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We love Nasco — it's the only vendor I use. It's a wonderful company that encourages, supports, and inspires teachers and students alike.

> - Darlene H.. Teacher, AZ



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# 90+ new products inside!

Check out some of the hottest new science tools below and look for this icon to find more throughout these pages.





Turn your microscope into a digital system with a highres streaming microscope Moticam A5 Digital

5.0 MP Microscope Camera, see p. 95





Take students on a tour of chemistry with 125 introductory experiments

Thames & Kosmos® Chemistry C1000, see p. 106



Learn about alternative energy sources by creating a hydrogen fuel cell

Innovating Science® Green Chemistry: Hydrogen Fuel Demonstration Kit, see p. 111



Grow up to 12 plants inside your classroom at any time of the year

Rise Personal Garden, see p. 12



# What's inside

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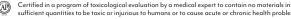


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#### Choking hazard label information

△ CHOKING HAZARD (1) WARNING: CHOKING HAZARD —

△ CHOKING HAZARD (2) WARNING: CHOKING HAZARD -Children under 8 yrs. can choke or suffocate or palloons. Adult supervision required. Keep unir children. Discard broken balloons at once

△ CHOKING HAZARD (3) WARNING: CHOKING HAZARD -

**△ CHOKING HAZARD (4)** WARNING: CHOKING HAZARD -**△ CHOKING HAZARD (5)** WARNING: CHOKING HAZARD

△ CHOKING HAZARD (6) WARNING: CHOKING HAZARD —

SB53399



When you help students understand all living organisms — from the smallest bacteria to the largest California redwoods — their curiosity will grow.

Encourage discovery and with aquaponics, botany, anatomical models, DNA, cell replicas, and more.

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#### Aquaponics **Education Kit**

Six lesson plans (50 minutes each) cover ecosystems, water cycle, fish basics, and more. Includes printed and electronic education booklets, seed packets, 20 g of natural fish food, and 4-oz. bottles of natural water dechlorinator and beneficial bacteria. SB52672 - \$99.95



AguaSprouts® Hydroponic and/or Aguaponic Water Fountains

Fountains combine fishkeeping/aquaponic learnings with hydroponic/gardening possibilities to help you build a system that demonstrates the transformation of energy, and brings chemistry, biology, and ecology lessons to life. Freshwater fish waste provides nutrients for the plants and the plants clean the water for the fish.

**SB53398** 6-Gallon Fountain — \$165.00 **SB53399** 8-Gallon Fountain — \$175.00



Countertop Aquaponics System Space-saving 5-gallor aquarium uses a sim-

removable. Allow extra delivery time. Z48490 - \$349.95



# **Aquaponics Kit** Acrylic tank, filter

sponge, pump, aquarium cover, plant trays with removable covers, watering hoses, plastic net pots, growing medium, and instruction manual. 30" x 12" x 22". Allow extra delivery time. 🖚 Z49074 - \$605.00

# **Desktop Aquarium Kit** Starter kits take up little space. Aquarium, quiet

floor filter and cartridge, aquarium light hood, 7-watt incandescent bulb, set-up/care guide, water conditioner, and fish food.

SB47442 - \$44.95



#### LaMotte **Aguaponics Test Kit**

Monitors basic water quality for the aquaculture and hydroponics segments of your system. Reagents, labware, and accessories come in foam-lined carrying case. Perform approximately 50 repetitions per test factor. Test chemistries and comparators are compatible with fresh, brackish, or salt water

♦ C34427 — \$320.00 \*EXCLUDED FROM DISCOUNTS

Reagent Refill for Aquaponics Test Kit ◆ C34428 - \$202.95





#### Counter AquaPonics with Grow Light

Add water along with your choice of fish and seed, then watch the ecosystem grow. System uses a space-saving 5-gallon aquarium (included) utilizing a simple airlift pump. Water flows through the filter media along to the plants and filtered water then returns to the fish. Can be used to grow a variety of herbs and lettuces. LED grow light is positioned directly over the grow raft. Height can be easily adjusted as plants grow. Top can be removed for easy cleaning. 16"L x 8"W x 21½"H. Allow extra delivery time. 🖚 🛆 CHOKING HAZARD (1). Not for under

3 yrs. **Z51477 — \$549.99** 

#### Aquarium Sets — Complete with Tank

Available in either 10- or 20-gallon sizes. Includes deluxe, all-glass aquarium; deluxe hood complete with light strip (lamps not included); and deluxe aquarium starter kit containing an air pump, airline tubing and valves, aerator bar, filter, filter medium, automatic heater, thermometer, fish net, and an aquarium handbook. Allow extra delivery time.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

Product No.	Capacity	Filtration	Each
SB16709	10 gallon	Under Gravel Filter	\$220.00
SB16705	20 gallon	Under Gravel Filter	\$269.00

#### **Deluxe All-Glass Aquaria**

Full-view, all-glass corners; nontoxic, permanently flexible silicone seals; and impact-resistant top and bottom moldings. Extremely popular for school and laboratory use.

Product No.	Capacity	Dimensions	Each
SA04493	10 gallon	20" x 10" x 12"	\$52.95
SA04495	20 gallon	24" x 12" x 16"	\$93.95





**Aguarium Gravel** 

NOTE: We recommend 10 lbs. of sand or gravel per 5 gallons.

Natural Red Flint Gravel, 10 lbs. S09944 - \$13.95

Rainbow-Colored Aquarium Gravel. 2 lbs. in polyethylene bag. SA04549 — \$5.25



#### White Sand

Pure white silica sand for top dressing in aquariums, or may be used for seed. 10 lbs. S09940 - \$10.15



#### Filter Carbon

Super-activated carbon is the best medium for removing all harmful gases, discolorations, and odors from aquarium water. Granules are uniform in size. Essential to filtration. 5-lb. bag. SA05525 - \$60.95



#### Eco-Check<sup>™</sup> 5-in-l Test Strips

One-dip solution for measuring nitrate, nitrite, total alkalinity, total hardness, and pH. Accurate results in seconds. For fresh-water aquariums, ponds, and lakes. 25 strips. SB39209 - \$14.95

#### **Nasco Flex-Tanks and Flex-Covers**

Create terrariums, small aquariums, or critter cages. Made from flexible, shatterproof material. Nests to save space; rounded corners provide easy clean up. No-drip covers. Exclusive design forces condensation to remain in the tank.

Product No.	Description	Size	Each
NE30347	½-gal. Flex-Tank Only	5%" x 7" x 3¾"	\$6.25
NE30350	½-gal. Flex-Cover Only	5%" x 7"	\$2.45
NE30348	1-gal. Flex-Tank Only	7" x 7" x 5"	\$7.15
NE30351	1-gal. Flex-Cover Only	7" × 7"	\$3.15
NE30349	1½-gal. Flex-Tank Only	11" x 7" x 5"	\$8.95
NE30352	1½-gal. Flex-Cover Only	10½" x 7"	\$5.25
NE30354	½-gal. Flex-Tank & Cover	5%" x 7" x 3¾"	\$6.95
NE30355	1 gal. Flex-Tank & Cover	7" x 7" x 5"	\$8.95
NE30356	1½ gal. Flex-Tank & Cover	11" x 7" x 5"	\$12.95





#### Aquaculture Countertop System

Clear, self-contained ecosystem with biological filtration and plant growth area needs no direct plumbing connections. Requires only one 120V outlet for operation. Recycled 14" water carboy containers, pipe, connectors, filter material, air pump, air stone, and one-plant hydroponic raft. 2 sq. ft. Allow extra delivery time.

Z40649 - \$289.95



#### Portable Animal Habitat - Kritter Keeper

Clear plastic habitat features air vents, flip-top lid for access, and handle for easy transport. For hamsters, gerbils, tropical fish, turtles, frogs, and snakes. 8" x 5".

SB25229 - \$10.95

#### Fish Farm™

5' 4" dia. x 35" polyethylene tank contains 400 gallons of water. Low-space bioreactor; large, silent, oilless air pump; larger self-cleaning biofilter that uses Kaldness media; and additional aeration for better nutrification performance. Electrical components are UL approved, with power consumption at 30 watts. Maintenance takes less than 10 minutes per day and only 2 pails of water (5 gallons each) need to be emptied and replaced. No electricity in the water. Allow extra delivery time. **729920 – \$4,000.00** 





#### Giant Butterfly Garden®

Watch five caterpillars become painted lady butterflies. Includes collapsible and reusable 18" deluxe habitat, pipette, four life-cycle stages plastic figurines, voucher for 5 caterpillars and nutritious food, and instruction guide. Additional shipping and handling fee required upon redemption. During extremely hot or cold weather, delivery of live larvae may be delayed. Live caterpillars shipped only to continental U.S. and Álaska. & CHOKING HAZARD (1). Not for under 3 yrs. SB52857 - \$31.95

Original Butterfly Garden®. Similar to garden above, but habitat is 11½" and does not include life-cycle stages figurines. Additional shipping and handling fee required upon redemption. (A CHOKING HAZARD (1). Not for under 3 yrs.

SB52856 - \$27.95

Original Butterfly Pavilion®. Redeem voucher online for 2 cups of 5 live caterpillars (10 caterpillars total) and food. Additional shipping and handling fee required upon redemption. 2' pop-up mesh habitat. △ CHOKING HAZARD (1). Not for under 3 yrs.

SB52855 - \$40.95



#### **Ladybug Land**

Raise your own pink spotted ladybugs. Features built-in magnifying lid and water reservoir "volcano." Redeem included voucher and receive 10–13 ladybug larvae and all needed food. Additional shipping and handling fee required upon redemption. Live ladybug larvae shipped to continental U.S. and Alaska only. △ CHOKING HAZ-ARD (1). Not for under 3 yrs. SB52854 - \$31.95



Extends from 18"-32" with a 48" conical net mounted on a 14" ring. Nylon. A CHOKING HAZARD (1). Not for under 3 yrs.

C33048 - \$12.15





Gr. 7+ Soft 1/32" mesh grid size, and 30" extendable handle with guick

**Insect.** 11" square steel hoop, 11" mesh capturing bag. SB43415 - \$24.95

Butterfly. 12" steel hoop, 28" mesh capturing bag. SB43416 - \$24.95



#### Maxi II Advance Classroom Pack

Incubation and embryology kit for elementary and middle school. Includes lesson plan manual on CD-ROM, Maxi Advance II Incubator, OvaScope, chick brooder, plastic chick enclosure, feeder, and drinker. C34169 - \$509.99



thermal-insulated material the incubator comes with the automatic egg turner and racks, plastic sanitary bottom liner, thermometer, thermostat, and two observation windows. 18" 18" x 7½"

C17015 - \$134.99



#### OvaScope Egg Scope

Watch the live embryo develop inside the egg. Can be fitted with a webcam. Completely blocks out ambient light, slightly magnifies egg's image, and allows viewer to rotate egg smoothly as it is observed. High-output, high-efficiency, LED illumination. No bulbs to replace. No concerns about overheating eggs. For any size egg up to goose eggs. C29805 - \$89.99

#### **High-Intensity OvaView Candler**

High intensity for darker and mottled eggs (quail, pheasant, etc.). Hold in hand or leave on a surface. High-output, high-efficiency, LED illumination. No bulbs to replace. No worry about overheating eggs. Battery powered; requires rechargeable batteries due to larger power drain. C29807 - \$57.99





#### Incredible Creatures® Life Cycles Set

Use replicas for hands-on sequencing of life cycles. Includes life cycle sets for a frog, monarch butterfly, green bean plant, green sea turtle, chicken, and ladybug.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs. EL11211 - \$59.95



**Chick Life Cycle** Gr. K+ Set of 21 eggs. Plastic. △ CHOKING HAZARD (1). Not for under 3 yrs.











#### Nasco Chicken Embryology Poster Set

Real pictures show chicken embryo development. May be used separately or joined together. Poster 1 shows days 0–6, poster 2 shows days 12–21, and poster 3 shows day 21. 21" x 7¼" per section.



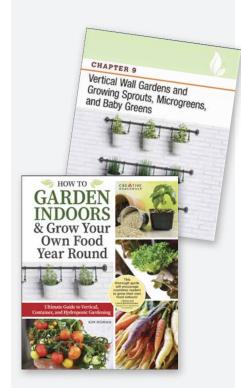
#### **Hydroponics Growing Center**

Self-contained ebb and flow system features two adjustable timers for water and sunlight, 150-watt grow light, water pump, containment plant tray (27½" x 42" x 8"), 25-gallon nutrient reservoir with lid, submersible pump, air pump, locking cabinet for timers and air pump, air stone, hoses, and 8" net pots. Includes 4" locking casters. 28" x 52" x 78". Allow extra delivery time. Z49096 - \$2,149.99



#### **Investigating Plant Macronutrients Using Hydroponics**

Gr. 6–12 In this essential life science activity, the science of hydroponics is used to supply plants with different amounts of key macronutrients and observe how the presence or absence of certain chemicals affects plant growth. The uniquely designed, transparent Lab-Aids® Greenhouse was designed for small, controlled investigations. This easy-to-use apparatus allows you to readily observe plant physiology, particularly root development. Additional experiments can be designed to investigate, observe, and gather data on variables such as aeration and temperature or to compare the speed of seed germination or plant growth. Use by individuals or in groups. Number of simultaneously germinating seeds: 36 total, maximum six per chamber. Complete for six groups. △ CHOKING HAZARD (1). Not for under 3 yrs. SA01210 - \$159.10



#### How to Garden Indoors and **Grow Your Own Food Year-Round** By Kim Roman

Learn how to grow a garden inside the classroom no matter what time of the year it is. This guide is filled with valuable information and DIY projects on growing vegetables, microgreens, and herbs, as well as information about hydroponic gardening, trouble-shooting, and more. 160 pages. NE40223 - \$25.75







Greenhouse with EasyFlow™ roll-up side vents delivers quality construction, quick and easy assembly, and best-in-class value

#### GrowIT® Greenhouse-in-a-Box® EasyFlow™ Greenhouses

Powder-coated 13%" steel frame with steel stabilizers. Translucent, rip-stop cover is waterproof and UV- treated. Easy Slide Cross Rails<sup>TM</sup> ensure a snug cover fit. Ratchet-Tite<sup>TM</sup> tensioning provides solid cover anchoring to the frame. Side panels and zippered half-moon endpanel vents provide airflow and temperature control. 1-year warranty against manufacturer defects. Allow extra delivery time. 🖚

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10' x 10' x 8' Greenhouse Z47143 - \$469.99 10' x 20' x 8' Greenhouse Z47142 - \$709.99



#### Personal Rise Garden Hydroponic System

This award-winning hydroponic system comes with everything you need to grow up to 8 plants in as little as 30 days. Solid-wood frame, full-spectrum LED lights, and a dishwasher-safe, food-grade plastic tray. Includes 8 seed pods, 8 net cups, 1 nursery, and nutrient mixes. Allow extra delivery time.

NE30457 - \$349.00



#### Seed Pods for Personal Rise Garden

Let students watch a variety of plants grow in your Personal Rise Garden. Thoroughly tested to ensure success. Shelf stable for 1 year. Allow extra delivery time.

NE30462 Microgreens Variety 12-Pack - \$22.50 NE30463 Butter Lettuce 4-Pack - \$11.25

NE30464 Mini Sunflower 4-Pack — **\$14.00 NE30465** Lavender 4-Pack — \$14.00



#### Nutrient Mixes for Hydroponic Personal Rise Garden

These mixes are a combination of micronutrients and macronutrients that help to target plant growth in various stages of maturity. Allow extra delivery time.

**NE30458** Thrive, 500 ml – \$17.00 NE30460 Blossom, 500 ml - \$17.00 **NE30459** pH Balance, 100 ml - \$17.00 NE30461 Sprout, 500 ml - \$17.00 NE30461



#### The Rise Garden Hydroponic System - Double Tier

Grow up to 36 veggies, fruits, and greens on each level. Automatically delivers the perfect amount of water for faster growth. App provides directions, reminders, and tips. Each system includes 16 starter plant variety packs, 3 (4-pod) trays per level, 18 net cups per level, and a nursery. 30W LED full-spectrum lights, steel shelves, wood frame, and a self-watering 9-gallon system. Wi-Fi- and voice-enabled. 53" H x 164" L x 364" W. Allow extra delivery time.

NE30475 Cloud - \$1,049.00 NE30478 Charcoal - \$1,049.00



Tabletop unit has 4 adjustable LED lights and 50 sponge planting sites. Accommodates plants over 3' tall or vining plants. Water capacity: 3.9 gallons. 41" x 28" x 23"–42". Allow extra delivery time. Z50809 - \$733.95



#### OPCOM® Deep Flow Technique Pallet Farm

Gr. K-12 Introduce students to alternative farming methods with this vertical planting system that grows up to 864 leafy plants, herbs, and microgreens such as lettuce, kale, basil and more. Plants are grown in a tray with roots submerged in water containing nutrients that are pumped up from the main reservoir. For more information, visit nascoeducation.com. Allow extra delivery time.

NE30258 - \$7.600.00



#### OPCOM® GrowWall 3C Hydroponics System

This all-in-one hydroponics growing system grows vegetables and herbs year-round and uses 90% less water than outdoor gardening. Grow up to 144 plants at a time with the space-saving, double-sided vertical design. The automated system adjusts LED light and water circulation efficiently, only using 2.3 kWh daily. Includes a starter kit with grow sponges, pH adjusters, and nutrients. Power: AC 100–240V. Allow extra delivery time.

NE30337 - \$1.199.00

EXCLUDED FROM DISCOUNTS

For a complete selection of hydroponics, visit nascoeducation.com

#### O<sub>2</sub> Light

Doubles as a tabletop LED reading light with an air refresher fan. Adjustable dual-line water tank accommodates any standard 1", 2½", 3", or 4" flower pot. Fits up to sixteen 2½" pots or sponges. Adjustable position. Water capacity: 0.7 gallons. 22" x 5½" x 21%". Allow extra delivery time.







#### **Full-Size Mobile Light Cart**

Three fixed shelves, 1" square aluminum tube construction, 4 plant trays (22" x 11") per shelf (12 trays total), and 3" wheels. Easy to assemble. 53" x 23" x 74"; 23" between shelves. Requires I light fixture per shelf, (SB26463, below). Allow extra delivery time. \$\infty\$ \$826462 - \$270.00

**Light Fixture.** For cart above. Lights have knobs on each end for height adjustment. All white aluminum body, on/off switch, three-wire grounded 48" cord, lower operating temperatures, enclosed ends, three-wire convenience receptacle, and 2 wide-spectrum 40-watt lamps. 48" x 15" x 2". Allow extra delivery time. ▶

SB26463 – \$139.95

Grolux Wide Spectrum Replacement Lamp. Fits 48" fixtures on cart above. 40 watt, 48". Also fits GrowLab II<sup>TM</sup> Gardens listed below.



Table Top 2 Lamp Fixture

Grow plants right inside your classroom using the light that emits from this lamp in replacement of natural sunlight. This height-adjustable lamp features 1" square welded aluminum legs, a three-wire cord, on/off switch, and two wide-spectrum 20-watt lamps. Light fixture measures 24" long. Height adjusts from 2" to 22" above the table surface. NE30211 — \$119.50



#### **GreenThumb Classroom Greenhouse**

Wire shelves in two tiers allow plenty of room for growth. Clear vinyl cover with large zippered opening fits snugly over metal frame. Assembles in minutes. 36" x 19" x 38". Includes instructions. For indoor or outdoor use.

SB42273 - \$72.95



#### **Perma-Nest Plant Trays**

Seeds, bulbs, and plants grow faster in Perma-Nest trays.

13" x 15" x 3½"

SB15172 - \$10.95

8" x 12" x 2½"

SB15174 - \$6.95

22" x 11" x 2½"

SB15173 - \$10.95

4" x 8" x 2½"

SB15174 - \$3.95

For a complete selection of botany products, visit nascoeducation.com









#### Classic Sienna Raised Garden Bed

Modular raised garden bed with 2" profile. Comes with everything needed except for soil and plants. Tool-free, snap-lock joints make it easy to install — simply slide and snap. Composite boards feature textured wood-grain finish that blends into any environment and will not rot, warp, splinter, or fade. Insulating open-channel boards trap air, providing insulation to your soil. Stacking brackets pivot 270°, allowing endless design options. Beds can be added on to or reconfigured at any time. Shipped directly from our supplier. Allow extra delivery time.

A. 4' x 4' x 5½". 16 sq. ft. of available planting area. **Z51724** — **\$99.99** 

B. 4' x 8' x 5½". 32 sq. ft. of available planting area. **Z51725** – **\$149.99** 

C. 4' x 4' x 11". 2-level raised garden bed with 6 sq. ft. of available planting area. Z51726 — \$199.99

D. 4' x 12' x 11". Reinforced with bracing boards that prevent frost push-out and divide garden into 3 separate planting areas. Provides depth for growing both underground veggies and tall plants. Provides 48 sq. ft. of planting area. Z51728 — \$429.99



# NO SPACE?

Garden even when you don't have your own patch of ground

#### Elevated Escape Raised Garden Bed

The elevated design and sturdy construction of this raised garden bed makes gardening in small spaces possible. Recycled plastic composite planter boards and aluminum frame. Simple assembly. 24" x 48" x 34½". Allow extra delivery time.

NE30404 - \$299.99



#### TickleMe Plant™

Gr. K+ When touched, the TickleMe Plant™ (Mimosa pudica) quickly closes its leaves and even its branches move down when tickled. These plants also appear to sleep at night by closing up their leaves. Seeds can sprout in a matter of days and within a month the plant will move when tickled. Adult plants can produce pink flowers.



**Group Kit.** Everything you need for your group (up to 30) to grow these plants from seeds to flowers and back to seeds. Includes 30 seed packets, 30 flower pots (4"), and 30 expanding Wonder Soil® waters. The 38-page TickleMe Plant<sup>TM</sup> book features over 60 color photos, information about how to care for your plant, over 20 teacher-created science projects, and experiments. EL10351 - \$89.99

Greenhouse Kit. Includes 2 plant seed packets (each with 10-20 seeds), reusable greenhouse made of recycled plastic, 6 flower pots, 6 coco-peat soil pellets, 10 fun science experiment ideas, and instructions.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

C29749 - \$23.19

Plant Seed Packet. Includes 10–20 seeds and instructions.

SB43354 - \$7.49



#### Plant Light House®

Snap-together internal frame makes setup and take down simple and fast. No tools needed. Light fixture includes a reflector, dual porcelain fixture, and two 14-watt LED light bulbs. Can grow 64 Fast Plants® to maturity, enough for a class of 32 students. 19" x 18" x 24".

SB41051 - \$212.95



Comes mostly pre-assembled. No tools required. Uses twelve 18-watt spiral compact fluorescent bulbs (included). Accommodates up to three Wisconsin Fast Plants® classroom kits. 53½" x 24½" x 28"

SB48915 - \$442.95



#### Fluorescent Fixture

Adjustable in ½" increments for optimum distance from plants. 18". Two wide-spectrum lamps.

SB15185 - \$96.95

**Full Spectrum Tube.** For use with fluorescent fixture above. 15-watt, T12, 18" full spectrum tube. SB41814 - \$15.95



#### All-In-One Greenhouse

No soil needed. Just add water, pellets, and seeds. Use for starting seeds or cuttings indoors. Pack of 25 Jiffy-7® Peat Pellets, sturdy base tray (reusable), and a clear greenhouse dome

SB28559 - \$13.25 5+ \$13.25



#### Professional liffy® Greenhouse

Easy-to-use greenhouse kit provides professional results for starting seeds or cuttings. Kit includes 11" x 22" tray/ dome and 72 liffy-7® Peat Pellets. It is just a small, thin, easily stored wafer enclosed in a fine plastic netting.

Add water and it expands to its ultimate size of 13/4" in diameter by 21/8" in height, all neatly enclosed in the plastic net.

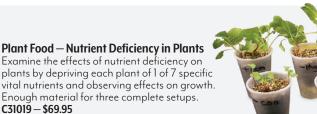
SB31095 - \$17.25



#### Sprout & Grow™ Window

Watch bean and pea seeds sprout and roots develop and grow in nutrient-enriched soil through large window. Step-by-step guide has instructions, suggested activities, and journal pages to fill in observations. A CHOKING HAZARD (1). Not for under 3 yrs.

SB36694 - \$28.95





#### Set of 10 Crystal Clay® Kits

Gr. 5+ Just add water and watch soil grow



100 times its size in 30 minutes. Seeds are guaranteed to sprout. 10 each of growing tubes, Crystal Clay® gel, seed packets (miniature pumpkin, blue morning glory, and sunflower), paper tube stands with plant growth life cycle, and instructions. SB42635 - \$31.95



filled from edge to edge in seconds, promoting more efficient use of costly soil mixes. Black.

**4\%"** with Tray. Set of 15.  $4\frac{1}{5}$ " x  $3\frac{3}{5}$ ". SB42878 - \$11.95

**2½" with Tray.** Set of 32.  $2\frac{1}{2}$ " x  $3\frac{1}{2}$ ". SB42879 - \$12.95

**2½"** without Tray. Set of 32. 2½" x 3½". SB42876 - \$9.25





Seeds sprout faster and root cuttings start quicker, too. Dome holds moisture and warmth inside. 72 pop-out gro-cells in 11" x 22" rugged plastic tray. ŠB11127 — \$10.95

**Bean Germination Mount** 

34" x 3½" block of clear resin.

SB47288 - \$49.95

Five real bean seeds encased in a 3½" x

#### Wisconsin Fast Plants® Kits

Contains everything you need to complete the activities including seeds, an automatic watering system that provides enough water for 3–4 days, planting units, pollination materials, plant stakes, pot labels, fertilizer, and growing instructions booklet. Many kits are reusable. Kits require 24-hour cool, white fluorescent light which can be provided with Plant Light House® (SB41051, see p. 16) for a single classroom or Light Bank (SB48915, see p. 17) for up to three classroom kits. For up to 32 students.

Kit Refill. Contains seeds, pollination materials, stakes, labels, chemicals, fertilizer, and instructions. Cannot ship outside the continental U.S.

Elementary Exploration of Plant Life Cycles. Grow plants through an entire life cycle in only 40 days. Cannot ship outside the continental U.S. SB41048 - \$134.95

Wisconsin Fast Plants® Standard Seed. Produce flowers in 13–17 days. Cannot ship outside the continental U.S.

**SB41049** Pack of 50 - \$23.95 **SB41050** Pack of 200 - \$62.95





#### Seed Starting Kit

Includes seed assortment, pack of 50 Jiffy® peat pots, 50 plant tags, 16 qts. of liffy-Mix® seed starting soil, and osmocote plant food. SB42710 - \$59.95

Four-cell foam planters can be adapted to

individual or group work. Easy to store. Set



#### Seed Assortment

Includes field corn, rye grass, lima bean, dwarf marigold, green arrow pea, radish, grey strip sunflower, and blue lake green

SB42711 - \$16.50



Seed Starting Soil. Sterile, fertilized

growing media SB30115 8 qts. - \$8.95





#### Pocket pH Meter

Digital display. Automatic temperature compensation. Electrode extends to 31/8". Range: 0.0 to 14.0 pH. Hard carry case and calibration solution. 6<sup>3</sup>/<sub>16</sub>" x 1½" x <sup>15</sup>/<sub>16</sub>' SB42161 - \$59.95



#### **Economy Heat Mat**

Ideal for starting seeds. Keeps soil at 15° to 20° above room temperature. 9" x 19" SB32754 - \$33.95



SB47153 - \$17.95

**Quads Reusable Planters** 

Plant Labels Pack of 50. 5/8" x 4" SB41071 - \$6.25



#### **Seed Germination Paper**

Tan creped towel used for seed germination. 100 sheets, 10" x 15". SB39211 - \$36.95



#### Nasco E-Z Spray Bottle Adjustable spray pattern. Pistol grip handle and bottle. Pint

C07664 - \$2.85



Students will have the experience of working with six different varieties of tree species from a temperate climate region of North America. Information on the biodiversity of hardwood and softwood trees is provided, with directions for students to engage in hands-on inquiry exercises. Similar internal tree structures will be compared, while the variation between species will also be identified. Illustrations and directions are included in the study guides. Kit includes 6 assorted tree rounds (2 softwood and 4 hardwood species), 15 hand magnifiers, colored marking pins, 15 metric rulers, 15 reproducible student study guides, reproducible student activity sheets, teacher study guide, and a tree round information sheet to assist with tree identification.

SB26418 - \$54.95

Gr. 6-10 Designed to show students the variations of different tree species. Students will learn how seasonal growth changes the appearance of layers of growth within the tree, and will find that spring wood and summer wood combine to produce annual rings. They will also learn how to estimate tree age by examining the annual rings of three different tree rounds. Includes 3 tree rounds (1 each of oak, pine, and walnut), a hand magnifier, colored marking pins, a metric ruler, 6 reproducible student guides, teacher guide, reproducible activity sheets, and Trees: A Golden Guide book.

SB22657 - \$34.95



#### **Dendrochronology: Tree Ring Dating Kit**

Gr. 6+ Learn about the effects of climate on living things while studying the age and history of trees in 30 simulated, reusable tree cores. For 30 students. Takes 50 minutes to complete. A CHOKING HAZARD (1). Not for under

 $\triangle$  See page 3 for complete Choking Hazard Label Information.

3 yrs. SB50433 — \$73.95



Explores the life cycle of trees, see the variations in tree species, estimate a tree's age, and learn about factors that affect tree growth. Approximately 2"-4" dia.

**Set 1.** Three tree cookies (1 each of oak, pine, and walnut).

SB25029 - \$8.25 10+ \$7.42

Set 2. Six tree cookies (1 each of red oak, pine, walnut, basswood, ash, and red pine) SB26464 - \$15.00



#### NewPath Learning® Photosynthesis and Cellular Respiration **Curriculum Learning Module**

**Gr. 6–10** Blend of technology-based instructions, interactive print resources, and game-based learning. Covers cell energy, photosynthesis, and cellular respiration. SB52105 - \$119.95



#### **Student Edition Giant Flower Dicot Model**

**Gr. 5+** Petals, sepals, and stamens are detachable. Floral structures are number coded and correspond to identification key. 17" x 14" x 10". SB33511 - \$299.95



#### **Dicot Flower Model**

Enlarged approximately 8 times. Disassemble to view pollen grains. Important structures are numbered and correspond to identification key. 1711/16" x 1511/16" x 12". SB50602 - \$135.95

#### Foam Flower Model

Resilient, nontoxic EVA foam and removable pieces for handson use with students of all ages. Detailed teacher's guide includes background information, reproducible worksheets, cross-curricular extension activities, assessment ideas, and more.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB31406 - \$85.95



#### Photosynthesis and Cellular Respiration Kit

An investigation into the reactions of photosynthesis and cellular respiration using a series of images and statements which are then discussed relative to ecosystems and the carbon cycle.  $\triangle$  CHOKING HAZARD (1).

C33050 - \$107.95



#### **Acid Rain and the Environment: Acidity and Plant Growth Kit**

The problem of acid rain is quite often associated with its effects on aquatic systems. Unfortunately, acid rain can also have devastating effects on terrestrial environments as well. In this activity, examine the detrimental effects of acidic conditions on plants. The plants will be grown under normal soil conditions, mildly acidic soil conditions, and very acidic soil conditions. Through physical observation, determine if the acidity has any impact on the growth of the plant. Contains enough materials for 15 groups. C31020 - \$78.95





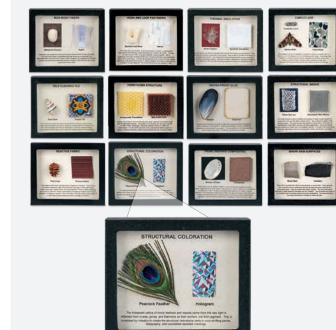
#### **Photosynthesis and Respiration Chamber**

Monitor the cycle of photosynthesis and respiration of plants using NeuLog O<sub>2</sub>, CO<sub>2</sub>, and light sensors. Gallon clear glass bottle with cap, rubber stopper size 00, and rubber stoppers size 7. (Plants and sensors not included.)

SB51966 - \$38.50

NeuLog Logger Sensors. See nascoeducation.com for complete descrip-

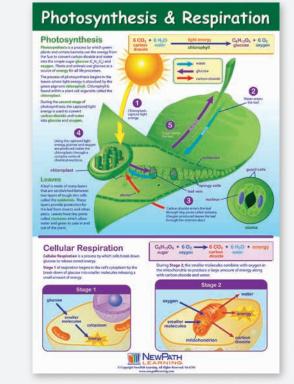
SB51188 CO2-\$325.00 SB50677 Oxygen - \$300.00



#### Biomimicry: Technology Inspired by Nature

Displays show an innovation and the element of nature it resembles, along with an explanation of the subject. Innovations include camouflage, hook-and-loop fasteners, man-made fibers, and more. Set of 12; 6" x 5" each.

SB50607-\$290.00



#### NewPath Learning® Photosynthesis & Respiration Poster

⚠ See page 3 for complete Choking Hazard Label Information.

Shows steps of photosynthesis and stages of respiration. 23" x 35" Laminated.

SB47610 - \$20.95

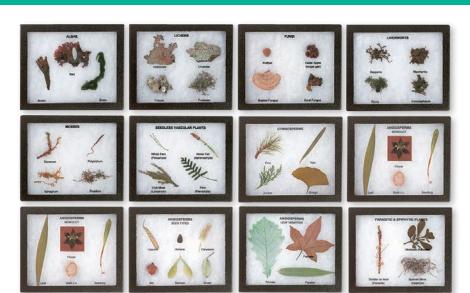


#### Photosynthesis, Plants, and Food

Gr. 6+ Teams use an atom model to build carbon dioxide and water molecules, then "react" them to form sugar and oxygen molecules. Students also read about plants' role as producers and are introduced to chloroplasts. For 32 students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB46818 - \$100.75

#### **Plant Kingdom Survey Set**

Collection of 12, 6" x 5" display mounts, each containing labeled specimens. Fungi, algae, lichens, and true plants are represented with 47 specimens. Contains algae, lichens, fungi, liverworts, mosses, seedless vascular plants, gymnosperms, monocot angiosperm, dicot angiosperms, seed types, leaf venation, and parasites and epiphytes. On occasion, similar specimens may be substituted due to availability. SB37295 - \$340.00







#### Leaves and Seeds of Common Trees Identification Mounts

Each species is represented by both leaves and seeds. Leaves and twigs are pressed. Fruits have been freeze-dried. Each 5" x 8" mount is labeled on back with common and scientific names, family, leaf arrangement, leaf type, tree size, fruit type, natural habitat, and a range map for the U.S. Includes 16 mounts in 6" x 15" flip bin.

SB37259 - \$94.95



Solid oak frames with brass-plated rivets and cotton web straps with sliding buckles. 12 driers and ventilators. 12" x 18"

SA02726 - \$71.95



#### **Absorption Paper**

Thick, absorbent, non-fuzzy, white blotting paper. Pack of 100, 12" x 18". SA04460 - \$93.95



#### **Plant Mounting Sheets**

Cardboard herbarium sheets. Printed legend in lower right-hand corner. No rag content. 11½" x 16½", 140-lb. weight paper. Pack of 25. C09647 - \$19.95



#### Nature Print® Paper

Undergoes chemical change when exposed to sunlight. Images appear in minutes. Select specimens you wish to print, arrange them on paper, and expose to sunlight for 2–3 minutes. Soak in water for a minute, then dry. Images will sharpen during drying. Pack of 30, 5" x 7".

5500210 - \$12.15



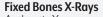




#### **Broken Bones X-Rays**

15 real X-rays reveal a detailed look at common breaks to a variety of human bones. Includes guide.

SB43367 - \$36.20



Authentic X-ray images show the hardware used to fix a broken bone. Additional images of the fractures correspond to the X-rays of the repairs. 14 X-rays, 14 broken bone images on card stock, and guide. EL14149 - \$24.00



#### True-to-Life Human X-Rays

Arrange 18 X-ray pieces together to reproduce entire 5' skeleton. Teacher guide includes reproducible artwork and information on radiography

SB40317 - \$41.20



#### American 3B Disarticulated Human Skeleton

Natural human skeleton reproduction made of unbreakable plastic that does not deteriorate with age. Each bone is cast individually in natural color with all details of anatomy represented. All bones, except skull (with detachable top and mandible), one foot, and one hand, are disarticulated.

SB13487 - \$627.40



200 accurately weighted bones of an actual adult human with easily removable limbs, individually spaced and molded teeth, and fully articulated hands and feet. Cast from actual specimen in unbreakable plastic, hand-assembled, and finished. Pelvic mounted on 4' roller stand; full height with stand is 5' 7". Muscle origins in red and muscle insertions in blue. Bones and muscles numbered for identification. Includes key card and dustcover. Allow extra delivery time. SB14901 - \$1.045.66

**Human Skeleton Poster** Front view with major bones and joints identified. Height: 4'6".

Comes in storage tube. SB28462 - \$24.40



# Anatomy & Physiology



#### **Full-Size Flexible Skeleton**

Spine bends to mimic natural human movement. Arms and legs are removable. All movable parts are joined by connectors that allow movement around the joint. Hands and feet are wire mounted. Skull has movable jaw, removable skullcap, suture lines, and full dentition. Bones are cast individually from natural-colored plastic with anatomical detail. Comes pelvic mounted on roller base and with a diagram. SB51062 - \$572.05

Half-Size Flexible Skeleton with Muscle Insertions. Full height with stand is 33" SB52181 - \$143.01

**Full-Size Flexible Skeleton** with Muscle Insertions. Full height with stand is 67". SB51061 - \$629.20



**Mounted Hand Model** Fingers are flexible enough to demonstrate movement. Mounted on plastic base. SB49825 - \$49.23



Soft Body Organ Set Turn your life-size skeleton replica into a torso by placing 12 soft organs in appropriate locations in skeleton. Includes two-part brain, right and left lungs, heart, liver, stomach, pancreas with spleen, right and left kidneys, large and small intestines, assembly guide, and curriculum booklet. Skeleton sold separately. SB52519 - \$425.75

Mounted Foot Model Flexible bones demonstrate movement. Foot can be attached to plastic base. SB49824 - \$49.23



extra delivery time.



#### Made from unbreakable plastic cast from an actual specimen. Hand assembled and finished. 200 accurately weighted bones of an actual adult human, easily removable limbs, individually spaced and molded teeth and fully articulated hands and feet. Pelvic mounted on 4' roller stand. Full height with stand: 5' 7". Poster included. Allow extra

delivery time. SB02011-\$391.18

SB27618 - \$867.00



Full sized. Separated bones correspond to the chart included. Features one wired hand and foot and one detached hand and foot. SB49201-\$285.93



Skeleton Dustcover - Black

Protect your investment with this heavy-duty protective cover. Suitable for all full-size skeletons and stand versions. Transparent

SB45480 - \$86.70

#### Skeleton Dustcover - Blue

Protects full-size skeletons (both hanging and pelvic mounted). Zippered. Heavy-duty fabric with transparent window.

SB51049 - \$28.62



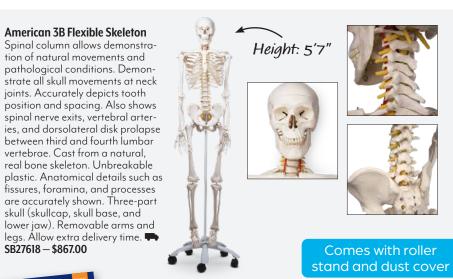


3B Scientific Hand Skeleton Model with Ligaments and Muscles Gr. 6-12 Study the human hand in great detail with this anatomically correct model. The bones, muscles, tendons, ligaments, nerves, arteries, and veins are all displayed in this high-quality four-part model of the hand and lower forearm. Includes free access to the anatomy course 3B Smart Anatomy, which includes 23 digital anatomy lectures, 117 different virtual anatomy models, and 39 anatomy quizzes to test student knowledge using the Complete Anatomy app by 3D4Medical. Allow extra delivery time. 🖚 NE40265 - \$424.32





3B Scientific Foot Skeleton Model with Ligaments and Muscles Gr. 6-12 Examine the human foot in great detail with this anatomically correct model. The bones, muscles, tendons, ligaments, nerves, arteries, and veins are on full display in this six-part model of the foot and ankle. The model includes free access to the anatomy course 3B Smart Anatomy, which includes 23 digital anatomy lectures, 117 different virtual anatomy models, and 39 anatomy quizzes to test student knowledge using the Complete Anatomy app by 3D4Medical. Allow NE40266 - \$406.98



To download this free lesson plan, visit nascoeducation.com/lesson-plans and search U27700.



#### Half-Size Skeleton

Wired for natural movement. Removable skull with calvaria cut. Miniature springs hold mandible in place. Tiny screws hold arms and legs in position so you can bend extremities in all directions. Although basic appearance and functional value of skeleton is excellent, there may be flaws in the construction. Plastic on heavy metal stand with stainless steel hardware. 33½" SB22564 - \$101.50

nascoeducation.com | 1.800.558.9595

**Anatomy & Physiology** 



3B Scientific Flexible Human Spine Model Gr. 6–12 Teach the anatomy of the human vertebral column with this fully flexible spine model with hands-on demonstrations. Features full male pelvis and occipital plate, fully flexible mounting in spine, prolapsed disc, spinal nerve, and cervical vertebral artery. Includes free access to the anatomy course 3B Smart Anatomy, which includes 23 digital anatomy lectures, 117 different virtual anatomy models, and 39 anatomy quizzes to test student knowledge using the Complete Anatomy app by 3D4Medical. Allow extra delivery time. NE40271 - \$166.26



Spine Model

Molded from PVC plastic. Hand-painted to show cervical, thoracic, and lumbar regions and sacrum/coccyx. Mounts on metal rod with plastic stand. Laminated color guide with 66 labeled structures (structure names on one side; numbers on other). Includes 10-page reproducible study guide. 14" x 5¼"

SB52565 - \$132.76



**3B Scientific Functional Shoulder Joint** 

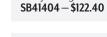
Life-size, movable model on stand illustrates the mechanics of the shoulder joint. Consists of shoulder blade, collar bone, portion of humerus, and joint ligaments. 6¼" x 4¾" x

SB41402 - \$122.40



**3B Scientific Functional Knee Joint Model** 

Life-size, movable model on stand provides a graphic demonstration of the anatomy and mechanics of the knee joint. Consists of portion of femur, tibia, and fibula, plus meniscus, patella with auadriceps tendon. and joint ligaments.  $6\frac{1}{2}$ " x  $4\frac{3}{4}$ " x  $13\frac{1}{2}$ ".





**Column with Femur** Heads, Muscle Insertions, and **Removable Sacral Chest** 

Life size. Show the natural movement of the spine. Occipital plate; cervical, thoracic, and lumbar vertebrae: sacrum: coccyx; complete pelvis; and removable femur heads. Painted left side shows muscle origins (red) and muscle insertions (blue). Features representations of vertebral arteries, spinal nerve branches, and intervertebral disks. Detailed manual. 8" x 8" x 37" LA00102 - \$219.00



**Deluxe Spinal Cord with Nerves** 

Replicates segment of upper thoracic spinal cord. Six times life-size. Sectioned both longitudinally and in a cross section. Portion of white matter has been cut away to expose color-coded anterior and posterior nerve roots. Color-keyed circuitry schematic is mounted along with model on hardwood base. Identifies 30 numbered features. 12" x 8" x 5"

SB48292 - \$382.50



The Thin Man: Sequential Human **Anatomy Program** 

A sequence of transparent Mylar® overlays allows peeling away of layer after layer of tissue. Provides valuable insight into the 3-D spatial relationships of principle structures, major vessels, and organ systems. Full-figure view of skeletal and nervous systems on back. Stands 63"H. Mounted on warp-proof composition board. Supported by a tubular steel frame on tip-proof stand. Allow extra delivery time.

See-Through Sally™ Human Anatomy Display

lights for anatomical features of each system.

Set of 12 spiral-bound anatomy charts (22" x 36") mounted on metal frame and 66" floor stand. Charts begin with body's outer layer and

image with all organs numbered sequentially, a number key, and high-

continue through various organ systems. Each page has a full-view

SB23900 - \$591.00

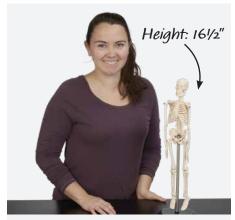
SB51340 - \$375.00



Skin Model

Enlarged 70 times, Individual layers of skin are clearly differentiated. Anatomical structures such as hair follicles, sweat glands, and receptors are shown in detail. 3-D model mounted on 10½" x 7½" board. 11½" x 8½" x 10"

SB49202 - \$114.39



Desktop Skeleton

Economical skeleton made of unbreakable plastic. Mobile jaw on springs, removable arms and legs, skull that is cut and removable, black plastic display stand, and key card. SB22563 - \$26.95



Mini-Muscled Joint Set

Set of 4 reduced-size (approximately 50% of regular models) joint models of the hip, elbow, shoulder, and knee. Card size: 8¼" x 61/4"

SB47324 - \$149.95



**3B Scientific** Microscopic Skin, Hair, & Nail Model Gr. 6-12 Use

this high-quality model to show students the microscopic structure of human skin in great detail. Includes a nail section on the base, showing the nail plate, nail bed, and the nail root. The model includes free access to the anatomy course 3B Smart Anatomy, which includes 23 digital anatomy lectures, 117 different virtual anatomy models, and 39 anatomy guizzes to test student knowledge using the Complete Anatomy app by 3D4Medical. Allow extra delivery time.

NE40267 - \$94.86



Muscles of the Human Arm Model (7-Part)

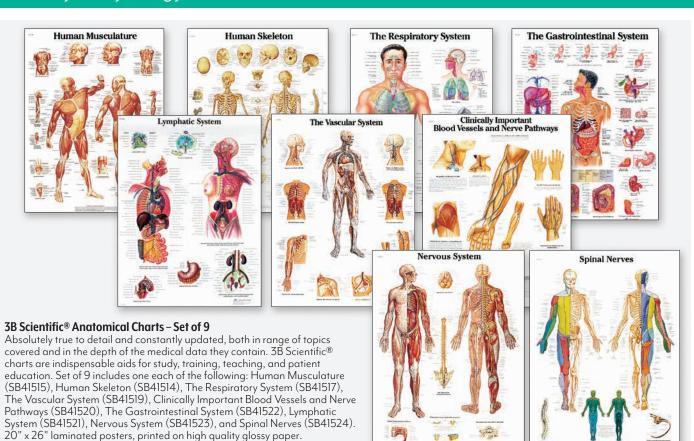
Life-size model shows the anatomical structure of the arm with superficial and deeper muscles, vascular structures, nerves, and ligaments. Removable parts include deltoid muscle, biceps muscle, triceps muscle, long palmar muscle with radial flexor muscle of wrist, brachioradial muscle with radial extensor muscle of wrist, and palmar aponeurosis. Mounted on base with stand. 29\%" x 7\%" x 4\3\4".

LA00129 - \$516.00

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SB48741 - \$269.95

#### Anatomy & Physiology





#### American 3B Muscular Figure (¼ Life-Size)

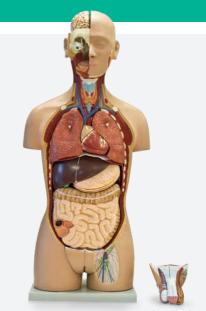
Hand-painted desktop figure shows all the superficial muscles of the human form, accurately reproduced and detailed in life-like colors. Chest plate is removable to reveal the internal organs. Right side contains a female mammary gland. 22½" x 9%" x 7%" SB27605 - \$969.00

Set of 10 posters

#### **5 Senses Poster Set**

Posters with 3-D illustrations, detailed cutaways, and labeled sense organs and their parts. Poster topics: sight, taste, touch, smell, hearing, hearing loss, eye disorders, seeing color and light, nearsightedness and farsightedness, and overview of the 5 senses. Laminated. Set of

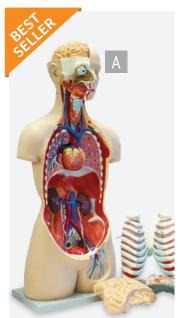
SB35256 - \$175.10



#### Dual-Gender Human Torso with Open Back (27-Part)

Life-size torso has the following removable parts: cerebrum and cerebellum; eyeball; lung (2 parts); heart (2 parts); liver; esophagus and thoracic aorta; half of kidney; pancreas, spleen, and duodenum; stomach (2 parts); large and small intestine; cecum cover; male and female organ (8 parts); 12th thoracic vertebra with spinal cord; and torso main body. 36" x 17" x 11". Allow extra delivery time. SB49199 - \$846.61











#### A. Genderless Human Torso with Open Back (17-Part)

Head is opened, exposing half of the brain. Dissected neck shows muscular, glandular, vascular, and neural structures. Thorax and abdomen are removable. Back is opened and dissected, showing the vertebral column, spinal cord, and nerve endings. Removable parts: torso, cerebrum, cerebellum, left and right lung with ribs, heart (2 parts), liver, stomach (2 parts), half kidney, half bladder, seventh thoracic vertebrae, intestine, colon with pancreas, transverse colon, and cecum cover. Key card. 9" x 13" x 34". Allow extra delivery time.

SB48432 - \$669.29

#### B. Genderless Human Torso (6-Part)

Compact plastic model displays the respiratory, circulatory, digestive, nervous, and urinary systems, as well as musculature. Easy removal of the lungs, heart, liver, stomach, and intestines. Full-color instruction manual. 10". SB25196 — \$65.92

#### C. Genderless Human Torso (12-Part)

Numbered or lettered anatomical features correspond to key card. Torso, head (2 parts), brain half, 2 lungs, heart (2 parts), stomach, liver, intestines, and cecum cover. Mounted on plastic base. 20" x 8" x 31/4".

SB25198 - \$192.34

#### D. Human Torso (20-Part)

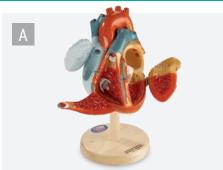
Head is removable; half of brain is removable to show a sagittal section. Heart, a portion of each lung, liver, stomach, and pancreas (including a portion of the duodenum) can be removed. Right kidney is separate and sectioned to show internal anatomy. Intestinal mass comes out in one piece. Plastic. Mounted on plastic base. 14% x 978" x 33½". Allow extra delivery time.

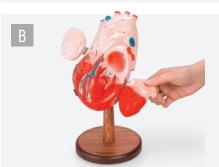
SB25195 - \$269.99

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# **BIOLOGY Anatomy & Physiology**

#### Anatomy & Physiology







#### Nasco Heart Game

Gr. 7+ Reviews cardiac anatomy and physiology, both diagnostic and assessment. Players learn the basic principles of cardiac assessment, trace circulation of blood, identify the anatomical components and normal regulatory mechanisms of the heart, and more by answering Question Cards. For 2-6 players or teams.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB06772 - \$30.00



Includes 7 charts

The Human Body

SB42082 - \$27.95

**Learning Charts Combo Pack** 

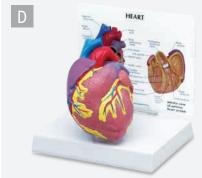
Seven charts include nervous system;

and digestive system. 17" x 22" each.

skeletal system; reproductive, endocrine,

and excretory systems; respiratory system;

cardiovascular system; muscular system;







#### A. Denoyer-Geppert Heart of America™

Twice life-size. Shows exterior and interior views. Flaps flip open for internal study. Chambers and valves accurately reproduced to scale. Flexible chordae tendineae and cusps permit easy-to-see demonstrations of valve action. Attached sections of the trachea and esophagus. Mounted on 6" x 9" x 15" hardwood stand. Teacher's guide/answer key lists 45 permanently coded structures.

SB16051 - \$469.60

#### B. Giant Hands-On Heart

Twice adult heart size and nearly three times child heart size. Three hinged "doors" through heart wall swing open to expose four pumping chambers. Flexible plastic valves. A segment of trachea and esophagus on back side. Heart lifts off and pivots 360°. Nonbreakable vinyl. Includes 7-page study guide which explains physiological function of 39 number-coded features. 7" x 7" x 15". SB33771-\$346.79

D. Heart Model (2-Part) Model opens in half to show inner chambers and

SB25200 - \$34.51

C. Life-Size Heart Model (2-Part)

6¼" x 3½" x 3¼". Key included.

Can be removed from base. Good visibility

of the chambers, valves, and great vessels.

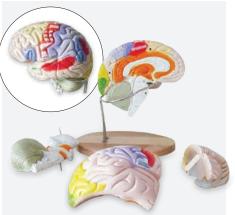
valves as well as aortic arch, superior and inferior vena cava, and pulmonary and cardiac veins. Mounted on stand. Model: 3¾" x 4" x 4¼". Information card: 6½" x 5¼". SB32595 - \$112.00

E. Cross-Section Heart and Brain Model Set

Foam models with one side labeled and other side blank. Each model represents a 5" crosssection in the actual shape of the organ. Includes guides.

SB42007 - \$43.95 **SB42005** Heart — **\$21.26 SB42006** Brain - \$20.25

For more anatomy models, go to nascoeducation.com



#### Large Brain Model

Life-size human brain represents a righthanded person. Color coding and hand-lettered captions locate and identify motor and sensory functional centers with emphasis on intellectual role of left brain and creative role of right. Identifies key structural features that correspond to manual. 9" x 8" x 1113/16". SB48436 - \$289.28

#### **Human Brain Model (8-Part)**

Life-size human brain molded from PVC plastic and hand-painted to show lobes. Can be removed from rotating metal harness. Guide indicates 50 labeled brain structures. One side of guide includes names, while other side shows only numbers for student assessment. Harness mounted on plastic stand. SB51339 - \$279.13



**3B Scientific Human Skull with Facial Muscles** Gr. 6-12 Display the human skull with

NEW

facial muscles for students to examine in the classroom. Use the model to demonstrate facial anatomy concepts as well as causes of temporomandibular disorders and other dysfunctional disturbances of masticatory muscles. The jaw is movable and its cranium and masseter muscle are detachable. This model includes free access to the anatomy course 3B Smart Anatomy, which includes 23 digital anatomy lectures, 117 different virtual anatomy models, and 39 anatomy quizzes to test student knowledge using the Complete Anatomy app by 3D4Medical. Allow extra delivery time.

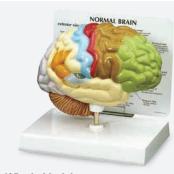
NE40273 - \$431.46



#### Life-Size Brain with Arteries (9-Part)

Model shows a median brain section, each part being dissectible into frontal-parietal lobes, temporal-occipital lobes, cerebellum, brain stem, and hypophysis. Mounted on

LA00239 - \$250.00



#### Half Brain Model

Demonstrates sensory/motor functions. Normal right half brain with frontal, parietal, occipital, and temporal lobes; cerebellum; interthalmic adhesion; corpus callosum; pons; midbrain-central peduncle; olfactory bulb; optic nerve; optic chiasm; mammillary body; and medulla oblongata. 6½" x 5" x 2½' SB40235 - \$99.95



Human Skull with Brain Model (8-Part)

Life-size, with accurate representations of all sutures, fissures, joints, foramina, and processes. Jaw is spring mounted and detachable. Removable skullcap. Includes key. 9" x 6" x 6"

SB51054 - \$257.40

9" x 6" x 634"

SB33945 - \$153.00



#### Human Skull (3-Part)

Life-size. 18th left mandibular molar. 22nd left mandibular canine, and 24th left central incisor are removable to show roots. Spring-mounted mandible and sectioned calvaria are detachable. 5½" x 8" x 6". SB25937 - \$40.55



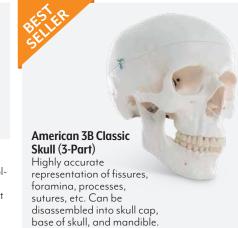
#### **Numbered Human** Skull Model (3-Part)

Removable skullcap and artic ulated mandible. Significant structures are numbered. 85/8" x 51/2" x 61/4". LA00176 - \$101.95



#### **Colored Human Skull**

Life-size model features. 22 colored bones. Identification key corresponds to the 22 different colors. 8" x 8" x 5½" SB50960 - \$174.58



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# **BIOLOGY**

**Anatomy & Physiology** 

Anatomy & Physiology

See how all parts of the human ear work together

#### **3B Scientific Human Ear**

Enlarged three times. Dissectible into four parts. Removable ear ossicles with dissectible cochlea.  $13\frac{1}{3}$ " x  $6\frac{1}{4}$ " x  $7\frac{2}{5}$ " on base. Teacher's quide. SB19254 - \$183.60



#### American 3B **Giant Eye Model**

Five times actual size. May be dissected into six parts. Upper half of sclera with cornea and eye muscle attachments, both halves of choroid with iris and retina, lens, and vitreous humor are removable. Comes on base with key card. 4<sup>3</sup>/<sub>4</sub>" x 4<sup>3</sup>/<sub>4</sub>" x 8<sup>1</sup>/<sub>2</sub>"

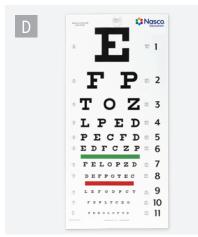
SB27614 - \$214.20













Oversized. Cut-away shows inner anatomy.

without base. Card size: 6½" x 5¼"

Removable lens and cornea.  $3\frac{3}{4}$ " x  $2\frac{1}{2}$ " x  $2\frac{3}{4}$ "

#### A. Clear Human law with Teeth

Full-size, hinged, clear cast jaw allows viewing of roots. Healthy side shows normal dentition and occlusion. Affected side shows multiple pathologies. Model: 3½" x 2¾" x 2½". Card: 6½" x 5¼". SB48717 - \$168.30

#### B. Human Ear Model

Fully assembled, full-size model shows canal and inner ear mechanisms.  $3\frac{3}{4}$ " x  $2\frac{1}{2}$ " x  $2\frac{3}{4}$ " without base. Card size: 6½" x 5¼".

SB32980 - \$109.95

D. Snellen Eye Examination Chart Wall chart for use at a distance of 20'. 11" x 22". SB16711 - \$12.00

#### C. Giant Hands-On Eyeball (5-Part)

Enlarged six times. Lens magnifies objects and forms inverted images. Remove transparent vitreous body to see light-sensitive retina. The two-page guide discusses 19 features. Mounted on wooden base. 6" x 6" x 6". SB31473 - \$332.51

#### F. Classic Eye (6-Part) Three times life size. Includes teacher's guide.

4" x 4" x 6" SB19256 - \$142.80

E. Human Eye Model

SB27236 - \$93.40







#### Nasco Human Body System Kits

Learn how the circulatory, respiratory, and nervous systems work, identify each system and its parts, and see each system in action. Includes one of each of the three kits below.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB52085 - \$140.95

#### G. Nervous System

Learn to identify the structures of the brain and the functional areas, discuss memory, and see how illusions can fool our brains.

SB51904 - \$54.95

#### H. Breathe Easy Respiratory System

Learn all the primary parts and functions of the respiratory system, understand the diaphragm, and more. A CHOKING HAZARD (2). Not for under 8 yrs. SB51905 - \$49.95

#### . Complex Circulatory System

Learn how to listen to your heart, find your pulse, and the components of the heart. ⚠ CHOKING HAZARD (1). Not for under 3 yrs. SB51906 - \$52.95





#### Nasco Human Reproduction and Development Kit Nine hands-on plastic models and replicas depict

developmental stages of human development. Four fetal replicas are magnified 10 times, and the other five are actual size. Guide provides in-depth background information and study questions, along with blackline drawings and a CD-ROM in PowerPoint format. The Life's Greatest Miracle DVD tells the story of embryonic and fetal growth.

WA25812 - \$867.95

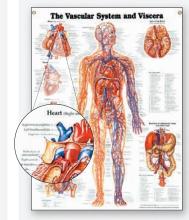


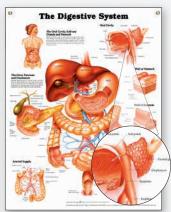
#### **Fetus Development Set**

Set of 8 models (14 pieces) on bases illustrates the detailed stages of pregnancy development. First-month embryo, second-month embryo, third-month embryo, fourth-month fetus in transverse lie position, fifth-month fetus in breech position, fifth-month fetus in transverse lie position, fifth-month twin fetuses, and seventh-month fetus. Approximately 4½" x 6" x 8" each.

SB47759 - \$292.32

⚠ See page 3 for complete Choking Hazard Label Information.





#### **Peter Bachin Anatomical Chart Series**

Lithographed in four colors with 3-D effects. Set of 10 includes Skeletal System, Muscular System, Vascular System and Viscera, Nervous System, Lymphatic System, Male Reproductive System, Female Reproductive System, Digestive System, Respiratory System, and Endocrine System. 26" x 20". Laminated.

SB25037 - \$286.00

# Anatomy & Physiology



#### Nasco Inflatable Lungs Comparison Kit with Teacher Instructional DVD

Inflatable lungs provide an impressive and unforgettable hands-on demonstration by using real swine lungs. This kit is designed to demonstrate the effects of prolonged smoking, as well as compare the differences in color and texture of a simulated smoker's lung and a healthy lung. Nasco uses a nontoxic solution that retains the texture and elasticity of fresh lungs, to preserve them. The smoker's lungs have a palpable internal tumor and a physical simulated external tumor to encourage students to feel the texture of real lung tissue and its variations. This kit includes an inflation rack assembly with tray, an air pump, a simulated healthy and smoker's lung, a dried cross section of a lung, an instructional DVD, a teacher's guide, and storage containers. The guide provides a detailed illustration of internal/external anatomy and supplemental information about lung cancer, other smoking related diseases, and air pollutants as well as guidelines for handling, use and storage of the reusable swine lungs.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. LS03769 — \$490.00







Inflated

#### A. Nasco Healthy Inflatable Lungs Kit

Students can see and learn how lungs work by inflating and deflating them with a pump. Includes an inflation rack and tray, air pump, a pair of reusable, inflatable swine lungs, a section of dried swine lung, a teacher's guide, and a container for storing the lungs. LS03765 - \$300.00

**LS03764** Nasco Inflatable Healthy Lungs Only — **\$210.00** 

#### **B. Nasco Dual Lungs Comparison Kit**

Interconnected airway system with dual trays, air pump, pair of normal inflatable swine lungs, pair of simulated smoker's lungs, dried swine lung section, and 2 guides.

LS03802 - \$540.00

**Dual Lung Rack Update Kit.** Converts inflatable lung comparison kit to dual lung rack.

LS03805 - \$85.00

#### C. Nasco Smoker's Lungs **Demonstration Kit**

Realistically stained inflatable swine lungs provide an unforgettable demonstration of prolonged smoking. Simulated internal and external tumors on each lung remind that smoking is a known cause of lung cancer. Kit includes a teacher's guide, inflation rack and tray, air pump, dried cross section of unstained lung, and simulated smoker's lung.

LS03767 - \$310.00

LS03766 Replacement Simulated Smoker's Lungs Only — \$220.00

#### **Nasco Lungs Maintenance Kit**

Includes necessary materials plus special instructions for prolonging the life of your inflatable lungs. LS03738 - \$38.50

**SB29032** Bellows Pump - **\$25.95** 



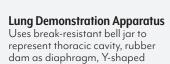
#### 9-Liter Student Wet Spirometer

Determine five different respiratory volumes: tidal volume (TV), inspiratory capacity (IC), inspiratory reserve volume (IRV), expiratory reserve volume (ERV), and vital capacity (VC). Large, easy-to-read scale graduations, larger-than-normal 9-liter capacity, disposable mouthpieces, and one-way plastic valve for sanitary classroom use. SB31479 - \$720.00



#### 3B Scientific Deluxe 7-Part Lung Model with Larynx

This first class model illustrates: two-part larynx (removable), trachea with bronchial tree, two-part heart (removable), subclavian artery and vein, vena cava, aorta, pulmonary artery, esophagus, two lungs (front halves removable), and diaphragm. Model comes mounted on a sturdy baseboard and includes key card. Dimensions:  $12\frac{1}{4}$ " x 16" x  $4\frac{3}{4}$ ". SB41144 - \$690.14



tube as trachea and bronchial tubes, and two balloons as lungs. Manipulate diaphragm to inflate and deflate balloons. 75%", 8" dia. S07746 - \$55.00





#### Life-Size Lung Model (5-Part)

Life-size model shows the following features: larynx, trachea with bronchial tree, 2-part heart (removable), vena cava, aorta, pulmonary artery, esophagus, and 2 lungs (front halves removable). Mounted on baseboard.  $4\sqrt[3]{4} \times 11^{\circ} \times 14\sqrt[3]{2}$ 

SB41444 - \$428.40



4 mouth piece holders, 4 rubber bands, and instructions. SB06915 - \$37.95

Disposable Lung Mouth Tubes. Pack of 100. SB15812 - \$20.00

⚠ See page 3 for complete Choking Hazard Label Information.

Lung Volume Bags. Pack of 4. SB51112 - \$25.00





Nasco PPE Trainer Classroom Kit

Get everything you need to help students practice the correct ways to don and doff PPE. Kit includes 20 pairs of latex-free gloves (10 medium and 10 large), 25 disposable face masks, 20 face shields, and 20 disposable isolation gowns. To download

the corresponding lesson plan, visit nascoeducation.com/lesson-plans and search U28164

NE40277 - \$65.99



**Nasco Patient Diagnostics Kit** 

Use the tools in this kit to teach students how to assess visual acuity, neurological function, reflexes, and more

NE40308 -\$20.99



**Health Careers Bingo** 

SB52268 - \$169.95

Muscle SpikerBox Kit Introduce students to electrophysiology with hands-on experiments. Kits allows students to listen to and record bioelectrical signals and display them live on a

smartphone, tablet, or laptop

Pro kits also offer USB con-

nectivity, 2 recording chan-

nels, sounds loud enough for the entire class to hear, 5 time

stamp markers for your experi-

for recording lab devices. Pairs

with SpikeRecorder free soft-

ware, which offers basic and

advanced analytics functions.

ments, and 2 analog inputs

Familiarizes students with various healthcare professions and medical equipment. For up to 30 players. △ CHOKING HAZARD (1). Not for under 3 yrs. SB40266 - \$109.95



**NEW** 

5-Minute Health **Sciences Activities** 

Gr. 7+ Filled with activity ideas, including medical ethics, healthcare services and careers, medical equipment, body systems, nutrition, and more. 50 pages. WA32531 - \$38.65



**Health Hints Game** Gr. 6-12 Learn about healthcare terminology and careers with a fastpaced game. Teams compete to guess as many word cards as they can in 60 seconds. Includes 140 two-sided cards, timer, instructions, and game bell. NE40390 — \$104.95

HEALTH HINTS

SPIKER BOX

5-Minute Racism, Diversity,

and Identity Activities Gr. 6+ Quick, easy, and effective activities to introduce lessons, reinforce learning, fill extra minutes of class time, or summarize a unit. Topics: race, diversity, personal identity and more. 50 pages. SB52825 - \$38.65



Mosby's Medical **Terminology Flash Cards** 

These 650 full-color illustrated cards are for students who want extra help memorizing prefixes, suffixes, and combining forms used to build medical terms. Cards provide

word-building examples, common medical abbreviations, and Spanish translations. Fourth edition.

⚠ See page 3 for complete Choking Hazard Label Information.

MEDICAL TERMINOLOGY FLASH CARDS

SB48058 - \$48.40



#### Stethoscope

Medium, flat chest piece (1¾" dia.) has single stem. Chrome-plated. Hard rubber ear tips.

SA01176 - \$10.95



#### **Fingertip Pulse Oximeter**

Accurately and safely measures oxygen saturation of arterial hemoglobin and pulse rate. Accommodates a wide range of finger sizes. Large LCD display with red digital readout displays blood-oxygen saturation (Sp02), pulse rate, and pulse bar. Onebutton operation, low battery indicator, and auto shutoff. Latex free. Lanyard. English/ Spanish instructions.





One-hand operation. Adult cotton D-ring cuff; black, no-stop pin, 300 mmHg gauge; separate professional stethoscope; vinyl carry case; illustrated instructions; and blood pressure chart.

SB10783 - \$23.70

**Student Blood** 

Pressure Kit



For a complete selection of health science products, visit nascoeducation.com

# **Assessing** vital signs

**▲VERIDIAN** 

**Touch-Free Infrared Thermometer** 

Accurate for both body and object/liquid

measurements. Features backlit display,

cator. No tip covers required. Latex-free.

SB50075 - \$49.30

memory recall of last 30 readings, fever alert

display icon, auto shut-off, low-battery indi-

Health Sciences Lesson Plan



To download this free lesson plan, visit nascoeducation.com/lesson-plans and search U28394.



Human Senses (Physiology) Experiment Kit

Students experiment to identify response areas of their body, and become aware of their sensory perception. They will map taste sensations and nerve endings, determine olfactory fatigue, investigate blind spots, and more. For 30 students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SA01213 - \$164.95



#### Life/form® Advanced Venipuncture and Injection Arm

Extensive eight-line vascular system for IV therapy and phlebotomy, plus sites for intramuscular and intradermal injections at primary and secondary locations. Flexible fingers and wrist, replaceable skin, and veins. Skin rolls as the veins are palpated and a discernible "pop" is felt when entering the veins. Includes simulated blood, one 3cc syringe, one 12cc syringe, needle, two fluid bags, instruction manual, and soft carry case. 5-year warranty.

· Intradermal injections

· Intramuscular injections

· Median antebrachial V.

LF01126 Dark

· Median cephalic V.

· Median cubital V.

· Replaceable skin

and veins

#### Complete venous access:

- · Basilic V. · Cephalic V.
- Digital V.
- Dorsal metacarpal V.
- Median basilic V.
- · Accessory cephalic V.
- · Extensive venipuncture system
- Flexible fingers and wrist

LF01121 Light Each - \$949.95

Thumb V.

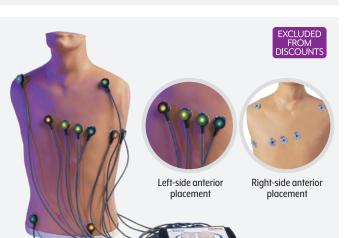
LF01250 Medium

#### Life/form® Deluxe Blood Pressure Simulator

A simulator for teaching physical assessment, this Blood Pressure Simulator helps resolve the uncertainties common in teaching students to take blood pressure. Features include:

- · Durable control unit
- · Palpable radial pulse
- Simple calibration
- · Audible discernment of the five Korotkoff phases
- · Systolic and diastolic settings
- · Adjustable volume
  - · Ability to turn auscultatory gap on or off
  - Adjustable pulse rate
  - Easy calibrated unit for use with any sphygmomanometer
  - · Ability to broadcast blood pressure sounds to an entire classroom with included speaker system
- 5-year warranty

LF01129 - \$1,640.25



#### Life/form® 15-Lead ECG Placement Trainer

Teaches up to 15-lead ECG electrode placement anatomically and provides visual feedback on the accuracy of electrode placement. . Students will learn the placement of the electrodes on the adult trainer using anatomical landmarks such as intercostal spaces, midclavicular line, anterior axillary, line, midaxillary line, and scapula. Features connection sites for four limb leads and VI through V9, with the ability to attach right- or left-sided electrodes. The trainer does not provide ECG output signals, but simulations of rhythms and hands-free defibrillation can be performed by adding any ECG arrhythmia simulator directly to your ECG monitor. Includes adult torso, 15-lead electronics box, power adapter, set of 13 leads, 50 electrodes, two C batteries, hard carry case, and instruction manual. 5-year warranty. Allow extra delivery time. LF01300 - \$4,610.95

#### VATA, Inc. Suture Skills Trainer · Realistic tissue pad consists of 5 anatomically correct tissue layers: epidermis, dermis, subcutaneous fat, fascia, and muscle Each individual layer is identifiable and has anatomically correct color, strength, firmness, and feel Unique materials used allow for SB52446 practicing superficial, subcuticular, and complex deep wound suturing

"tear through · Tissue pad moves just like real human tissue when making an inci-

With proper tension, the suture will not

sion or when suture tension is applied

Sutures can be removed and you can reuse the site numerous times · Comes with a proprietary tensioning device for use with the tissue pad, so the user can adjust the distance between the 2 cut tissue

• Offers the user a more realistic feel and increases the challenge when closing the tissue under varying degrees of tension

· Instruments are of a much higher quality than those generally supplied with suture models

Trainer comes with everything you need: o Hooked Littauer

o Tension device

SB52444 Light

Each - \$264.00

- o Needle driver o Adson 1-2 for
  - scissors o Surgical safety scalpel
- o 12 nylon sutures o Disposable skin
- stapler o Carrying case

**SB52446** Dark

#### Life/form® Venatech IV Trainer

FROM DISCOUNTS

- Easily attaches to a person's arm so student can practice venipuncture techniques on a live subject, including the proper positioning on an actual human arm, without the risks associated with puncturing living tissue
- · Ideal for practicing starting İVs
- · Includes the 3 main veins used in phlebotomy cephalic, basilic, and median cubital — all in correct anatomical

position

- Arterial vessel is present for arterial blood gas simulation · Helps students learn essential communication skills and patient interaction
- 5-year warranty

LF01162 Light Each — \$114.95 LF01163 Dark



Life/form® Canine IV Leg

A fully functional canine IV leg trainer at an affordable price. Represents the left foreleg of a medium-sized dog in the sternal recumbent position with two interchangeable sleeves — normal fur for routine blood draws and a "shaved" area for IV catheter insertion. Replaceable vein system demonstrates actual blood flashback. Great for bandaging and restraint/assistance practice as well. Ideal for veterinary schools and vet tech programs. Portable storage box with built-in IV pole, blood powder, syringe, IV catheter, and two fluid supply bags. LF01016 - \$285.00

#### **Practice Suture Kit**

Includes suture pad, 6 ½"W x 53/4"L x 1/2"H; a variety of

realistically textured common cuts and lacerations; self-healing plastic pad; 5" needle holder; toothed forceps; suturing scissors; and 3 suture varieties with needles and tub-

ing pieces. **NE40443 – \$57.95** 

#### CasPeR the CPR Dog

CasPeR the CPR Dog provides training in mouth-to-snout resuscitation with individual-use, disposable airway bags. These economical disposable shield/lung bags eliminate cross contamination between students and the need to disinfect the manikin after every use. This dog manikin can be used to teach proper hand placement for compressions, depth of compressions, airway maintenance, femoral pulse check, and adequate ventilation. Airways are changed quickly and without tools. 3-year warranty 100-5000 - \$439.00



#### **Demo Dose® Inject-Ed Injection Pad**

Compact and economical injection task trainer provides students with a realistic injection

experience in the simulation lab. IM, SQ, ID, and Z-track simulation. Resilient, durable, and self-healing surface fluid. Holds up to 20 ml. 3" dia. x 1½"H x 2¼" injection area.

PN01195 - \$33.66

# Nasco LESSON

#### **Vet Tech Surgical Instrument Kit** with Identification Flash Cards

Learning to identify veterinary instruments is made easier when users can handle each instrument and compare action, weight, and feel, Includes 29 of the most common instruments with display case and flash cards. Care and handling instructions are also included. For more information, visit nascoeducation.com.

C33788 - \$429.99



To download this free lesson plan, visit nascoeducation.com/lesson-plans and search U28164.

1.800.558.9595 | nascoeducation.com





#### **CPR Prompt® Training and Practice Manikin**

Comprehensive design allows for practice of the Heimlich Maneuver and abdominal thrusts, as well as CPR and mouth-to-mouth breathing. Realistic anatomical markings (Adam's apple, carotid arteries, navel, rib cage, chest notch) make it easy to learn correct hand placement for checking pulse, performing chest compressions, and more. Head tilt/chin lift required to open airway. Audible compression "clicker" (adult/child, only) to ensure proper technique. Lung bags are replaceable. Designed to meet American Heart Association criteria for desirable manikin features. Includes 10 face shield lung bags and insertion tool, assembly instructions, and cardboard carry case with handle. 5-year warranty

CPR Prompt® skin tones available: Blue Tan

TMAN 1 Adult/Child Single Manikin. Includes age selector dial that adjusts chest compression piston for learning adult or child techniques.

LF06001 Blue Each - \$131.17 LF06003 Tan



#### Nasco First Aid & Blood **Pathogens Deluxe Kit**

Put your students' first aid skills to the test with these kits. During first aid training, simulate injury situations that need immediate attention so they are ready to help whenever there's an emergency. For more information, visit nascoeducation.com.

NE40227 - \$249.99



#### Basic Buddy® CPR Manikin

Airway opens using the head tilt/chin lift method, and there is a visible chest rise when ventilated. Xiphoid process provides an anatomical reference point for hand placement and compressions. Features both adult and child capabilities. 5-year warranty.

10 adult/child manikins, 100 lung/mouth protection bags, 10 lung insertion tools, 2 instruction manuals, and 2 carry cases. Allow extra deliverv time. LF03695 - \$1,157.95

Basic Buddy® 10-Pack. Includes Basic Buddy® 5-Pack. Includes 5 adult/child manikins, 50 lung insertion tools, instruction manual, and 1 carry case. Allow extra delivery time. LF03694 - \$628.95

#### Basic Buddy® Single Manikin. Includes 1 manikin, 10 lung/

lung/mouth protection bags, 5 mouth protection bags, 1 lung insertion tool, and instruction manual

LF03693 - \$138.95

#### Act+Fast™ Anti-Choking Trainers

Students wear trainer to learn the Abdominal Thrust Maneuver. When performed correctly, a foam plug shoots into the air, making instruction realistic and leaving students confident. Can be used standing, sitting, on the ground, or for choking self-rescue by using a counter or chair. Each trainer has adjustable shoulder straps, air bladder for practicing Abdominal Thrust Maneuver, and 30 foam plugs (20 yellow standard plugs and 10 green easy plugs for beginners and children).

Red Trainer. Also includes foam back slap pad for additional choking rescue practice.

**SB48084** Single Trainer - \$172.00 SB51829 Pack of 4 - \$565.00



# **NEW** NE40367

#### Mini Anne Global

This low-cost CPR kit includes an inflatable Mini Anne® Personal CPR Manikin, a simulated AED trainer, and a plastic storage bag. The manikin includes landmarks for compression point location, a clicker for audible feedback on optimal compression depth, and ventilations with visible chest rise.

NE40367 - \$37.43

#### Mini Anne Lungs

Pack of 6 replacement lungs for Mini Anne® Personal CPR Manikin. NE40368 - \$15.60

#### Overall attributes

- · Lightweight approximately 28 lbs.
- Full-size adult manikin measures 58"
- · Overall female appearance converts to male with removal of wig and attachment of male genitals
- · Ideal for OBRA-required training
- Life/form® 5-year warranty

#### Visual inspection training

- · Normal and cancerous mole
- · Stage 1 sacral ulcer
- · Dilated and constricted pupils
- · Reddened skin folds
- · Major joints have natural movement to provide realistic practice of patient

#### Patient care simulation

- · Bandaging and wound dressing
- · Bed baths, hair care, and clothing changes · Denture placement and removal –
- upper and lower • Ear canal irrigation, otic drops, and
- hearing aid placement
- · Eye irrigation

- · Finger and toe manipulation with bandaging
- · Intramuscular injection sites
- Oral and nasal hygiene
- Ostomy care ileostomy and colostomy · Patient positioning and transfering
- techniques Peri and tracheostomy care

#### Life/form® Complete GERi™ and KERi™ Manikins

Includes all of the main features listed above with the addition of:

- Enema administration female only
- Gastrostomy procedures lavage and gavage
- · Internal fluid reservoirs
- · Nasogastric tube placement Allow extra delivery time.

LF04001 GERi™ - Light **LF04116** GERi™ – Medium Each — \$2,571.95

- · Pap smears and douching
- · Prostate exam Stage B
- Urinary catheterization female and uncircumcised male

**LF04020** KERi™-Light LF04121 KERi™ - Medium







# **Life/form® Complete GERi™ Auscultation Manikins**

Includes all of the main features seen on page 4 with the addition of:

#### Auscultation Sites with Heart and Lung Sounds:

- · Heart sites 6 anterior locations with 12 heart conditions
- · Lung sites 5 anterior, 6 upper posterior, 4 lower posterior, and 2 midaxillary locations with 16 lung conditions

#### **Heart Conditions:**

· Aortic regurgitation, atrial septal defect, holosystolic, midsystolic, mitral stenosis, normal,

Allow extra delivery time. 🖚 LF04003 GERi™ with Light Skin Each — \$6.437.95

PDA, pulmonary stenosis, S3 gallop, S4 gallop, systolic click, and VSD

#### Lung Conditions:

Bronchial, bronchovesicular, cavernous, coarse crackle, egophony, fine crackle, friction rub, infant, mono wheeze, normal, pectoriloguy, pulmonary edema, rhonchi, stridor, vesicular, and wheeze

**LF04118** GERi™ with Medium Skin

Connect with us on Facebook facebook.com/nascoeducation



#### 3B Scientific Patient Care Pro Training Manikin

- Train students in nursing practices, first aid, and emergency
- · Neck and all arm and leg joints can be moved into every natural position
- · Flexible connection at waist enables the back to bend
- · Injection pads allow repeated injections
- · Includes exchangeable male and female genital inserts and removable partial dentures in upper and lower jaws
- Made of durable, unbreakable, water-resistant plastic
- · Lungs, heart, stomach, bladder, and intestinal section are removable and fitted with drainage seals
- · Includes intestine tube, catheter, duodenal probe, talcum powder, petroleum jelly, and lubricant

#### Functions include:

- · Wound treatment and care (surgical staple seam, laceration, and abrasions
- Injections (intramuscular and subcutaneous)
- · Irrigations (eye, ear, nose, stomach, intestine, bladder)
- · Oxygen treatment, artificial respiration
- Personal hygiene, cleaning (removable partial prosthesis)
- Tracheotomy care Allow extra delivery time.

SB51955 - \$4.182.00



#### **Protein Synthesis Manipulatives Kit**

Features large manipulatives for demonstration and smaller manipulatives for student use of DNA, mRNA, ribosome, tRNA, and amino acid models. Demo manipulatives attach to blackboard. For assessment, each student is given a unique DNA sequence and asked to identify the resulting amino acid sequence. Includes teacher key and a kit demonstration CD. For 30 students.

SB37499 - \$362.95

#### **Dvnamic DNA Kits**

Gr. 6+ Help students better understand how the genetic information in DNA is revealed and used. Accurate and easy to put together. Students can assemble the

nucleotides, feel the hydrogen bonding of the A-T and G-C base pairs, and discover the double helical structure of DNA. Plus, they can twist and unwind the double helix to model DNA replication and RNA transcription. Each kit includes 5' hydrogen and 3' oxygen parts, oxygen atoms to model RNA; removable carbons for uracil; ATP, TTP, GTP, and CTP models; display stand; and teacher resources/lessons. Meets National Science Education Standards. For 4-8 groups of students NOTE: Only available in the U.S. △ CHOKING HAZARD (1). Not for under 3 yrs.

2 Base Pairs Kit. Includes 1 A-T and G-C base pair.

SB53358 - \$58.00

6 Base Pairs Kit. Includes 3 A-T and G-C base pairs. SB53359 - \$156.00

12 Base Pairs Kit. Includes 6 A-T and G-C base pairs. SB53145 - \$298.00







#### **DNA Starter Kit**

**Gr. 6+** Explore DNA replication and transcription with interactive foam model of double-stranded DNA and single-stranded RNA with color-coded DNA bases. Twist to transform from ladder shape to double helix. Two-group set includes 102 bases, 8 continuous gray backbones, 48 gray sugar-phosphates, and 24 lavender sugar-phosphates. Meets NGSS. & CHOKING HAZARD (I). Not for under 3 yrs. SB49639 - \$100.00



#### **Genetics & DNA Kit**

**Gr. 4+** Head into the lab for an in-depth investigation of genetics, heredity, and variation in organisms and DNA. Experiments involve isolating the DNA from a tomato in a test tube, playing inheritance games to determine how traits will be expressed, and assembling a model of DNA.

SB49267 - \$35.95



#### **RNA/Protein Synthesis Kit**

Use this 24-piece kit to make single-strand models of messenger RNA carrying the genetic code (codons) and component parts to represent transfer RNA and an amino acid. Also can be used to demonstrate the process of protein synthesis known as Translation. A CHOKING HAZARD (1). Not for under 3 yrs. SB42167 - \$50.50

#### **DNA Extraction and Isolation Kit**

DNA, RNA - Protein Synthesis Kit

students first build a DNA molecule,

to build mRNA. Students conclude by

Gr. 6+ Extract DNA from strawberries and examine physical properties. Provides everything necessary (except strawberries) to conduct two extractions. For 32 students working in 8 teams of 4.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs

SB40666 - \$127.30

SB20188 - \$299.95







#### Stick to Science — Genetic Cards

These 36 magnetic shapes represent males and females with three possible genetic combinations (affected, carriers, or not affected). Teacher's guide has actual case studies, lesson outlines, and reproducible student worksheets.

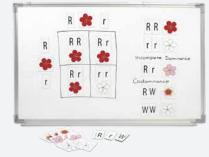
SB48332 - \$10.95



#### Individual DNA and Molecular Model Kit

Construct a model of an eight-rung ladder segment of the DNA molecule, then build a molecular model of the basic components of the nucleotides of RNA and DNA. Components are reusable. A CHOKING HAZARD (1). Not for under 3 yrs.

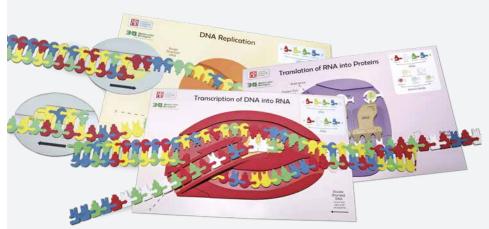
SB13744 - \$47.95



#### Stick to Science — Punnett Squares

**Gr. 7**+ Includes 56 magnetic flowers show three types of monohybrid crosses (complete dominance, incomplete dominance, or codominance). Includes teacher's guide with sample questions.

SB53071 - \$19.95



#### Flow of Genetic Information Kits

Gr. 9+ Lets students model DNA replication using color-coded, foam nucleotides and a place mat. They will be able to model replication of the leading and lagging strands of DNA, model transcription by copying one strand of DNA into mRNA using an RNA polymerase, and model translation/synthesis by decoding mRNA into protein on the ribosome place mat. NOTE: Only available in the U.S. △ CHOKING HAZARD (1). Not for under 3 yrs. **SB53360** For 1 group — \$130.00

**SB53361** For 3 groups - \$375.00



#### **Genetics of Corn Kit**

For up to 32 students working in groups of four. A complete genetics lab for advanced high school classes and up. Covers basic Mendelian genetics, including segregation and independent assortment of alleles, dominance, genotype and phenotype, expected ratios, monohybrid and dihybrid crosses, and chi-square. Kit includes eight segregated ears each of purple-yellow, starchy-sweet, and purpleyellow-starchy-sweet; eight corn parental cross cards A and parental cross cards B, 16 transparency markers, storage box, and teacher's manual. SB41056 - \$284.95











#### The Molecular Model of DNA and Replication Kit

Build an 8-rung ladder segment of the DNA molecule. Flexible model is twisted to form the double helix structure. 12 model segments can be attached to each other to make a "giant" double helix DNA model that can also be coiled and will be more than 9'L.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SB14279 - \$124.95



**Gr. 5–10** Make base pairs and combine them to make a model of the DNA double helix. Includes materials for 5 paper models for students working in groups. Includes NGSS-aligned teacher guide. NE30428 - \$34.95

#### B. Advanced miniDNA™ Model

**Gr. 9+** Shows all of the major and minor grooves. The 22 base pairs are comprised of 11 each of 4 color-coded bases. Side chain: 44 each of deoxyribose (red) and phosphate (purple). 45/16" x 175/16". Includes stand. ▲ CHOKING HAZARD (1). Not for under 3 yrs.

SB42166 - \$79.95

**12-Layer miniDNA™ Model. Gr. 9+** The 12 base pairs are comprised of 6 each of 4 color-coded bases. Side chain: 24 each of deoxyribose (red) and phosphate (purple). Approximate dimensions:  $4^{5}/_{6}$ " x  $9^{7}/_{6}$ ". Includes stand. A CHOKING HAZARD (1). Not for under 3 yrs.

SB42168 - \$37.95

#### C. DNA Model

Gr. 7+ Built to a scale of 10 cm to 1 mm. Accurately depicts a 16 base pair section of DNA. Phosphate-deoxyribose backbone and 4 bases are represented by custom plastic moldings that show molecule shapes in scale and illustrate bonding between them. Central pillar can rotate on circular stand. Remove phosphate and deoxyribose components of backbone and individual base pairs for separate examination. 24".

SB45825 - \$74.95



#### **ABO-Rh Combination Blood-Typing Kit**

All the features of the ABO Blood-Typing Kit are combined with an Rh Blood-Typing Kit, along with the addition of a Slide Guide® and worksheets. Serum does not require refrigeration and has no expiration date. Complete activity in one lab period. For 30 students.  $\triangle$  CHOKING HAZARD (1).

SB13739(A) - \$179.90





#### ABO Blood-Typing Kit

Students sample their own blood, determine their blood group, and receive firsthand awareness of tissue incompatibility. Blood serum requires no refrigeration. For 30 students. & CHOKING HAZARD (1). Not for under 3 yrs. SB13734(A) — \$124.95

Alcohol Prep Pads. 200 per box. △ CHOKING HAZARD (1). Not for under 3 yrs. SB09360 - \$9.95



#### **ABO/Rh Blood Typing Kit**

**Gr. 7+** The most procedurally accurate simulation of blood typing technique available. Students test and determine the ABO/ Rh blood types of 4 different simulated blood samples. For 30 students. **SB48262** – **\$54.50** 

Kit Refill Only SB53059 - \$30.50



# Determination of Blood Type Using Real Blood and Saliva Kit

**Gr. 4+** Students test their own saliva to determine their ABO blood type by performing titers. Titers will be performed using supplied screened and typed human blood samples. Redeem coupon for perishable components. For 30 students working in groups of 3.

SB51069 - \$169.95



#### X-Act Blood-Typing Kit (A, B, O, AB, Rh, HIV)

**Gr. 9+** Allows you to test a single "blood" sample for not only A, B, O, and AB major blood types, but also for the presence of Rh factor. All 8 blood types are represented. Screen the same "blood" sample for the presence of HIV antibody. For 3 classes of 24 students working in pairs.

⚠ See page 3 for complete Choking Hazard Label Information.

SB27471 - \$49.95



**Genetics of Blood Types Kit** Gr. 7+ Resolve a fictional paternity suit by using simulated blood to determine blood type of 4 unknown samples. For 30 students. SB46574 - \$56.95



#### Simulated Blood-Typing Kit

Simulates blood typing, but requires no blood. Allows students to visualize antigenantibody type relations and understand principles of blood typing. For 30 students working in pairs.  $\triangle$  CHOKING HAZARD (1). Not for

SB19152 - \$102.95

# INDIVIDUAL STUDENT **SCIENCE KITS**

Versatile kits are great for classroom and at-home investigations, after-school, independent study, summer school, and more

**Gr. 7+** When everyone has their own, you don't have to disinfect materials at the end of the hour or the end of the day, saving you time and hassle. With these convenient kits, you just open and go!







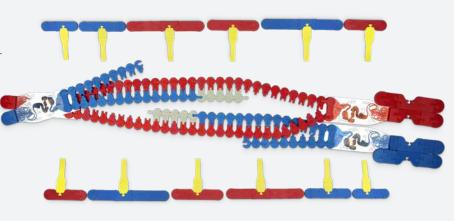


SB53423 NE30081 NE30073

Description	Students will	Product No.	Each
ABO/Rh Blood Typing	Test and determine ABO/Rh blood types of four different simulated blood samples.	SB53423	\$22.95
Kidneys & Blood Function	Create an artificial kidney model to filter a simulated blood solution, perform chemical tests to determine waste material removal.	NE30073	\$15.95
Cellular Respiration—What Sugar Does Yeast Like Best?	Expose living yeast cells to three different sugars—glucose, sucrose, and lactose—to see if they use the sugars as a food source to engage in aerobic respiration and/or fermentation.	NE30077	\$19.95
Chromatography of Plant Pigments	Use paper chromatography to separate the various pigments of a plant sample.	NE30078	\$20.50
Urinalysis Using Simulated Urine	Perform a test strip urinalysis on four urine samples, testing for glucose, protein, and ketones.	NE30080	\$27.50
Osmosis and Diffusion	Determine the effect of a solution temperature on the rate of diffusion of a solute. Then research osmosis: Gather data over a period of time in a created environment.	NE30081	\$15.25

#### **Chromosome Connections Kit**

**Gr. 6-12** Help students understand the difference between chromosomes at microscopic and molecular scale. Enhance your classroom exploration of cell cycle, cell division and genetics with this handson kit. The colorful foam pieces can also be used to: model chromosome structure and anatomy; construct Punnett squares to connect inheritance of traits to chromosomes at the molecular level; compare and contrast mitosis and meiosis; model mechanisms that contribute to genetic variation; and model chromosomal aberrations such as nondisjunctions, translocations, inversions, deletions, and duplications. For groups of 2-4 students. NE30093 - \$70.00



#### For complete descriptions, visit nascoeducation.com



#### Diffusion and Cell Size Lab

**Gr. 7+** Learn about cell size by creating simulated cells (agar blocks) of different sizes and examining how effectively a substance is able to diffuse into the cell. For 15 groups of students.

SB49031 - \$54.95



#### **Osmosis & Diffusion Kit**

Allows students to observe diffusion through a membrane in two directions at the same time. In addition, they can observe the selective permeability of a membrane. For 30 students.  $\triangle$  CHOKING HAZARD (1).Not

SA08212 - \$148.50



#### **Cell Structure Kit**

Observe the major components of plant and animal cells using simplified staining procedures.

SB08033 - \$99.50



⚠ See page 3 for complete Choking Hazard Label Information.



#### **Kidneys and Blood Filtration Kit**

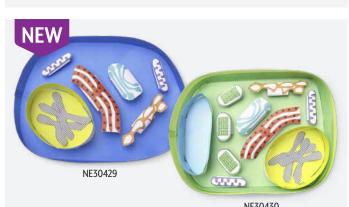
Gr. 7+ Create an artificial kidney model to filter simulated blood, then chemically test the resulting filtrate to detect any possible waste material that may have been removed by the kidney. For 15 groups of students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB47397 - \$59.95



#### Mendelian Genetics: Genes and Probability Lab

**Gr. 7+** Simulate Mendel's work in genetics and determine patterns of inheritance. Using special chips and dice, students simulate both monohybrid and dihybrid crosses. Students then determine genotypic and phenotypic ratios for select traits and compare their values to the theoretical ideal values as put forth by Mendel. Contains enough materials for 15 groups. Kit includes 15 each of red/yellow monohybrid chips (female), red/white monohybrid chips (male), colored dihybrid double dice (female), clear dihybrid double dice (male), and plastic shaker cups. A CHOKING HAZARD (1). Not for under 3 yrs.

SB49024 - \$77.95



#### NewPath Learning® Cell 3D Model Kits

Gr. 5–10 Colorful, easy-to-assemble model helps students learn about the main parts of an animal or plant cell. Each kit includes materials for 5 paper models for students working in groups. Includes NGSS-aligned teacher guide.

**NE30429** Animal Cell (Blue) — **\$34.95** NE30430 Plant Cell (Green) - \$34.95



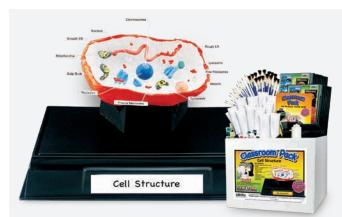


SB53098

#### **Science Learning Centers**

**Gr. 6–8** Engaging, ready-to-use learning center designed for teacher-directed instruction or independent learning working in a group of 2–4 students. Includes laminated, double-sided game board, game pieces, 30 illustrated self-checking question cards, and zippered storage pouch. Also includes 4 Visual Learning Guides with self-directed readings, easy-to-follow illustrated explanations, guiding questions, graphic organizers, and assessment review questions. For up to 4 students.  $\triangle$  CHOKING HAZARD (I). Not for under 3 yrs. **SB53097** Building Blocks of Life — **\$34.95** 

**SB53098** Study of Heredity - **\$34.95** 



#### **Cell Structure Classroom Pack**

**Gr. 3–8** Students will create their own cells in 5 sessions to reinforce the fundamental elements of any type of cell. Aids in meeting the expectations of the NSES for Life Sciences. For 12 individual or group

SB45532 - \$119.95



#### Nasco Cell Cycle Game

**Gr. 7**+ Calculate the possible mutations that may have occurred in an adult stem cell of a fictional character based on the outcomes of a narrative containing character's life choices, family history, and background. Correlates to CCSS and NSTA Standards.

SB51706 - \$62.95



#### 4D Science™ Cell Complete Model Set

Gr. 5–8 Assemble models to better understand composition and structure of plant and animal cells. Each model features detailed parts and transparent outside for viewing internal structures. 16". A CHOKING HAZARD (1). Not for under 3 yrs.

SB51409 - \$64.95

Animal. 26 detachable parts. SB49141 - \$35.95

**Plant.** 24 detachable parts. SB49142 - \$35.95

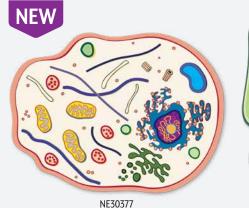


Simple for elementary level, yet comprehensive enough for middle school. Made of resilient, nontoxic EVA foam. Includes animal and plant cell models listed below. Each hands-on model comes with a detailed teacher's quide including 5 inquiry-based lab activities, reproducible worksheets, assessment ideas, and more.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

#### SB40956 - \$154.95

**Animal.** Topics include cell structure and function, osmosis, eukaryotes, bacteria, and more. SB31407 - \$85.95

**Plant.** Topics include cell structure and function, osmosis, photosynthesis, pigments, and more. SB31408 — \$85.95





Vibrant transparencies allow you to build the cell one layer at a time so you can focus on each organelle. The cell wall and membrane doubles as a clear tray that holds transparencies in place. Each kit includes tray and 9 transparencies.

NE30377 Animal Cell — \$14.99 NE30378 Plant Cell - \$14.99

Rovlco® Cell Builders



#### Genetics I Kit

Become familiar with some human genetic traits and characteristics. Understand inherited differences.

C32877 - \$126.95



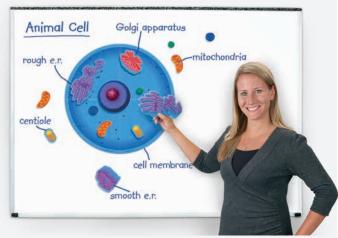
in each cross section is labeled, the other side can be used for guizzes. Cross sections identify key organelles and their functions and comes with guide.

SB42004 - \$39.50

Cross Section Models

**SB42003** Animal Cell (Blue) - \$21.00 **SB42002** Plant Cell (Green) - \$21.00

 $\triangle$  See page 3 for complete Choking Hazard Label Information.



#### Magnetic Animal Cell Model

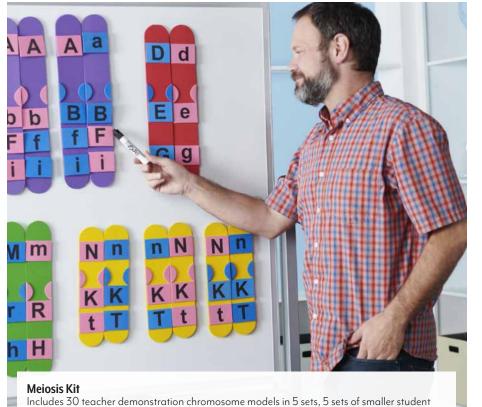
Cell structures are printed on raised foam magnet for a 3D effect. Coordinates with animal foam cell model to the left. Includes guide. SB48210 - \$23.95

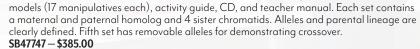


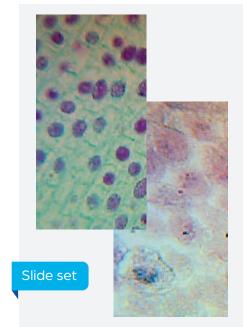
#### Mitosis Manipulatives Kit

Demonstrate all 4 stages of the cell cycle with 66 oversized teacher manipulatives for use on a magnetic dry erase board, 5 sets (85 pieces) of smaller student manipulatives for a class of 30, detailed instructional CD, and activity manual.

SB49161 - \$385.00



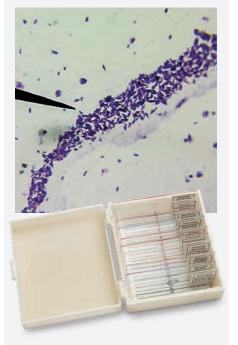




#### Fish and Onion Mitosis Slide Set

Compare animal against plant mitosis. Allium (onion) slide shows root tip and all stages of mitosis present. Whitefish slide shows a section of blastodisc for animal mitosis demonstration. Set of 2.

SL10290 – \$22.25



#### Deadly Human Diseases — Set of 10 Slides

Explore cellular structures and visible qualities of anthrax, tetanus, botulism, and more. Stored in a slotted plastic container. SB52191 — \$76.00



#### Normal Mitosis Kit

Make stained microscope slides of a root tip that has been pooled to ensure students can observe cells undergoing mitosis. Students not only observe the presence of chromosomes in cells and the stages of mitosis, but also gain experience in microtechnique and staining. For 30 students.

Δ CHOKING HAZARD (I). Not for under 3 yrs.

SA08203 - \$244.00



#### Outbreak!

**Gr. 6+** Simulation of how disease spreads. Documentation in the kit allows the teacher to substitute flu, hepatitis, or any other virus or bacteria as a causative agent. Ideal for biology, health, or family life courses. Enough material for 2 classes of 24 students working in pairs. No actual bacteria or virus is used in the simulation. **SB46410 – \$73.80** 



#### Natural Selection and Antibiotic-Resistant Bacteria Kit

Models the effects of antibiotics on disease-causing bacteria. See how more resistant bacteria are selected if antibiotics are not taken properly.  $\triangle$  CHOKING HAZARD (I). Not for under 3 yrs. SB42898 — \$101.95



#### AIDS and STD Transmission and Control (A Simulation)

Illustrates how easily sexually transmitted diseases can infect teenage populations, as well as the permeability and effectiveness of latex barriers in preventing STDs. For 3 classes of 30 students working individually and in teams. & CHOKING HAZARD (I). Not for under 3 yrs.

SB26208 — \$289.95



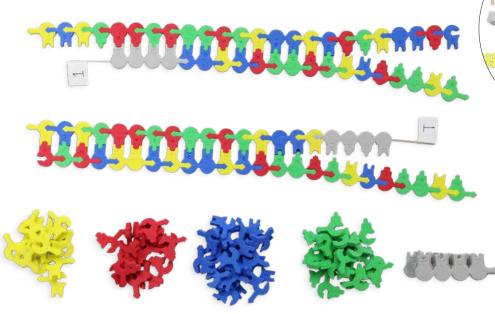
Nearly invisible in ordinary light, Glo Germ<sup>TM</sup> (fluorescent plastic particles) glow under UV light. Used as a graphic illustration to show where bacteria can hide, the Glo Germ<sup>TM</sup> powder and oil reveal areas most often missed in hand washing. Can be used to demonstrate cross contamination and surface cleaning. Kit includes a hand-held 21 LED ultraviolet flashlight (requires three AA batteries, included), an 8-oz. bottle of Glo Germ<sup>TM</sup> oil (approximately 75-100 demos), a 1.9-oz. bottle of Glo Germ<sup>TM</sup> powder (approximately 75-100 demos), and a translucent plastic case.

#### WA28161 - \$166.95

**Glo Germ™ Kit.** Identical to the kit above (WA28161), except with a 9 LED ultraviolet flashlight.

WA28160 - \$114.95

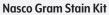
Glo Germ™ Powder. 4-oz. bottle (approximately 150-200 demos) WA19097 — \$20.50 Glo Germ™ Oil. 8-oz. bottle (approximately 75-100 demos). WA19096 — \$21.50





#### **Biotechnology Kit**

**Gr. 6-12** With one, easy-to-deploy kit, your students will learn multiple biotechnology concepts, such as diagnostics, forensics, and bacterial transformation. Color-coded foam nucleotides allow students to model: polymerase chain reaction and how flanking primers result in the exponential amplification of a short product; the Sanger DNA sequencing method using chain-terminating fluorescent dideoxy nucleotide analogs; and DNA cloning using restriction endonucleases to cut DNA at specific sequences. Each kit serves 2-4 students. NE30094 - \$109.00



Learn to differentiate between Gram-positive and Gram-negative microorganisms. Includes 30 ml each of Crystal Violet Solution, Gram's lodine Solution, Alcohol/Acetone Solution, and Safranin (counter-stain) Solution. SB30104 - \$29.95









#### Introduction to Microbiology: Bacterial Growth and Staining

Gr. 7+ Sample and grow bacteria, then learn techniques for studying bacteria. Perform two staining techniques on bacterial cells to study morphology and to determine if collected bacteria are Gram-positive, Gram-negative, or both.

SB48225 - \$86.50



#### A. Ready-To-Use Prepared Media

The most commonly used media for the culture of bacterial and fungal organisms. Sterile, dated media plate. 100 x 15 mm. 10 plates per unit. Shipped Monday through Wednesday only. Store at 2°-8° C. Allow extra delivery time.

**Z13903** Nutrient Agar Plates — **\$19.95 Z13905** Tryptic Soy Agar Plates — **\$19.95** 

#### B. Student Bacteria Experiment Kit

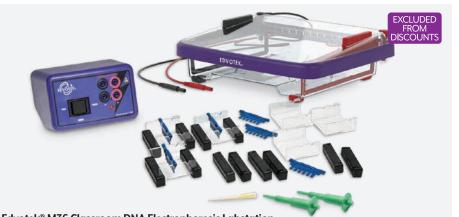
**Gr. 8+** Conduct bacteria experiments, including clean hands vs. dirty hands, dog mouth vs. human mouth, clean mouth vs. dirty mouth, and testing common items around the school or home. For individual experiments or can be used with 4 groups of 5–6 students.

SB39237 - \$46.95

Prepared Nutrient Agar Only. 200 ml. SB51073 - \$13.95

#### C. Inoculating Loop

3"L, 25-gauge Nichrome wire with loop at one end. Other end mounted on 8" aluminum handle. SB47542 - \$1.95



Edvotek® M36 Classroom DNA Electrophoresis Labstation

M36 HexaGel<sup>TM</sup> electrophoresis apparatus, 6 trays (7 x 7 cm), DuoSource<sup>TM</sup> 150 Power Supply (150V for 1 or 2 units), 2 fixed-volume mini pipettes (40  $\mu$ l), micro pipette tips (1-200 $\mu$ l/2 racks of 96), and DNA fingerprinting classroom kit. SB45632 – \$684.00



Edvotek® M12 Dual Gel **Electrophoresis Apparatus** 

Run the full spectrum of horizontal electrophoresis experiments. Two standard-length gel trays (7 x 7 cm) for experiments that require less separation, or 1 long gel tray (7 x 14 cm) for those that require more. For 1 or 2 groups. Also has 2 six-tooth combs, 2 tooth combs (8/10), and 4 rubber end caps. SB45606 - \$205.95



#### Agarose for Electrophoresis Stations and Units

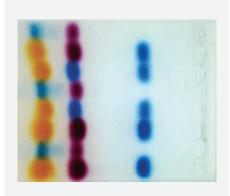
Prepare your own agarose gels at any concentration with the addition of TBE running buffer. Can be stored at room temperature for years. Low EEO. 25 g. SB51075 - \$60.95



#### **Electrophoresis Stations Classroom Kit**

Electrophoresis apparatus, power supply, 2 fixed 50 µL pipettors, and 2 racks of 96 universal tips (10-200 µL)

SB49183 - \$749.95



#### An Introduction to Electrophoresis

Identify unknown dye molecules by comparing their electrophoretic migration with the migration of known dyes, then identify dye molecules that bind to DNA and determine the mechanism. For 8 groups of students in 2 lab periods (40–60 minutes).

SB49181 - \$59.95



**Electrophoresis Station** 

For up to 32 students. Includes 4 electrophoresis apparatuses, 2 power supplies, and 4 adjustable volume pipettors (5-50  $\mu$ L). Four casting trays (7 x 14 cm).

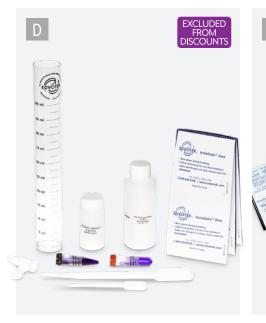
SB49186 - \$1,849.95

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#### A. DNA Electrophoresis Labs and Simulations **Gr. 5+** For use with the DNA Electrophoresis Station (SB45632) on p. 53.

The Mystery of the Crooked Cell. Demonstrates detection of the mutation that causes Sickle Cell Anemia. Use electrophoresis to separate dyes that represent patient samples and controls. For up to 10 groups. 45-minute lab.

SB45630-\$85.00

**DNA Fingerprinting.** Compare crime scene DNA with suspect DNA. For 8 groups. 60-minute lab. SB45631-\$100.00

**In Search of My Father.** Solve the mystery of two boys separated from their parents a decade ago. Their biological mother is identified by mitochondrial DNA and their biological father from chromosomal DNA. For 10 groups. 45-minute lab. SB45636 - \$65.00

#### B. DNA Fingerprinting by PCR Amplification

Uses PCR to amplify human DNA obtained from crime scenes. Required but not included: electrophoresis apparatus, white light box, and microwave or hot plate. For 8 gels; complete in 45 minutes.

SB53004 - \$100.00

#### C. Clear Acrylic Pipette Rack

Sleek pipe rack holds 5 pipettes. 11" x 6¼" x 5½". SB47099 - \$33.95

#### D. Edvotek® DNA Fingerprinting **Using Restriction Enzymes Kit**

Cut DNA with restriction enzymes, then compare banding pattern of crime scene DNA vs. that of 2 suspects using agarose gel electrophoresis. Some components require freezer and refrigerator storage. For 6 groups. Allow extra delivery

Z50738 - \$130.00

#### E. Whose DNA Was Left Behind?

Use dye simulations of two DNA samples from a crime scene to identify the criminal from four suspects. Requires an electrophoresis unit. SB26186 - \$65.00

#### F. Edvotek® Cholesterol Diagnostics

**Gr. 8+** Demonstrates a simulated genetic test for familial hypercholesterolemia (FH) in which patients are tested for a DNA polymorphism linked to the FH gene. Required but not included: DNA electrophoresis, micropipets (5-50 µl, optional), white light box, and microwave or hot plate. Storage of included Ready-to-Load QuickStrip™ samples in refrigerator is recommended. For 8 gels (45 minutes). SB53146 - \$100.00



#### Ready-to-Load™ DNA: Detection of Mad Cow Disease

Examine simulated PCR products from several feed mills, to determine any possible violations of the 1997 ban that ended the practice of including animal parts in cattle feed. Contains enough materials and instructions for 6 gels (6 lanes each) with InstaStain® Blue or FlashBlue® stain

C26406-\$100.00



#### Do Onions, Strawberries and Bananas Have DNA? Kit

Make DNA models then extract DNA from onions, strawberries, or bananas. Required but not included: fruits or vegetables and 95–100% isopropyl alcohol. Time: 30 minutes. For 10 groups. SB25276 - \$75.00









#### G. Principles and Practice of Agarose Gel Electrophoresis

Demonstrate how electrophoresis separates molecules on the basis of size and charge. Required but not included: electrophoresis apparatus, power supply, and microwave or hot plate. For 8 groups; complete in 45 minutes. SB51181 - \$65.95

#### H. Transformation of E. *coli* with **Green and Blue Fluorescent Proteins**

Transform bacteria either with GFP, BFP, or both. Required but not included: water bath, 98.6° F (37°C) incubation oven, microwave or hot plate, and long-wave UV lamp. Some components require refrigeration and freezer storage. For 10 groups; complete in 50 minutes and grow overnight.

SB51180 - \$139.95

#### . Pipette Tips

Nonsterile replacement tips for micropipettes and mini pipettes.

Micropipette Tips (1-200 µl), Yellow **SB46000** Bag of 1,000 - \$23.95

Micropipette Tips (100-1,000 µl), Blue **SB46001** Rack of 100 - \$12.95

#### . Genes in a Tube™ Classroom Pack

Teach students how to extract and precipitate their own DNA. All you need is ice cold alcohol (95% ethanol or isopropyl alcohol) and a 56° C water bath. For up to 26 students. 30-minute

SB45634 - \$120.00

#### K. Variable-Volume Fully **Autoclavable Micropipettes**

Built-in tip ejectors. Autoclayable tip cones. Works on a click-stop digital system. Easy to calibrate, maintain, and disassemble for autoclaving. Individually calibrated according to ISO 8655 standards (calibration certificate included).

**20 \mul.** Volume range of 2-20  $\mu$ l in increments of 0.1  $\mu$ l. A volume of 2  $\mu$ l is accurate to +/- 5%; a volume of 20 ul is accurate to +/- 1%.

#### SB51312 - \$136.95

**50 \mul.** Volume range 5-50  $\mu$ l in increments of 1.0  $\mu$ l. A volume of 5  $\mu$ l is accurate to +/- 2.5%; a volume of 50 µl is accurate to +/- 0.7%.

SB51313 - \$136.95

 $100~\mu l.$  Volume range  $10\text{--}100~\mu l$  in increments of  $1.0~\mu l.$  A volume of  $10~\mu l$  is accurate to +/- 2.5%;a volume of 100  $\mu$ l is accurate to +/- 0.8%. SB51314 - \$136.95



Forensics is a great way to draw students into making scientific inquiries. Through handson lessons and high-interest scenarios, they will apply critical-thinking and problemsolving skills to find evidence and crack a case.

# **Quick Index**

Forensics 56–63



#### Nasco CSI Forensics Classroom Kit

Gr. 5–8 Immerse students into scenarios such as a classroom break-in, interrogation, and vending machine caper. Perform fingerprinting, simulated blood patterns, fabric testing, plaster casts, and more. For 24 students. Allow extra delivery time. 🌦 🛆 CHOKING HAZARD (1,2). Not for under 3 yrs. SB52385 - \$615.00



#### **Complete Crime Scene Set**

Fascinating fictional scenarios allow students to solve mysteries and prevent crimes. Includes one of each kit listed.

SB51268 - \$289.95

Crime Scene 1: Lois McArthur. Gr. 7+ Look for a culprit in a mock murder case. For 2 classes of 24 students working in pairs to perform hair, fiber, blood, handwriting, and fingerprint tests. SB28531-\$79.95

Crime Scene 2: Kidnapped! Gr. 6+ Investigate a kidnapping to uncover a missing heir. Perform blood, fiber, paper, ink, and fingerprint analysis tests. For 3 classes of 24 students working in

SB42186 - \$79.95

Crime Scene 3: Drug Bust! Gr. 6+ Solve a series of drug-related crimes. For 3 classes of 24 students working in pairs.

SB42185 - \$79.95

Crime Scene 4: Terror from Paradise. Gr. 8+ Students must thwart a terrorist plot by performing customary terrorism detection tests. For 3 classes of 24 students working in pairs.

SB51267 - \$79.95



#### Rogue Rodent Mystery: A Study in Forensic Science

Gr. K–1 Students work together to determine which of 4 suspects stole Alice the guinea pig from her classroom. Lessons have students investigate the crime scene, interview suspects and witnesses, examine evidence, and more. 10 lessons; approximately 1 hour each. For 30 students.

**Classroom Kit.** Includes 103-page instructor's **Summer Camp Kit.** Includes 103-page instructor's guide, introductory video on DVD, teacher resource CD, preprinted student handouts, and all needed supplies. Allow extra **EL16550 – \$350.00** delivery time.

guide, introductory video on DVD, teacher resource CD, and essential supplies.

Z51518 - \$700.00

#### Missing Money Mystery: A Study in Forensic Science

Gr. 2–3 Work to solve the mystery of the stolen funds and determine the guilty party. Lessons have students collect evidence from the crime scene and examine evidence using real forensic techniques such as forensic fiber analysis, lifting lip prints, and exploring genetic markers. 12 lessons; approximately 1 hour each. For 30 students.

**Summer Camp Kit.** Includes 107-page instructor's guide, teacher resource CD, preprinted student handouts, and all needed supplies. Allow extra delivery time. Z51519 — \$700.00

EL16551 - \$374.95

Cookie Jar Mystery: A Study in Forensic Science
Gr. 4–5 Students will examine and analyze forensic evidence to solve the mystery of the broken cookie jar. Facilitates scientific observation, sample examination, analysis, lab work, testing, and more. 12 lessons, approximately 1 hour each. For 30 students.

Summer Camp Kit. Includes 110-page instructor's guide, teacher resource CD, preprinted student handouts, and all needed supplies. Allow extra delivery time. Z51520 - \$700.00

guide and essential supplies.

Classroom Kit. Includes 107-page instructor's

handouts, and essential supplies.

guide, teacher resource CD, preprinted student

**Classroom Kit.** Includes 110-page instructor's EL16549 - \$350.00



#### Kemtec<sup>™</sup> Analysis of Drugs & Poisons Kit

Gr. 9+ Identify some common over-thecounter drugs, learn test procedures for "controlled substances," and analyze simulated body fluids, such as urine. A CHOKING HAZARD (1). Not for under 3 yrs.

SB49875 - \$269.95



#### **Forensic Toxicology**

**Gr. 6+** Students will use different lab techniques to determine the presence of alcohol, drugs, and pain medications in the simulated urine samples of suspects. Includes teacher's manual and student study guide copy-masters. Enough materials for 30 students.

SB53066 - \$151.95



#### Innovating Science® Forensic Analysis of Fabric and Fibers Kit

**Gr. 5+** Introduce students to fabric and fiber analysis with experiments covering cloth weave identification, microscopic fiber analysis, burn testing, and chemical analysis. For 10 groups.

EL15811 - \$147.95



#### **Contamination of Carter Creek Environmental Forensics Kit**

**Gr. 6+** The creek near a paper and plastics business has been polluted. Find the nature of the contamination and locate its source. For 24 students working in pairs. SB50011 - \$74.95

#### Forensic Drug and Poison Analysis: Chemistry and Toxicology

Gr. 9+ Perform chemical tests on drugs and poisons, identify unknown samples based on test results, and examine urine for evidence of heavy metal poisoning using chromatography. For 15 groups.

SB51984 - \$199.00

Refill (Chemicals Only) SB51985 - \$150.00

57

**Forensics** 

#### **Forensics Using** Simulated Blood

Gr. 7+ Students first use a blood test to determine if a substance on a stained piece of cloth may be blood, and then determine the blood type of a sample collected. Students compare their results to samples provided from 2 suspects. For 10 groups.







#### Innovating Science® Chemiluminescence in Blood Stain Detection Forensic Kit

Gr. 6-8 Use this forensic kit to show students how luminol is used in crime scenes every day. Special luminol formula does not require a separate catalyst. Rehydrate and use with the simulated blood hemoglobin. Kit contains materials for several demonstrations. Includes NGSS-aligned teacher guide. NE30419 - \$30.00



#### **Forensic Dental Analysis**

Introduce students to various techniques used in forensic dentistry while they try and identify the suspect in the case. For up to 30 students.

SB51977 - \$345.00



#### **Forensic Chemistry of Blood Types**

Gr. 6+ Determine blood type of 4 simulated samples (victim, suspect #1, suspect #2, and crime scene) to figure out whodunit. For 15

SB43607 - \$58.95



#### Odontology (Bite Out of Crime)

Gr. 9+ Learn how dental records are used as a form of positive identification with these 7 experiments. Meets National Standards for grades 9–12.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB47538 - \$414.95



#### Forensic Chemistry: Hair Analysis

**Gr. 6+** Discover how forensic scientists use hair to assist in solving crimes. For 15 groups. SB43606 - \$79.95



Help students learn a little about the discovery of DNA and DNA structure while they discover the nature of genetic inheritance and the role of DNA and proteins in genetic expression. Great option for distance learning or in no-share classroom environments. How it works:

- Students will use biological detergents, enzymes and ethanol to isolate DNA from plant material you supply
- · Kit includes enough materials to run the experiment twice or for 2 students to use and an instruction manual

NE30072 - \$9.15



#### Innovating Science® Forensic Case Study: Drugs - Small Town, Big Problem

Gr. 6–12 In this activity, students must assist the police in identifying an illicit drug distributor by analyzing a variety of forensic evidence, including fingerprints, unknown powders, urine 15 groups of students. Includes teacher's guide and student analysis copymasters.

The Case of the

Missina Mascot

NE30420 - \$86.50

NEW

#### Innovating Science® Forensic Case Study: Murder at Eagle Nest Harbor

Gr. 6-12 Students take on the role of a forensic technician as they analyze hair, fiber, fingerprint, blood, and handwriting evidence to help identify a murderer. Kit contains materials for specimens, and more. Kit contains materials for 15 groups of students. Includes teacher's guide and student guide copymasters.

NE30421 - \$91.95



#### The Case of the Lost Skull

from check forgery to mur-

⚠ See page 3 for complete Choking Hazard Label Information.

sheets. 288 pages.

SB39171 - \$39.95

Gr. 5–8 An animal skull has been found with money stuffed inside and potential evidence in the area. Students analyze fingerprint, blood, hair, fiber, imprint, and documentation evidence over the course of 5 days. For 30 students. Requires a microscope (not included).

CRIME SCENE **Crime Scene Investigations Gr. 6+** Solve crimes ranging der. 68 lessons with teacher background info and activity

### flame test. For 30

SB42519 - \$224.95

# The Case of the

students. SB42521 - \$224.95

staff members took the cookies. Clues include a stained ransom note with envelope, white powder, and soil. For 30 students. Requires a microscope (not included)



Kidnapped Cookies Gr. 5–8 Figure out which

SB42523 - \$224.95



# THE MYSTERY OF LYLE AND LOUISE KITS

**Gr. 7+** Premier forensic science curriculum is comprised of independent, hands-on laboratory kits. Each kit allows students to process different evidence from multiple crime scenes in a complex murder mystery scenario. Aligned with NSES. For up to 30 students working in 6 groups.



Identify which body is Louise using DNA typing technology. Experiment with 3 different methods of DNA analysis. Allow extra delivery time. Z46029 - \$189.00





#### **Blood Spatter**

Discover the relationship between height and angle of impact and the size and shape of blood spatter. Build a mathematical model to apply to blood spatter patterns and perform experiments to find the point of impact. SB47779 - \$195.00



#### **Glass Fragment Identification**

Microscopically determine the refractive indices of several known types of glass, then compare glass fragments from a crime scene to a potential source.

SB49169 - \$135.00



Students will take casts of their own teeth in wax, identify their teeth, then solve a case using bite mark analysis.

SB47782 - \$179.00



Get 12 engaging experiments in one convenient bundle!

#### **Innovating Science® Forensic Science Lab Activities - Complete Set of 12**

**Gr. 6–12** Introduce your students to the basics of forensic investigation with this set of 12 lab activities. Students will work with several different types of possible evidence, such as fingerprints, blood, and gunshot residue. Each kit contains materials for 15 groups of students. Allow extra delivery time.

NE30422 - \$774.95

#### Innovating Science® Forensics Mastery Set

Gr. 6-12 Get all the materials needed to introduce students to the forensic analysis of hair, fingerprints, soil and minerals, drugs and poisons, and documents. Includes 5 kits, teacher's quide, and student study guide copymasters. Contains materials for 30 students working in groups. Allow extra delivery time.

NE30423 - \$659.95



#### **Forensic Science: Introduction** to DNA Fingerprinting

Gr. 4-8 Begin with a crime scene, an eyewitness report, and "video stills," then construct a model of a "chromosome" with color-coded "genes" representing some physical traits of the suspects. 5 activities. For 15 groups of 2. Materials are reusable. A CHOKING HAZARD (1). Not for

SB27541 - \$281.10





#### **Gunshot Residue**

Perform a series of tests to determine if powder from several surfaces is gunpowder, then learn how to analyze gunpowder with a scanning electron microscope (SEM). SB48523 - \$179.00



#### **Questioned Documents Analysis**

Engage in a handwriting analysis using thinlayer ink chromatography to create an ink profile for suspected forged documents. SB47781 - \$184.00



#### **Footprint Analysis**

Students will compare their own height with shoe size and stride length, then use that knowledge to determine individual characteristics about shoe prints of a suspect (or suspects) at a crime scene. SB48521 - \$160.00

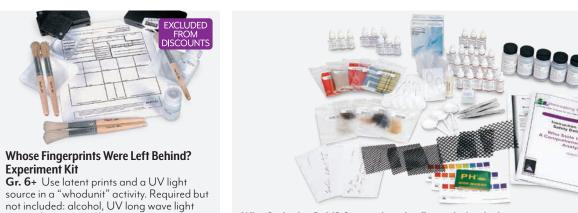
SB39287 - \$79.95

**Experiment Kit** 

source (mineral light), safety goggles, and

⚠ See page 3 for complete Choking Hazard Label Information.

a towel or washcloth. 50 minutes. For 10 lab



#### Who Stole the Gold? Comprehensive Forensic Analysis

Gr. 9+ Students help figure out which of 4 suspects is responsible for stealing the gold by analyzing soils, minerals, documents, fabrics, fibers, blood, fingerprints, and hair. For 15 groups. SB51979 - \$173.95





#### **Nasco Latent Fingerprint** Kit and Poster Set

SB51457 - \$54.95

Illustrates the 3 main fingerprint patterns (whorl, arch, and loop) with 3 laminated posters (11" x 16½" each) and 3 double-sided TearPads<sup>TM</sup> (50 sheets, 8½" x 11" each). Also includes latent fingerprint kit. SB52384 - \$83.95

Latent Fingerprint Kit Only. Includes 2 oz. bottle of bichromatic magnetic fingerprint powder, magnetic powder applicator brush, 1½" x 360" roll of clear fingerprint lifting tape, and a pad of 100 glossy 3½" x 5" latent print backing cards. Comes in a sturdy, protective carrying case.



**Basic Black Powder** Fingerprint powder for nonporous surfaces.

SB51360 - \$11.95



Includes 1-oz. bottle of bichromatic magnetic fingerprint powder, magnetic powder applicator brush, 360"L x  $1\frac{1}{2}$ "W roll of clear fingerprint lifting tape, 2-oz. clear specimen jar with cap, and a pad of 100 glossy  $3\frac{1}{2}$ " x 5" latent print backing cards. SB51456 - \$59.95

Fingerprint Lifting Tape Only. Lifts powdered fingerprints. 360" x 1½" roll.

SB51379 - \$11.95

Magnetic Applicator Only. For use with magnetic fingerprint powder. Cluster of powder forms at the end of the wand. Doesn't damage or scratch latent prints. SB51370 - \$27.95

Latent Print Backing Cards Only. Glossy white cards to preserve and document latent prints. 3½" x 5". Pad of 50. SB51369 - \$7.95





**Inking Foils** 

High-grade polyester film coated with a thin layer of fingerprint ink. Peel back to expose ink. Prints are clear and sharp. Reusable foils. Pack of 200; 1" x 5" SB51368 - \$26.95



#### **Fingerprint Brushes**

For use with regular (non-magnetic) fingerprint powders of all colors. Comes in clear plastic tube

A. **Regular.** Soft, high-grade goat hair. Bristle length 1¼", overall length 6¼". SB51372 - \$4.95

B. Latent Plus. Non-abrasive brush with soft fiberglass bristles. SB51376 - \$11.95

bristles that get softer with each use. Overall length 6½" SB51378 - \$15.95

C. **Zephyr.** Made from thousands of fiberglass

**Fingerprinting Supplies** Perfect for properly documenting fingerprints. **Plastic Fingerprint Ink.** "Inkless" pad leaves a crisp, clear imprint, never smears, and dries instantly. 1,200 imprints per pad. SB49300 - \$8.50 Dark Ink Fingerprint Pad. Very clear, crisp

**Applicant Record Cards.** Accepted by law enforcement agencies as a fingerprint record card and also used for employee applications by schools, banks, hospitals, security agencies, and more. Pack of 100 cards printed in process blue on 110-lb. index card

imprints. Leaves very little residue on fingers.

Dries instantly. Doesn't smear.

SB49304 - \$35.95

stock.

SB49301-\$10.25



#### Clear Evidence Jars

Clear plastic jars with tight-fitting, lined screw-top lids.

Product No.	Volume	Each	
SB51385	2 oz.	\$1.00	
SB51386	4 oz.	\$1.50	
SB51387	8 oz.	\$2.15	



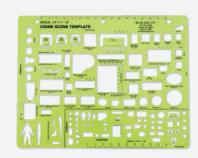
**Forensic Slide Set** 

17 prepared, labeled slides include digestive system, connective tissue, human blood, nerve tissue, and more. Store in slotted plastic container. SB52190 - \$41.95



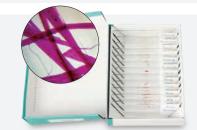
#### Shirt Pocket Long Wave UV Lamp

Spectroline UV-4B light, wrist strap, and instructions. 365 nm wavelength.  $64^{\circ} \times 21^{\circ} \times 34^{\circ}$ . Uses 4 "AA" batteries, sold separately. SB51392 - \$60.95



#### **Crime Scene Template**

Draw crime and accident scenes to scale. Furniture and plumbing cutouts in 2 scales: 1/4":1 ft. and 1":10 ft. 8½" x 11" SB51380 - \$25.95



#### Textile Fibers Slide Set — Student Grade

Includes 12 prepared 3" x 1" glass slides featuring stained specimens studied in life science. Cotton fibers, hemp fibers, nylon fibers, wool fibers, silk fibers, sheep hair, and 6 other specimens. Subjects in set may change

SL10007 - \$27.95



Emits a blue light in the 470 nm range. View fluorescence from bodily fluid stains and fluorescent powdered fingerprints. Approximately 10 hours of continuous use. LED light source rated for 10,000 hours of use. 6½" SB51394 - \$69.95



**Crime Scene Barricade Tape** Comes in dispenser box. 1,000' x 3". SB49303 - \$29.95



#### Hair Types Slide Set

Samples from humans and animals including dog, w.m.; deer, w.m.; horse, w.m.; human, 3 colors, w.m.; mouse, w.m.; cat, w.m.; woolly mammoth, w.m.; hair, 3 types (human, cat, sheep), w.m.; human, 3 types (straight, curly, gray). Set of 9.

SB51053 - \$23.95

nascoeducation.com | 1.800.558.9595

#### Osteometric Board

Gr. 9+ Lightweight styrene measuring board with slider and 60 cm scale. Bone not included. SB52129 - \$76.95







Dissection offers plenty of handson opportunities to see, touch, and explore the inner systems of preserved specimens firsthand.

As your students use dissection materials and tools in the lab, they may be inspired to pursue careers in medicine, veterinary care, biology, and more.

# Quick Index

Specimens 65–80 **Tools** 81–83

Supplies 84–85

# THE SAFEST DISSECTIONS START HERE



Every specimen in this catalog has been prepared with NASCOGuard® — our nontoxic, low-odor humectant fluid that exceeds OSHA standards



#### 99.7% formaldehyde free

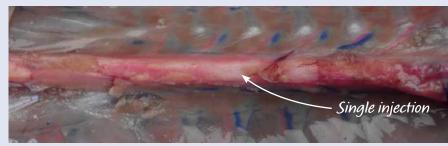
Our skilled technicians remove the original formaldehyde fixative in a series of water baths, then perfuse the specimens with propylene glycol to inhibit the growth of decay organisms, ensure moist specimens, and lower the vapor pressure of any residual formaldehyde.

#### Shelf life guaranteed indefinitely

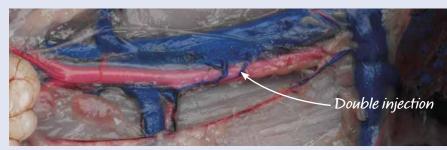
NASCOGuard® specimens will remain usable indefinitely when stored in the original sealed packaging, so you can be confident of consistent results with expertly preserved specimens.

#### Three levels of color-coding

Key structures are injected with colored latex for clear and visible differentiation of organs and structures, providing an enhanced learning experience.



· Arteries shown in red



Arteries shown in red

Veins shown in blue



· Arteries shown in red

· Veins shown in blue

Hepatic portal system in yellow

#### 200+ premium-quality specimens

We obtain our specimens through professional collectors, by-products of stockyards, and the food industry. All of these are processed and packaged by skilled technicians in our Wisconsin facility. We're licensed and/or governed by the U.S. Fish and Wildlife Service, the U.S. and Wisconsin Department of Agriculture, and the Wisconsin Department of Natural Resources.



#### Cause of Death Autopsy Kit

Students will follow the steps a medical examiner would take as they conduct an authentic forensic autopsy. A complete activity guide will take students through step-by-step instructions of the medical examiner process. The 3 fetal pigs represent victims with stab wounds, gunshot wounds, or a broken back. Use the scientific method in real-life applications as your students investigate the demise of the pigs. Kit includes three 10" to 13" pigs, suture needle, nylon thread, data cards, bags, and a complete activity guide

LS03825 - \$185.00

**Refill Kit.** 3 pigs and data cards. **LS03825(CB)** – **\$125.00** 

# **HOW TO STORE AND DISPOSE OF YOUR NASCO** PRESERVED SPECIMENS

When your specimens arrive, keep them at room temperature and in the shipping bag/container they came in until you are ready to use them. Between classroom sessions, return specimens to a tightly closed plastic bag or airtight container to prevent them from drying out. If specimens begin to dry out over the course of an extended dissection, remoisten them with NASCOGuard® Humectant Fluid only (see

Specimens are biodegradable, so once the dissection is complete, they can be buried in an approved sanitary landfill or incinerated. Ambient fluids may be safely disposed via city sewers.

**NASCOGuard® Humectant Fluid Five 1-Gallon Bottles** SB17218 - \$93.00

1-Gallon Bottle SB12631 - \$20.75 1-Ouart Bottle SB32395 - \$11.50 1-Pint Bottle

SB32396 - \$9.00



### CONVENIENT, ALL-IN-ONE KITS

Give each student their own specimen, set of dissection tools, and protective equipment

#### Nasco "Try It" Dissection Kits

Introduces students to the exploration of internal and external anatomy of a specimen. Each kit is equipped with a preserved specimen, dissection tools, a plastic apron, an illustrated guide, and latex-free gloves. Dissection tray not included.

Fetal Pig. 7"-10" plain fetal pig. LS03815 - \$44.95 10+ \$40.45

Rat. Fully mature, 7"-9" plain rat. LS03848 - \$29.95 10+ \$26.95

Perch. 7"+ plain perch. LS03849 - \$20.95 10+ \$18.85

**Frog.**  $4''-4\frac{1}{2}''$  plain frog.

LS03850 - \$23.95 10+ \$21.55 **Sea Star (Starfish).** 5"–6" plain sea

star (starfish) LS03851 - \$17.95 10+ \$16.15

Crayfish. 4"-6" plain crayfish. LS03852 - \$18.95 10+ \$17.05

Worm. 2 single injected worms (8"+).

LS03853 - \$20.95 10+ \$18.85 **Squid.** 8"-12" plain squid.

LS03854 - \$22.95 10+ \$20.65

Cow Eye LS03859 - \$17.95 10+ \$16.15

Clam. 4"-5" plain clam. LS03861-\$19.95 10+\$17.95





#### Nasco Zoology Survey Set with Study Guides, Preserved

Includes 1 each of earthworm, crayfish, clam, grasshopper, sea star (starfish), perch, and grass frog.

**LS03737** With Dissection Guides — **\$24.95 10+ \$19.31 LS02893** Without Dissection Guides - \$16.95 10+ \$15.78

Nasco Individual Guide Set. Includes a guide for each specimen listed above. Set of 7. SB23166 — \$13.95



#### Sponge Spicule Lab Activity

**Gr. 9+** Dissolve spongin to analyze and identify the remaining spicule. Six species of sponges, each with a unique spicule type; enough tissue for 80 students working in pairs; and written procedure and student worksheet.

SB51342 - \$45.95

# Nasco Vertebrate

#### **Organ Comparison Kit** The ideal way to compare

the anatomy of common vertebrates including a sparrow, bullfrog, rat, fish, and turtle. The activity guide will take you through a step-bystep, hands-on comparison of external and internal anatomical structure. Containers are provided for storage of extracted organs.

\( \Delta \text{CHOKING HAZARD (1). Not for} \)

LS03806 - \$64.95







Plain

Single injection

#### **Earthworms** (Lumbricus terrestris)

Earthworms are great for beginners and advanced students. These can be ordered with the circulatory system red (injection) or plain. Residual fluid is added to the sealed bag for long-term storage.

Product No.	Size	Injection	Qty.	Each	10+
LS02407	8"-10"	Plain	10	\$10.50	\$9.45
LS01081	8"-10"	Single	1	\$6.55	\$5.89



**Grasshopper Classroom Pack** 

Includes 30 grasshoppers (3 units of LS01319) and 30 grasshopper dissection guides (SB07317). Each student receives a dissection guide to further explain external and internal anatomy to work independently, in pairs, or groups. LS03721-\$58.95

#### Grasshoppers

Product No.	Туре	Size	Injection	Qty.	Each	10+
LS01319	(Romalea microptera)	Large	_	10	\$8.50	\$7.64
LS02440	(Romalea microptera)	Large	Tracheal system - yellow	10	\$12.60	\$11.34
LS03477	(Brachy-stola magna)	Large	_	10	\$7.75	\$6.97



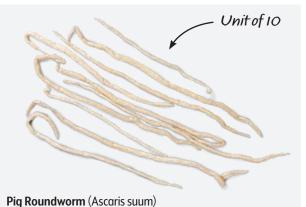
Sandworm/Clam Worm (Nereis) Large, 8"+. LS01292 – \$3.75 10+ \$3.37

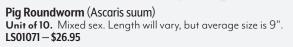


#### **Earthworm Classroom Kit**

Includes 30 earthworms (8"–10", LS02407) and 30 earthworm dissection guides (SB07316) to allow students to work in pairs.

LS03719 - \$50.00





 $\triangle$  See page 3 for complete Choking Hazard Label Information.



Nonvenomous Snake 20" average (50 cm). Species as available. LS01422 - \$25.95 10+ \$23.35

**Specimens** 

# **EXPLORE UNDERWATER ADAPTATIONS**

From fins to scales to claws and everything in between



**Grey Perch** (Pomadasys Macracanthus)

Product No.	Size	Injection	Qty.	Each	10+
LS03690	9"-12"	Plain	1	\$6.75	\$6.07
LS03689	7"-9"	Plain	1	\$3.55	\$3.19
LS03691	5"-7"	Plain	1	\$2.55	\$2.29



**Lamprey** (Petromyzon or Entosphenus)

Product No.	Size	Injection	Qty.	Each	10+
LS02460	18"+ (46+ cm)	Plain, large	1	\$13.00	\$11.70
LS03744	18"+ (46+ cm)	Single injected, large	1	\$14.50	\$13.05
LS02465	18"+ (46+ cm)	Double injected, large	1	\$16.50	\$14.85
LS03697	Under 18" (46 cm)	Plain, small	1	\$13.00	\$11.70



**Grey Perch Classroom Kit** 

Includes 30 grey perch (7"–9", LS03689) and 30 perch dissection guides (SB07313), to allow each student to have their own dissection guide. LS03778 — \$104.00



#### Crayfish (Cambarus)

Product. No.	Size	Injection	Qty.	Each	10+
LS01314	4"-6"	Plain	1	\$2.75	\$2.47
LS02428	4"-6"	Single	1	\$4.65	\$4.18
LS02952	3"-4"	Plain	1	\$ 2.25	\$2.02



Green Sea Urchin (Strongylocentrotus sp.) Large. 2" (5 cm) average. LS02405 – \$6.75 10+ \$6.07

For a complete selection of dissection specimens, visit nascoeducation.com

#### Shark

Depending on availability, specimens may be either squalus dogfish or mustelus smooth-hound sharks.

Product. No.	Size	Injection	Qty.	Each
LS03741	Adult	Plain, Preg.	1	\$28.50
LS02472	Adult	Double, Preg.	1	\$32.95
LS02473	Adult	Triple, Preg.	1	\$37.95
LS03585	27" +	Plain	1	\$19.95
LS03586	27" +	Double	1	\$29.95
LS03587	27" +	Triple	1	\$31.95
LS02467	22"-27"	Plain	1	\$19.95
LS02469	22"-27"	Double	1	\$20.95
LS02470	22"-27"	Triple	1	\$23.95
LS03575	18"-22"	Plain	1	\$15.95
LS03588	18"-22"	Double	1	\$18.95
LS01348	Shark Head	Long cut	1	\$10.95





Learn the functions and structures of the squid, a perfect specimen for studying class cephalopeda. Order our dissection guide (SB18116) for step-by-step instructions to assist with this dissection.

Product No.	Size	Injection	Qty.	Each	10+	
LS01302	12"-16"	Plain	1	\$10.95	\$9.85	
LS02420	12"-16"	Single	1	\$13.95	\$12.55	
LS01304	12"-16"	Double	1	\$15.75	\$14.17	
LS02421	8"-12"	Plain	1	\$9.10	\$8.18	
LS02422	8"-12"	Single	1	\$11.00	\$9.89	
LS03574	5"-8"	Plain	1	\$5.50	\$4.94	



#### Sea Star (Starfish) (Asterias)

Product No.	Size	Injection	Qty.	Each	10+	
LS01073	4"-6"	Plain	1	\$2.65	\$2.38	
LS01305	3"-4"	Plain	1	\$2.25	\$2.02	

**Sea Star (Starfish) Classroom Kit**Includes 30 sea stars (4"–6", LS01073) and 30 dissection guides (SB07314). Great for a classroom of 30 students working independently, in pairs, or groups. LS03722 — \$83.95



#### **Clam Classroom Kit**

This kit includes 30 clams (4"-5", LS01083) and 30 Clam Dissection Guides (SB07320). Each student receives a guide to further explain the anatomy to work independently, in pairs, or groups. LS03718 — \$116.00

Product No.	Туре	Size	Qty.	Each	10+
LS03464	Freshwater Clams (Unio or Anadonta)	3"-4"	1	\$2.95	\$2.65
LS01083	Freshwater Clams (Unio or Anadonta)	4"-5"	1	\$3.75	\$3.37
LS02416	Marine Quahog (Venus mercenaria)	3"-5"	1	\$4.00	\$3.60







#### Grass Frogs (Rana sp.)

Product No.	Size	Injection	Qty.	Each	10+
LS03712	4½"-5½"	Plain	1	\$11.50	\$10.34
LS03713	4½"-5½"	Single	1	\$12.00	\$10.80
LS03714	4½"-5½"	Double	1	\$12.50	\$11.24
LS03715	4½"-5½"	Triple	1	\$13.00	\$11.70
LS02492	4"- 41/2"	Plain	1	\$7.25	\$6.52
LS02494	4"- 41/2"	Single	1	\$9.00	\$8.09
LS02496	4"- 41/2"	Double	1	\$9.55	\$8.59
LS02497	4"- 41/2"	Triple	1	\$10.55	\$9.49
LS01373	3"-4"	Plain	1	\$4.70	\$4.23
LS02493	3"-4"	Single	1	\$5.75	\$5.17
LS02495	3"-4"	Double	1	\$6.55	\$5.89

#### Frog Classroom Basic Kit

30 frogs (4"–4½", LS02492) and 30 Frog Dissection Guides (SB10258), allows each student to have their own dissection guide. LS03724 - \$210.00

#### Frog Classroom Standard Kit

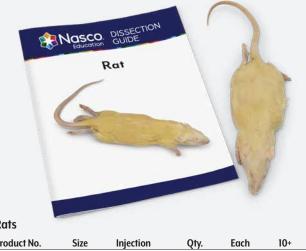
Includes Basic Kit above (LS03724), plus 30 disposable dissection trays (9½" x 11½", SB41945, see p. 82).

LS03724(A) - \$206.00

#### Frog Classroom Deluxe Kit

30 sets of dissection tools/instruments (SB12623, see p. 79), 30 preserved 3"-4" frogs (LS01373), 30 Frog Dissection Guides (SB10258), and 30 magnifiers (SB18007, see p. 97).

LS03749-\$405.00



Rats					
Product No.	Size	Injection	Qty.	Each	10+
LS03709	9"+	Plain	1	\$19.25	\$17.32
LS03576	9"+	Double	1	\$25.95	\$23.35
LS03577	9"+	Triple	1	\$27.95	\$25.15
LS01436	7"-9"	Plain	1	\$14.10	\$12.68
LS01437	7"-9"	Single	1	\$19.95	\$17.95
LS01438	7"-9"	Double	1	\$21.95	\$19.75
LS02523	7"-9"	Triple	1	\$23.95	\$21.55
LS02823	7"+	Double, Preg.	1	\$23.50	\$21.15

LS02669

Rat Classroom Pack
Includes 30 rats (7"–9" plain, LS01436) and 30 Rat dissection Guides (SB29846), allows each student to have their own dissection guide. LS03763 - \$375.00



#### Frog Anatomy Aprons

Anatomically correct, lightweight, and dispos-able. 3 mil polyethylene. Aprons do not protect from harsh chemicals. Box of 100.

SB32571-\$93.95



#### Bullfrogs (Rana sp.)

Product No.	Size	Injection	Qty.	Each	10+
LS02503	6"-7"	Plain	1	\$18.25	\$16.42
LS01362	6"-7"	Single	1	\$20.95	\$18.85
LS01363	6"-7"	Double	1	\$22.95	\$20.65
LS02509	6"-7"	Triple	1	\$24.95	\$22.45
LS02502	5"-6"	Plain	1	\$16.50	\$14.85
LS01365	5"-6"	Single	1	\$16.95	\$15.25
LS01366	5"-6"	Double	1	\$18.95	\$17.05
LS02508	5"-6"	Triple	1	\$20.95	\$18.85

#### **Bullfrog Classroom Kit**

30 bullfrogs (5"– 6" plain, LS02502) and 30 Frog Dissection Guides (SB10258), allows each student to have their own dissection guide. LS03824 - \$419.95



#### Nasco Frog Dissection Guide Set

Well-illustrated guide provides step-by-step instructions for the dissection of this common laboratory specimen. Classroom tested and proven to assist the student with self-guided instruction. Set of 15,  $5\frac{1}{2}$ " x  $8\frac{1}{2}$ ". SB10258 - \$21.95

Plain, preserved. Sexually mature. LS01433 — \$4.50 10+ \$4.04

#### Sparrows and starlings available at nascoeducation.com





Turtle species are either *Chrysemys* or *Trachemys*. Single-injected turtles have red latex injected into arterial system. Double-injected turtles also have blue latex injected into ventral abdominal, hepatic portal, and renal portal vein. Triple-injected turtles also have yellow latex injected into pre- and post-caudal veins.

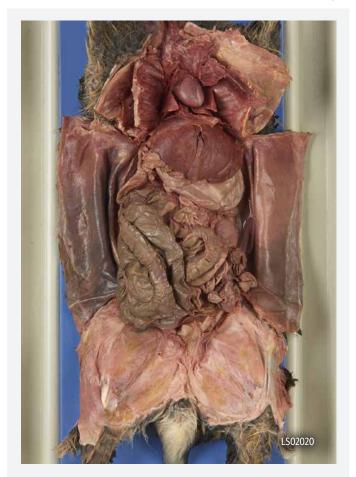
Product No.	Size	Injection	Qty.	Each	10+
LS02660	8"-10"	Plain	1	\$21.00	\$18.89
LS02662	8"-10"	Single	1	\$23.00	\$20.70
LS02663	8"-10"	Double	1	\$26.00	\$23.39
LS02664	8"-10"	Triple	1	\$28.00	\$25.19
LS02657	6"-8"	Plain	1	\$19.50	\$17.54
LS03487	6"-8"	Double	1	\$22.95	\$20.65

\$24.25

\$21.82

Specimens

### ALTERNATIVES TO THE CAT



#### **Rabbits**

Product No.	Size	Injection	Qty.	Each	10+
LS02518	Large	Plain	1	\$63.95	\$57.55
LS02519	Large	Single	1	\$68.95	\$62.05
LS02020	Large	Double	1	\$72.95	\$65.65
LS02520	Large	Triple	1	\$79.95	\$71.95



#### Mink (Descented)

Readily available, well-muscled, and measures 13"-17" (34-44 cm). Specimens are skinned with scent glands and external abdominal fat removed.

Product No.	Size	Injection	Qty.	Each	10+
LS02022	13"+	Plain	1	\$24.95	\$22.45
LS01963	13"+	Double	1	\$37.95	\$34.15
LS02054	13"+	Triple	1	\$39.95	\$35.95

Preserved Mink & Dissection Guide Set
10 double-injected, 13"–17" preserved mink (LS01963) and 5 copies
of Mink Dissection guide (S08849). Specimens are skinned with
scent graph and statemal abdominal fat removed.

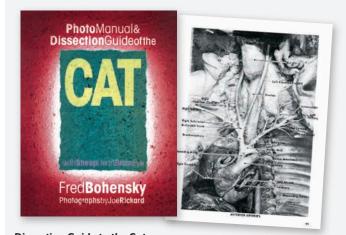
LS01963(B) - \$375.00

**Mink Dissection Guide.** A complete dissection guide for classes in general and vertebrate biology. 60 pages. S08849 - \$15.95





LS01431



#### Dissection Guide to the Cat

Photos and illustrations guide student through the study of anatomical structures. Accompanying text offers dissection instructions and factual information about the section under observation. Tests at the end of each chapter. 167 pages. **SB42224 – \$20.95** 

#### Cats (with skin)

Product No.	Size	Injection	Qty.	Each	10+
LS03533	19"-23"	Plain	1	\$85.00	\$76.49
LS02505	19"-23"	Single	1	\$82.00	\$73.79
LS02907	19"-23"	Double	1	\$100.00	\$89.99
LS02506	19"-23"	Triple	1	\$100.00	\$89.99
LS02671	16"-23"	Double, Preg.	1	\$120.00	\$108.00
LS02672	16"-23"	Triple, Preg.	1	\$140.00	\$126.00
LS01429	14"-19"	Plain	1	\$81.00	\$72.89
LS01431	14"-19"	Double	1	\$92.00	\$82.79
LS03363	12"-14"	Double	1	\$99.00	\$89.09

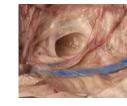
#### Cats (skinned)

Product No.	Size	Injection	Qty.	Each	10+
LS03534	19"-23"	Plain	1	\$100.00	\$89.99
LS03535	19"-23"	Double	1	\$110.00	\$98.99
LS03536	19"-23"	Triple	1	\$125.00	\$112.49
LS03597	16"-23"	Double, Preg.	1	\$130.00	\$117.00
LS03598	16"-23"	Triple, Preg.	1	\$145.00	\$130.50
LS03556	14"-19"	Plain	1	\$100.00	\$89.99
LS03557	14"-19"	Double	1	\$110.00	\$98.99

Nasco Cat Anatomy and Mammalian Organ Study Set with Photographic Atlas Specimens of a preserved cat (double injected), sheep heart, sheep brain, cow spinal cord, cow eye, and pig kidney come with storage bags and A Photographic Atlas of Cat Anatomy: With Sheep Heart Brain Five Kidney Dissertion Heart, Brain, Eye, Kidney Dissection. Shows actual specimens at different stages of dissection. Photos are arranged and listed by body system. LS03710 — \$160.00









#### Fetal Pigs

Product No.	Size	Injection	Each	10+
LS03793	13"-16"	Triple	\$37.95	\$34.15
LS03792	13"-16"	Double	\$33.95	\$30.55
LS03791	13"-16"	Single	\$32.50	\$29.24
LS03790	13"-16"	Plain	\$30.95	\$27.85
LS03789	10"-13"	Double	\$32.95	\$29.65
LS03788	10"-13"	Single	\$31.95	\$28.75
LS03787	10"-13"	Plain	\$30.95	\$27.85
LS03786	7"-10"	Double	\$27.95	\$25.15
LS03785	7"-10"	Single	\$26.95	\$24.25
LS03784	7"-10"	Plain	\$24.95	\$22.45
LS03783	4"-7"	Plain	\$20.95	\$18.85

#### Dissection Guide to the Fetal Pig

Photos and illustrations guide student through the study of anatomical structures. Accompanying text offers dissection instructions and factual information about the section under observation. Tests at the end of each chapter. 128 pages.

SB42225 - \$20.95



#### **Fetal Pig Sagittal Section**

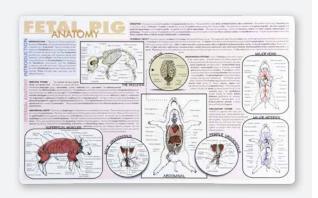
Sagittal section of an 11"–12" artery-injected fetal pig for observing internal organs and vessels before starting dissection. Great demonstration tool in clear plastic bag to use as a demonstration model. Can be removed for dissection. Teacher's guide included.

LS03565 — \$29.95 10+ \$26.95

#### **Pig Dissection Mat**

Allows the student to follow the directions for a complete dissection without the worry of damaging books or paper. A complete pig dissection is printed directly on this 93/4" x 16" polyvinyl mat. It is resistant to spills and is easily cleaned with a sponge or paper towel.

SB32578 — \$11.25





#### Fetal Pig Anatomy Aprons

Lightweight and disposable. Made of 3 mil polyethylene. Aprons do not protect from harsh chemicals. Box of 100.

SB35157 — \$93.95

#### A. Pig Organs

An excellent way to closely study organs that are remarkably similar to a human's.

Product No.	Description	Each	10+
LS02530	Heart	\$10.95	\$9.85
LS03808	Heart, double injected, arteries (red), veins (blue)	\$15.95	\$14.35
LS03569	Heart in pericardium	\$17.95	\$16.15
LS02532	Eye	\$1.95	\$1.75
LS03352	Kidney, plain	\$7.00	\$6.29
LS03353	Kidney, double injected	\$11.50	\$10.35
LS03489	Kidney, triple injected	\$12.95	\$11.65
LS03490	Ovary	\$3.95	\$3.55
LS03491	Uterus, nonpregnant, plain	\$26.25	\$23.62
LS03544	Stomach	\$22.50	\$20.25
LS03593	Small intestine, 1 ft. section	\$5.95	\$5.35
LS03612	Larynx w/epiglottis, vocal cords, and portion of trachea intact	\$8.50	\$7.64
LS01955	Nasco dry-preserved pig heart	\$40.25	_

#### B. Pig Organ Set

Get up close and personal with organs that are very similar to those of a human with this popular combination of preserved pig organs in a convenient storage box. Includes reclosable storage bag. Consists one each of four-chamber heart measuring 4"–5" (LS02530), eye (LS02532), kidney (plain, LS03352), and ovary (LS03490). Dissection guides for each organ are included. LS03496 – \$22.95 10+ \$21.42

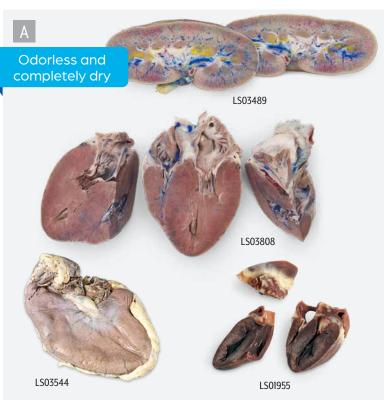
#### C. Nasco Dried Swine Lungs

Swine lungs are preserved, inflated to full size, and dried to produce a real odorless specimen. Lungs, once dried, are the consistency of Styrofoam. Order lung cross section (LS03686) to observe alveoli and other structures under binocular microscope. Teacher guide included.

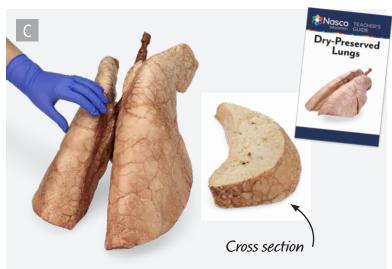
LS01956 - \$56.95

Nasco Dried Lung Section. Perfect for observing the internal structures of the lung without having to slice a whole lung. LS03686 — \$6.25









Specimens

Lubber grasshopper

Grantia (Scypha)

Farthworm

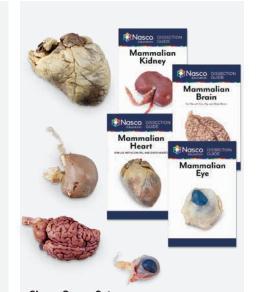
#### Specimens







Sheep Orga	Sheep Organs Sheep Organs						
Product No.	Description	Qty.	Each	10+			
LS03699	Head with eyes, brain and lower jaw	1	\$16.55	\$14.89			
LS01155	Heart	1	\$9.10	\$8.18			
LS03701	Heart, double injected, arteries (red), veins (blue)	1	\$14.25	\$12.82			
LS01152	Brain with cranial nerve roots	1	\$16.95	\$15.25			
LS03354	Half Brain with cranial nerve roots	1	\$10.00	\$8.99			
LS03570	Brain with hypophysis and cranial nerve roots	1	\$17.95	\$16.15			
LS03546	Brain with dura mater	1	\$22.00	\$19.79			
LS01439	Eyes	10	\$14.25	\$12.82			
LS01440	Kidney	1	\$6.25	\$5.62			
LS03493	Larynx with epiglottis, vocal cords, and portion of trachea intact	1	\$6.75	\$6.07			
LS01627	Pluck. Heart, Lungs, and Trachea	1	\$21.25	\$19.12			
LS03494	Testicle	1	\$11.25	\$10.12			



**Sheep Organ Set** 

Eye, brain, kidney, and heart in storage box. Includes reclosable storage bag and dissection guides.

LS03140 - \$37.95



#### **Preserved Reproductive Tract From Cow**

Complete female reproductive tract. Preserved with Nasco's exclusive Bio-Flex process. Can be kept in a plastic bag and used repeatedly for long periods of time. LS02798 - \$103.50



#### Mammalian Eye Comparison

Observe, compare, dissect, and determine the subtle difference between sheep, cow, and pig eyes. Includes 30 eyes of each type and 30 mammalian eye dissection guides. LS03828 - \$104.95



#### **Mammalian Anatomy Survey Set**

Sheep heart with aorta, sheep brain (half), cow spinal cord, cow eye, pig kidney, and dissection guide for each.

LS03497 - \$36.95 10+ \$33.99

#### **Cow Organs**

Product No.	Description	Qty.	Each	10+
LS01630	Calf heart with base of aorta attached	1	\$32.95	\$29.65
LS01631	Calf light. Heart, lungs, and trachea. Lungs embalmed	1	\$58.95	\$53.05
LS01628	Eye	1	\$3.55	\$3.19
LS02533	Spinal cord, over 4" section	1	\$7.35	\$6.61
LS03488	Uterus, nonpregnant	1	\$31.75	_
LS03532	Calf testicles	1	\$12.00	_
LS03566	Elbowjoint	1	\$68.95	_
LS03567	Longitudinal section of long bone	1	\$9.95	_
LS03568	Cross section of long bone	1	\$12.95	_



LS03567



#### Cow Organ Set with Sheep Brain

A popular combination of cow organs in a convenient storage box. Includes reclosable storage bag. Consists of one cow eye, heart, spinal cord, and sheep brain. Dissection guides for each organ are included. LS03495(SB) - \$45.95

#### **Zoology Survey Sets**

Preserved specimens are individually packaged and shipped moist in vapor barrier plastic bags. Vacu-Pac process eliminates over 50% of shipping weight incurred with using fluid in breakable jars, as well as offering extended shelf life of several years. Small specimens are in a glass vial within the Vacu-Pac plastic. Reclosable storage bag included with each set.

#### Small

· 3" frog • 4"-6" worm (with clitellum) • 4"-7" fetal pig

LS03817 - \$17.50

· 6"-8" earthworm

· 8"-10" earthworm

• 6"-8" earthworm

· Lubber grasshopper

Lubber grasshopper

LS03560 - \$18.00 10+ \$16.84

• ¼"-½" Grantia (Scypha)

LS03499 - \$16.25 10+ \$14.95

Large
· 8"-10" earthworm • 4"-5" clam • 3½"-5" crayfish • 5"-6" sea star

• 7"+ perch · 3" grass frog

LS03558 - \$13.25 10+ \$12.15 Medium

• 5"-7" perch

• 3" grass frog

• 3"-4" clam

• 3"-5" sea star

• 3"-4" crayfish LS03498 - \$11.50 10+ \$10.22

Large · 8"-10" earth-• 4"-5" clam

• 5"-6" sea star worm · Lubber grass-· 7"+ perch • 3" grass frog hopper • 3½"-5" crayfish

hopper • 3"-4" crayfish LS03559 - \$17.50 10+ \$16.13 LS01570 - \$15.95

• 4"-5" clam

• 5"-6" sea star

• 3"-4" cravfish

• 3"-5" sea star

· 3"-4" clam

• 3"-4" clam

• 3"-5" sea star

Medium

worm

• 6"-8" earth-

specimens

3 specimens

6 specimens

· Lubber grass-• 5"-7" perch · 3" grass frog

• 7"+ perch

• 3" grass frog

• 5"-7" perch

• 3" grass frog

· 7"+ perch 3" grass frog 7"–10" fetal pig

• 5"-7" perch

• 3" grass frog

· 4"-7" fetal pig

8 specimens

9 specimens



#### Set 1, Large

Medium

• ½"-¾" Grantia (Scypha) • 3½"-5" crayfish · 8"-10" earthworm • 4"-5" clam • 5"-6" sea star Lubber grasshopper

**Large**  $\cdot \frac{1}{2}$ " Grantia (*Scypha*)  $\cdot \frac{3}{2}$ " – 5" crayfish

LS03578 - \$45.00 10+ \$42.29

Set 1. Medium · Lubber grasshopper • 3"-4" crayfish

• 1/4"-1/2" Grantia (Scypha) • 3"-4" clam • 6"-8" earthworm • 3"-5" sea star

LS03563 - \$30.00 10+ \$27.32

Set 2, Large

Same as LSO3578 above, except fetal pig is replaced with a 9" rat.

LS03705 - \$40.00 10+ \$35.72

#### **Bulk Assortments**

Buy in bulk and save on packing, container, and labor costs. Shipped in easy-to-store cartons with small specimens in separate jars.

#### 7 Specimen — Large (10 of each)

· 8"-10" earthworm • 3½"-5" crayfish

• 4"-5" clam • 5"-6" sea star · 7"+ perch

• 3" grass frog Lubber grasshopper 7 Specimen — Medium (10 of each) · 6"-8" earthworm

• 3"-4" crayfish • 3"-4" clam

• 3"-5" sea star • 5"-7" perch · 3" grass frog

 Lubber grasshopper LS03604 Set of 70 specimens - \$125.00 5+ \$114.12 LS03603 Set of 70 specimens - \$110.00 5+ \$96.11





Fetal pia

nascoeducation.com | 1.800.558.9595





#### **Animal Kingdom Survey Set**

Collection of 12 display mounts (6" x 5" each) with a total of 49 fully labeled specimens across 7 phyla. Contains:

Caddisfly larva

Termite

Pill bug

Shrimp

Crab

Shell

Scale

Feather

· Quill

Hair

Barnacle

Seahorse

 Tadpole Turtle

Exoskeleton

Sand dollar

- Spongilla · Sea cucumber Scypha
- Chalina Sea urchin Centipede Commercial sponge
- Millipede Anemone |ellyfish Tick
- Hard coral Spider Soft coral Scorpion Horseshoe crab Snail Grasshopper
- · Chiton Cicada Squid Beetle Leech Butterfly Scale worm Stink bug
- Mayfly Earthworm Starfish Wasp · Louse Brittle star

On occasion, similar specimens may be substituted due to availability. SB37287 - \$375.00



#### Insect Specimen Blocks – Insect Orders

10 preserved specimens in clear resin blocks with scientific name tags. Represents 10 different insect orders. Chafer beetle, cicada, monarch butterfly, dragonfly, onion fly, cricket, honey bee, cockroach, shield bug, and praying mantis. A CHOKING HAZARD (1). Not for under 3 yrs. SB48191 - \$140.00



#### **Resin Casting Specimen Mount Kit**

4-oz. mold release, rectangle mold, dome mold, and 32 oz. of clear casting resin.

9726894 - \$59.95



#### **Animal Kingdom Mount Set**

Each specimen embedded in clear acrylic block. Collection of 20 specimens includes:

- Leech
- Cuttlefish
- Spider
- Centipede
- Swordtail fish
- Frog
- Crab
- SB47476 \$380.00
- Turtle
  - Zosterops
  - Mouse · Long horned beetle
  - Cricket
  - Cockroach Wasp
- - · Lychee stink bug
  - Cicada Mantis
  - Butterfly Dragonfly
  - Stick insect · Latched carry case
- **Animal Kingdom Mount Set** Each specimen embedded in clear acrylic block. Collection of 12 specimens includes:

Tapeworm

Leech

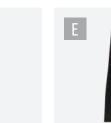
Roundworm

SB47475 - \$250.00

- Paramecium Cuttlefish · Sea anemone
  - Scorpion Tiger barb fish
    - Frog Tortoise
- Zosterops
- · White mouse · Carry case with
- magnetic closure

















#### A. United Scientific Dissection Kit

Set of 8 tools includes dissecting scissors, dissecting forceps, scalpel with replacement blade, straight teasing needle, 2 curved teasing needles, dropping pipet, vinyl ruler, and 6 T-pins. Includes a hard case for storage.

NE30313 - \$17.50 **SB15400** Case Only **- \$6.00** 

#### B. Nasco Basic Dissecting Kit

Single fold vinyl case with lining, 1½" chrome single blade scalpel, 4½" chrome wire dissecting scissors, 4½" chrome-plated forceps, pipette, straight dissecting needle, bent dissecting needle, and 6" ruler.

SB12623 - \$11.75

#### C. Basic Elementary Dissecting Kit

Single-fold vinyl case with lining, 6" chrome replacement blade scalpel, 4½" stainless steel dissecting scissors, 4½" chrome-plated forceps, straight dissecting needle, bent dissecting needle, pipette, and 6" ruler. SA01127 — \$10.25

#### D. Basic Elementary Dissecting Kit

Same as the kit above (SA01127) but in semitransparent hinged case with snap cover and insert for the 7 instruments.

SB07839 - \$11.95

#### E. Biology Dissecting Kit with Case

12 instruments: No. 4 stainless steel scalpel handle, 1½" stainless steel narrow blade scalpel,  $5\frac{1}{2}$ " stainless steel sharp/sharp scissors,  $4\frac{1}{2}$ " stainless steel straight iris scissors, 5½" stainless steel thumb forceps, 4½" chrome curved medium-point forceps, 6" chrome probe and seeker, 6" ruler, a straight and bent dissecting needle, pipette, and 6 No. 22 scalpel blades. SB10272 - \$22.95

F. Biology Dissecting Kit

Double fold vinyl case with lining; 1½" stainless steel scalpel; 1½" stainless steel narrow blade scalpel; 5½" stainless steel sharp/blunt scissors; 4½" stainless steel iris scissors; 4½" chrome, straight, fine-point forceps; 4½" chrome, curved, fine-point forceps; 5" chrome, straight, bluntpoint forceps; straight dissecting needle; bent dissecting needle; 6" chrome probe and seeker; and 6" ruler.

SA04449 - \$20.25

#### G. Advanced Dissecting Kit

Zipper case with velvet-like lining and stainless steel instruments: No. 3 surgical handle with No. 10 replaceable blade (2 extra blades included), 1½" narrow blade scalpel, 5½" sharp/ blunt operating scissors, 4½" straight iris scissors, 5½" thumb forceps, 4½" fine-point forceps, mallprobe and seeker, and straight teasing needle. SB12625 - \$22.50

H. University Level Anatomy Dissecting Kit

Black vinyl, zippered case has red velvet inner lining with 10 loops for organization. Contains straight teasing needle, bent teasing needle,  $4\frac{1}{2}$ " iris scissors,  $4\frac{1}{2}$ " medium point forceps, cartilage knife,  $1 \times 2$  teeth tissue forceps,  $5\frac{1}{2}$ " surgical scissors, #3 scalpel handle, mall probe, #10 scalpel blades (pkg. of 10), 5" hemostatic forceps, and 6" ruler. A CHOKING HAZARD (1). Not for under 3 yrs. **SB46659** — **\$37.95** 

#### I. Large Animal Dissecting Kit

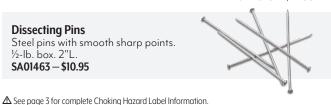
Canvas roll case with 2 pockets and adjustable loops to hold additional instruments; 61/4" stainless steel Pean hemostat; 5½" stainless steel Kelly hemostat; No. 3 stainless steel scalpel handle; No. 10 scalpel blades (6); No. 11 scalpel blades (6); 4½" stainless steel iris scissors; 5½" stainless steel operating scissors; 4½" chrome, straight, fine-point forceps; 5½" chrome, straight, medium-point forceps; 6" chrome probe and seeker 5¼" section lifter; metal, straight dissecting needles (2); 2½" double-prong flesh hooks; and 6" celluloid ruler.

SA01129 - \$37.95

#### **Dissecting Pins**

Steel pins with smooth sharp points. ½-lb. box. 2"L

SA01463 - \$10.95



#### **T-Pins**

Steel nickel-plated, ½-lb. box. Approximately 375 pins. 2"L 2500120 **- \$27.00** 



Tools

#### **Classroom Dissection Instrument Sets**

A set of quality dissection instruments for the entire classroom. Instruments come in instrument sorting tray. For 30 students working in pairs. A CHOKING HAZARD (1). Not for under 3 yrs.

#### Stainless Steel Grade Set A Includes:

- (15) 4½" stainless steel dissecting scissors (SA01146)
- (15) No. 4 stainless steel surgeon's handles (SB07833)
- (20) No. 22 scalpel blades (SB09348)
- (15) 4½" fine-point, stainless steel forceps (SB12629)
- (15) straight steel teasing needles
- (15) angular chrome probe and seekers (SB07838)
- (1) box of 2" dissecting pins (SA01463)
- (1) instrument sorting tray (SB25286)

#### SB15428 - \$177.00

#### **Chrome Grade Set B Includes:**

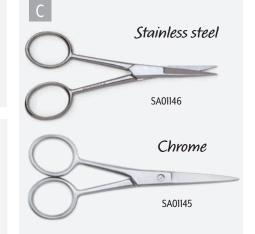
- (15) 4½" chrome dissecting scissors (SA01145)
- (15) chrome safety-lok scalpels. Includes No. 22, scalpel blades (SA01177)
- (15) 4½" fine-point, chrome forceps (SA01134)
- (15) straight wood handle teasing needles (SB15414)
- (15) bent plastic handle teasing needles
- (1) box of 2" dissecting pins (SA01463)
- (1) instrument sorting tray (SB25286)

#### SB15429 - \$142.00











No. 3 stainless steel surgeon's handle for Nos. 10,

No. 4 stainless steel handle for Nos. 20, 21, 22,

C. Dissecting Scissors, Straight, Fine Point

**SA01146** 4½" Stainless Steel — \$3.05 12+ \$2.74

SA01145 4½" Chrome - \$2.05 12+ \$1.84

No. 10

A. Surgeon's Handle No. 3

11, 12, and 15 surgeon's blades.

SB06903-\$5.55 12+\$4.99

B. Surgeon's Handle No. 4

23, and 24 surgeon's blades.

SB07833 - \$5.55 12+ \$4.99



No. 22

#### D. Surgical Scalpel Blades

Pack of 10. (1). Not for under 3 yrs. **SB09342** No. 10 **SB09348** No. 22

Pack — \$2.35

No. 21

**Box of 100.** △ CHOKING HAZARD (1). Not for under 3 yrs. SB09351 No. 10 SB09357 No. 22 **SB09356** No. 21

Box - \$18.95

Straight-blade scissor with sharp points. 4½"L. SB06901 - \$3.05 12+ \$2.74



F. 1 Point Sharp/1 Point Blunt Surgical Scissors SB15420 4½" - \$3.05 12+ \$2.74 SB10283 5½"-\$3.35 12+ \$3.01

G. Both Points Sharp Surgical Scissors

SB15417 4½" — \$3.05 12+ \$2.74 SB10282 5½"-\$3.25 12+ \$2.92 SB15406 6½" - \$3.55 12+ \$3.19

SB15408 6½" - \$3.55 12+ \$3.19

### E. Iris Research Scissor

(SB09348) blade listed on p. 80.











Plastic handle shaped for comfortable grip and easy manipulation of high-quality surgical steel blade. Honed to provide extremely sharp cutting edges. Packs of 10.

**SB15239** No. 10 Blade for

Fine Dissection - \$24.95

**SB15240** No. 11 Blade for Microdissection - \$24.95

**SB15241** No. 21 Blade for Gross Dissection — **\$24.95** 

#### . Scalpel — Student Grade

One-piece chrome scalpel, 11/2" blade. SB12627 - \$2.05 12+ \$1.84

#### . Scalpel

One-piece scalpel, 1½" blade, satin finish handle. Superior grade.

SA01179 - \$1.75 12+ \$1.57

#### K. Safety-Lok Scalpel — Student Grade

Chrome-plated forged steel with screw lock to hold No. 22 blade firmly in place.

#### SA01177 - \$2.05 12+ \$1.84

NOTE: For replacement blades, order No. 22

 $\triangle$  See page 3 for complete Choking Hazard Label Information.













Retractable blade snaps off easily when fresh point is desired. Plastic knife includes 1 blade with 13 points.

9705448 - \$1.40 10+ \$1.24

#### M. Plastic Handle Teasing Needle Straight. Pack of 12.

S08847 - \$3.95 12+ \$3.55

#### N. Plastic Forceps 4"L (11 cm).

**SB18875** Fine Point — \$1.35 12+ \$1.21 SB48152 Blunt Tip - \$1.65 12+ \$1.48

#### O. Wood Handle Teasing Needle Straight. Pack of 12.

SB15414 - \$3.55 12+ \$3.19

#### P. Probe and Seeker

Mall probe 6"L. Solid steel, chrome-plated. Angular, semi-blunt tip. 6 mm dia. Hexagonal handle.

SB07838 - \$1.55 12+ \$1.39

#### Q. Forceps

Serrated inside tips. Chrome plated. Fine. 4½' SA01133 - \$2.05 12+ \$1.84











### R. Tissue Forceps

Stainless steel forceps with 1" x 2" teeth. Superior grade. 5½"

SB15411 - \$3.25 12+ \$2.92

#### **Dissecting Forceps**

With serrated points and guide pin. 4½".

#### S. Fine Points

Product No.	Type	Material	Each	12+
SB12628	Straight	Stainless Steel	\$3.25	\$2.92
SB12629	Curved	Stainless Steel	\$3.05	\$2.74

#### T. Medium Points

Product No.	Type	Material	Each	12+
SB15410	Straight	Stainless Steel	\$3.05	\$2.74
SB15425	Curved	Stainless Steel	\$3.05	\$2.74

### U. Thumb Forceps

Stainless steel. 5½"L SA04467 - \$3.25 12+ \$2.92

## V. Microdissection Forceps

4½". Stainless steel. Extra-long. SB12630 - \$3.05 12+ \$2.74

# **Supplies**

#### A. Blue Nitrile Gloves

100% synthetic nitrile polymer gloves are latex, powder, and odor free. 5 mil thick. Box of 100 for small, medium, and large; box of 90 for X-large. 5 mil thickness. C20030 C20031

Each - \$19.95

C20032 C20033 X-Large

#### B. Gold Latex Powder-Free Gloves

Made with light chlorination rinse. Nonslip, tacky surface provides excellent grip for both dry and wet applications. Minimum risk of potential glove-related chemical or protein allergies. Box of 100 for medium and large; box of 90 for X-large. 4 mil thickness.

Each - \$16.95

**C31908** Medium **C31909** Large **C31910** X-Large

2100320 Medium

C. Low Density Polyethylene Powder Free Gloves
Dispenser box of 100 gloves. 1½ mil thickness.

**SB48963** Small 2100321 Large

Box - \$4.95



transducer for superior cleaning; large tank capacity; and cooling fan. Five cycles with digital

SB47541 - \$164.95

#### **Ultrasonic Cleaner Lab**

Quiet, solid state circuitry; high-powered time display. 1,400 ml (2.40 pints) capacity. 110V. 9" x 7" x 6¼".

#### Reusable

#### **Black Wax Dissecting Pans** One-piece aluminium construction

will not rust, crack, or leak. Product No. Description 10+ Each SA00328 Standard (11½" x 7½") w/wax \$21.95 \$19.75 SB07238 \$12.95 \$11.65 Standard pan only SB07156 Deluxe (13\%" x 9\%" x 2\4") w/wax \$24.95 \$22,45

Disposable **Dissection Trays** Set of 30; 9¼" x 11¼" SB41945 - \$8.95





#### **Economy Safety Glasses**

Wide, single-piece lens and adjustable temples. Made of durable polycarbonate. Meets ANSI Z87.1 high impact standards.

SB32854 Blue Frame SB39510 Black Frame Each - \$3.95



#### **Shark Tray**

Molded of heavy-gauge, high-density polyethylene. Unbreakable, lightweight tray is chemicalresistant with nonskid bottom. Accepts dorsal muscle, with center groove for dorsal spines. 15½" x 31" x 15%". Clear, plastic cover fits firmly over tray.

SB13624 - \$32.95 10+ \$29.65

# **Nasco Dissection Pans**

#### High-density polyethylene pans:

- · Less expensive than aluminum
- · Will not rust, crack, or leak
- Bottom retains shape does not become rounded with use
- Not as deep easy to perform routine dissections
- · Designed to be used with Flex-Pads only, not with wax
- · Chemical resistant
- · Stackable for storage

#### **Small Basic Dissecting Pan**

Designed for grades with routine dissections using earthworms, crayfish, clams, grasshoppers, sea stars, perch, and grass frogs. Outside dimensions:

#### **Medium Standard Dissecting Pan**

For general student use in dissection. Available in both tough, high-density polyethylene and durable, one-piece aluminum construction. Neither will rust, crack, or leak. Outside dimensions: 11½" x 7½".



Product No.	Description	Each	10+
SB11667	Basic polyethylene pan only (10" x 7")	\$2.95	\$2.65
SB15232	Standard polyethylene pan with Flex-Pad and cover	\$20.95	\$18.85
SB15233	Standard polyethylene pan with Flex-Pad	\$16.25	\$14.62
SB08756	Standard aluminum pan with Flex-Pad and cover	\$24.60	\$22.14
SB07237	Standard aluminum pan with Flex-Pad	\$20.50	\$18.45
SB07239	Standard Flex-Pad only (fits 11½" x 7½" standard pans)	\$9.75	\$8.77
SB07241	Deluxe Flex-Pad only (fits $12^3$ /4" x 9" deluxe pans)	\$13.95	\$12.55

#### Nasco Large Animal Dissection Tray

Designed for cats, rabbits, mink, and other large animals. Unbreakable, lightweight tray is chemical-resistant and has a skid-resistant bottom. Stack trays for storage. Clear plastic cover fits firmly over tray to prevent moisture loss and nestles for storage, but is not designed to stack with specimens inside.

•			
Product No.	Description	Each	10+
SB32649	Tray, Flex-Pad and cover	\$91.95	\$82.75
SB07288	Dissection tray and pad	\$79.95	\$71.95
SB09565	Tray only (30" x 16")	\$49.95	\$44.95
SB07840	Flex-Pad only (23" x 10")	\$34.95	\$31.45
SB09913	Cover only	\$22.95	\$20.65

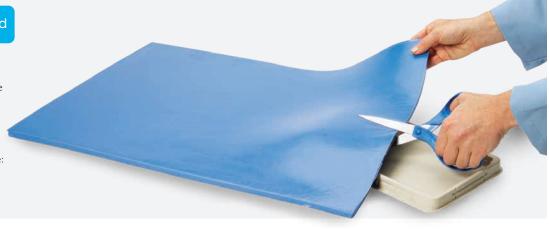


#### Cut to the size you need

#### Nasco Flex-Pad Bulk Sheets

Trim with scissors or utility knife to fit irregular-size dissection pans. Basic, Standard, or Deluxe Flex-Pads will fit the vast majority of pans in use. Each bulk sheet fills about 4 dissection pans. Bulk sheet size: 24½" x 17"

SB09801-\$57.95 10+ \$52.15



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Your students will be amazed at the microscopic world around them. Find stereo, compound, and digital microscopes as well as advanced functionalty through your computer, smartphone, or whiteboard. Discover time-lapse photography, projection, and video capabilities.

The right microscopes, slides, and accessories are right here.

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#### **Nasco Elementary Student Microscope**

All-metal, compact microscopes for younger students. Precision optical system features achromatic optical glass lenses.

#### Specifications:

- Color-coded objectives: 4X, 10X, 40XR
  Locked on 10X wide-field eyepiece with
- revolving pointer
- · Revolving triple nosepiece with positive click stops
- 360° rotatable head on 45° inclined model

**Nasco Elementary Mirror Microscope** 

· Cast metal with inclination joint · Rack-and-pinion focusing

· Plano-concave mirror in fork mount • 88 x 98 mm stage with stage clips

Locked on WF10X eyepiece with pointer
6-hole disc diaphragm

- · Substage 110V, 15-watt illuminator, factory mounted
- · Rack-and-pinion focusing

Specifications:

· Slip clutch Magnification 25X

Vertical head

SB28921-\$92.00

Dust cover

Mirror for illumination

- Slip clutch

  ⚠ CHOKING HAZARD (1). Not for under 3 yrs.

SB26448 - \$159.00

- · Tension adjustment illuminates focusing drift
- · MS5 standard round movable stage
- Safety rack stop
- · Separate coarse and fine focus controls
- · 88 x 82 mm stage with locked-on,
- spring-mounted stage clips
- · Calibrated 6-hole disc diaphragm
- · Cast-metal frame with inclination joint,
- · Deluxe vinyl dust cover

# Nasco Elementary Stereo Microscope

Offers economy along with precise engineering. Unit has many features of advanced modular instruments.

#### Specifications:

- Paired, 10X eyepieces with 20X magnification
- Interpupillary adjustment
- · Left diopter adjustment on illuminated models
- Paired 2X objectives
  Large 4½" x 75%" stage with a frosted glass insert
- · Locked-together rack-and-pinion focusing

SB25261-\$185.00

- Stops prevent head removal
- Adjustable 360° rotating head
  Reversible black/white plate and
- frosted glass stage plate
- · Ebony finish, chemical resistant Three-wire cord
- · Dust cover



#### Nasco Economy Stereo Microscope

Beginner stereo microscope is great for viewing coins, stamps, insects, and other common objects.

#### Specifications:

- · Upright binocular head
- 10X wide-field eyepieces
- 55–75 mm interpupillary adjustment
- · 2X objective, 20X magnification
- Coarse focus control
- 60 mm white stage plate and locked-on stage clips **SB52176** — **\$73.00**

- 70 mm working distance
- · Top light LED
- · Dust cover and instruction manual
- Requires 2 "AA" batteries, sold separately



#### MicroPro™ Elementary Microscope Kit

Features glass eyepieces and power settings from 50X to 600X for superior precision viewing.

- Die-cast metal microscope
- 10X and 20X glass eyepieces activity guide

· Requires 2 "AA" batteries, 3 prepared slides · 8 blank slides not included • Lab supplies ▲ CHOKING HAZARD (1). Not for under 3 yrs. SB39462 - \$59.95



• 18-page instruction and



#### **National Elementary Standard Microscope**

- · Revolving wide-field 10X eyepiece,  $45^{\circ}$  inclined head with pointer, rotates 360°
- · Achromatic, color-coded 4X, 10X. 40XR
- · 40X, 100X, and 400X magnification
- LED illumination
- Slip clutch
- Rack stops SB52272 - \$179.95

- · Locked-on, spring-activated stage clips
- · Cast metal frame
- Oversized focusing knobs range between normal coarse to fine focus
- · Three-wire cord and plug
- · Vinyl dust cover
- 11"H with 3½" x 3¼" stage



#### National Elementary Compact Microscope with Cordless LED Illumination — Model 205

Ideal for primary levels. Monocular microscope supports an 18 mm field of view. Also features low position focusing controls, state-of-the-art LED illumination, one-touch stage clips, and inward facing nosepiece for maximum operating space.

#### Specifications:

- · Wide-field 10X monocular eyepiece with 45° inclined viewing head
- 4X, 10X, and 40X objectives

SB49055 - \$255.00

- 185 mm focal length
- Separate coarse and fine focus
  70-milliwatt/3.5V LED illumina-
- tion with intensity control

#### **National Elementary** Student Microscope – Model 109-L

Teaching microscope for elementary grades has both coarse and fine focus knobs, a refinement usually found only on high school models, which ensures easier focusing.

#### Specifications:

- · Wide-field 10X eyepiece with revolving pointer
- Triple nosepiece with 4X, 10X, and 40XR objectives, achromatic • All parts locked on and color coded, for 40X, 100X, · Cast metal vertical frame can be and 400X magnification
- Coarse focus with slip clutch to protect rack and pinion mechanism, and fine focus for easier sharp focus
- SB25193 \$174.95

- 88 x 82 mm stage with locked-on stage clips, calibrated 5-hole disc diaphragm
- inclined 45°
- 15-watt LED illumination
- Fitted Styrofoam<sup>TM</sup> box with dust cover





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#### Nasco Middle School Standard Microscopes

#### Specifications:

- · Wide-field locked-on 10X eyepiece with
- 360° rotatable head
- · DIN objectives are parfocal, parcentered, achromatic, color-coded 4X, 10X, 40XR (retractable)
- · Triple nosepiece with positive click stops
- Coarse and fine coaxial focusing with built-in slip clutch
- · Fluorescent illumination
- Locked-on spring-loaded stage clips
- Three-wire cord
- Dust cover

Product No.	Head	Eyepiece	<b>DIN Objectives</b>	Stage	Illumination	Each
SB24173	Monocular	WF10X/pointer	4X, 10X, 40XR	0.65 NA condenser 5-hole disc diaphragm	20-watt LED	\$220.00
SB25252	Monocular	WF10X pointer	4X, 10X, 40XR	Add-on mechanical stage side adjustment	20-watt LED	\$255.00
SB37674	Monocular	WF10X/pointer	4X, 10X, 40XR	0.65 NA condenser 5-hole disc diaphragm	LED cordless	\$290.00



#### Nasco Standard Stereo Microscope

Has all the quality and basic features necessary for dissection, botany, and earth sciences.

#### Specifications:

- · 45° inclined head
- Head raises, lowers, rotates 360° on pillar
  Paired wide-field eyepieces with rubber eye
- · Interpupillary adjustment
- · Diopter adjustment on one side
- · Rack-and-pinion focusing protected by slip
- · Tension control adjustment eliminates drift
- · LED lighting
- High-intensity, low-voltage illumination
  Reversible black/white stage plate (also includes frosted glass stage plate)
- · All parts lock on
- · Base mounted on/off switch, three-wire safety cord and plug
- Dust cover

Product No.	Eyepiece	Objectives	Magnification	Illumination	Each
SB26447	WF15X	3X	30X	Top and bottom LED corded	\$305.00
SB41021	WF10X	2X	20X	Top and bottom LED cordless	\$266.00

#### Nasco Middle School LED Standard Microscopes

Precision-built, tamper-proof microscopes incorporate high-resolution, flat field objectives with wide-angle viewing.

### Specifications:

- 10X wide-field eyepiece, locked on with calibrated pointer
- Monocular 45° inclined head or 45° dual view head — both with 360° rotation
- Reverse nosepiece
- · Objectives are DIN achromatic, parcentered, parfocal, and color coded 4X, 10X, 40XR
- · Positive stops at both ends of travel

- · Tension adjustment eliminates stage drift
- LED illumination
- · Coaxial coarse and fine focusing
- Dust cover and instructions
- · Spring-loaded stage clamp
- Large plain stage (4¾" x 4½") with spring clips, 0.65 N.A. condenser, and iris diaphragm
- · Cordless microscopes are rechargeable

	1				5	
Product No.	<b>DIN Objectives</b>	Stage	Head	Illumination	Voltage	Each
SB37509	4X, 10X, 40XR	0.65 N.A. condenser with iris diaphragm	Monocular	LED corded	110V	\$291.00
SB41037	4X, 10X, 40XR	0.65 N.A. condenser with iris diaphragm	Monocular	LED cordless	110V	\$320.00
SB41036	4X, 10X, 40XR	0.65 N.A. condenser with iris diaphragm	45° Dual	LED corded	110V	\$307.00
SB41035	4X, 10X, 40XR	0.65 N.A. condenser with iris diaphragm	45° Dual	LED cordless	110V	\$342.00

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#### Intermediate Student Microscope with LED Light

- Metal construction
- Rotatable head
- · Fine focus control
- · Objective lenses 4X, 10X, and 40X
- 100,000-hour, 4.5V LED cool illumination light
- · Built-in 15-hour rechargeable battery
- Detachable AC power cord
   SB45405 110V \$155.00



#### Premiere® Middle School Standard Microscope

Features LED lighting and a mechanical stage for smooth observation.

#### Specifications:

- Wide-field 10X eyepiece with pointer
  Monocular, 45° inclined and rotatable 360°

- 4X, 10X, and 40X objectives
  Total magnification: 40X to 100X
  Brightfield, cool LED illumination and 6-hole disc diaphragm
  Coaxial coarse and fine focusing controls

- Mechanical stage
  Stage dimensions: 311/16" x 311/16"
- · 110V power supply

SB52649 - \$164.95

## National Middle School Standard Microscope

Includes heavy vinyl dust cover.

#### Specifications:

- · Wide-field 10X eyepiece with revolving pointer (dual head model includes eyepieces in both viewing tubes)
- 45° inclined viewing head rotates 360°
- · Objectives 4X, 10X, and 40XR on ball-bearing mounted 3-hole nosepiece are parfocal, parcentered, low-reflection coated
- 110 mm x 120 mm stage with locked-on stage clips or optional graduated mechanical stage
- In-stage 0.65 condenser lens
- Low-position coarse and fine focusing knobs
- Safety rack stop prevents damage to lenses or slides
  LED illumination provides virtually no heat and 50,000 hours of bulb life

Product No.	Model	Head	Illumination	Each
SB42834	131-CLED	Monocular	LED cordless	\$310.00
SB44745	132-CLED	Dual	LED corded	\$401.00





# Premiere® Cordless High School Standard

An upgraded cordless student microscope with a mechanical stage and powerful magnification of up to 1,000X.

#### Specifications:

- 10X eyepiece with pointer
- · 4X, 10X, 40X, and 100X oil-immersion objectives
- Magnification power of 40X to 1,000X
- Rotatable head
- · Coarse and fine focusing controls
- Mechanical stage with clips
- Coaxial diaphragm
   Built-in rechargeable battery with 15 hours of life and detachable AC power cord
- LED lighting system
  Long LED bulb life of 100,000 hours
- Dust cover and immersion oil included
- Metal construction

SB52648 - \$327.95





#### Premiere® High School Binocular Microscope

- stage illumination)
- obiectives
- SB46630 \$284.95
- Dual LED illumination
   10X WF eyepiece
- (both incident and sub- · Separate coarse and fine illumination
- 4X, 10X, and 40X DIN Mechanical stage
  - 1.25 NA iris diaphragm

#### **Nasco High School Advanced Microscopes**

Compact ergonomic microscopes with built-in handle, variable LED illumination, and high-performance objective lenses that provide excellent clarity. Equip long-term trinocular microscope with digital camera and LCD screen for photo and video image analysis.

#### Specifications:

- Metal frame with arm and base made of one-piece
- · Siedentopf head (50/50 light splitting ratio), 30° inclined and 360° rotatable, interpupillary adjustment of 55–75 mm
- 10X wide-field eyepieces with diopter adjustment on right eyepiece tube and calibrated pointer on one eyepiece
- Revolving reversed quadruple objective nosepiece
  Objectives are DIN achromatic 4X, 10X, 40XR
- (retractable), 100XR (retractable) oil · Low position coaxial coarse and fine focus knobs on both
- sides with positive focus stop and tension adjustment
- Focusing range of 14 mm, fine focus graduation of 0.01 mm
- · Dust cover and instruction manual
- 1X C-mount included for trinocular head
- 125 mm x125 mm built-in double-layer mechanical stage, smooth X-Y calibrated movement with cross travel range
- Focusable sub-stage N.A. 1.25 Abbe condenser with iris diaphragm mounted on rack-and-pinion system
- · 1-watt LED illumination with light intensity control Allow extra delivery time.

Product No.	Head	Each
Z48549	Binocular	\$455.00
Z48550	Trinocular	\$505.00



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#### Nasco High School Standard Microscopes

Economical but with all of the quality features found on more expensive microscopes. Requires limited maintenance. Top-quality optics.

#### Specifications:

- · All-metal body and mechanism
- Student-proof construction
- · Separate coarse and fine adjustment
- · Viewing head inclined
- · Locked-on 10X wide-field eyepiece with calibrated pointer
- Stage drilled and tapped for add-on mechanical stage
- · Stage stop and slip clutch
- LED Illumination
- · Drift adjustment

- Spring-loaded stage clips
- Monocular or dual viewing head rotates 360° DIN objective lenses are achromatic, parfocal, color-coded with 40XR and 100XR (oil) lens (retractable)
- Built-in 0.65 stage condenser, 5-aperture disc diaphragm for 3 objective models
- · Substage illuminator with on/off switch

•	Vinyl	dust	cover
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Product No.	Viewing Head	DIN Objectives	Substage	Illumination	Each
SB25253	Monocular 10X wide-field with calibrated pointer	4X, 10X, 40XR	0.65 NA condenser 5-hole disc diaphragm	LED corded	\$331.00
SB48590	Monocular 10X wide-field with calibrated pointer	4X, 10X, 40XR	Includes mechanical stage side adjustment	LED corded	\$400.00
SB25255	Monocular 10X wide-field with calibrated pointer	4X, 10X, 40XR, 100XR oil	Abbe 1.25 focusable Abbe condenser with iris diaphragm	LED corded	\$385.00
SB48589	Monocular 10X wide-field with calibrated pointer	4X, 10X, 40XR, 100XR oil	Includes mechanical stage side adjustment	LED corded	\$470.00
SB29118	90° Video/Dual 10X wide-field with calibrated pointer	4X, 10X, 40XR	0.65 NA condenser 5-hole disc diaphragm	LED corded	\$327.00
	·				



#### Nasco High School Advanced Monocular Microscope Specifications:

- · Coarse and fine coaxial focusing
- · Locked-on 10X wide-field eyepiece, with
- · 4X, 10X, 40XR, 100XR oil DIN objectives · 45° inclined monocular head, 360° rota-
- · Objectives are DIN achromatic, parcentered, parfocal color-coded with 4X, 10X, 40XR and 100XR oil being retractable
- Positive stops at both ends
- · Built-in mechanical stage 1.25 Abbe condenser with iris diaphragm
- · 20-watt LED illumination
- Dust cover and Styrofoam<sup>™</sup> case SB28929 - \$339.00 5+ \$322.05



#### Nasco Tri-Power Stereo Microscopes

Turn tri-power objective turret to choose low, medium, or high magnification. Comes with instruction manual and vinyl dust cover.

#### Specifications:

- · Viewing head has advanced 45° inclined design, and is post mounted to permit 360° rotation
- · Locked on 10X wide-field eyepieces with diopter adjustment on one ocular tube
- · Paired objectives: parfocal, parcentered, and achromatic
- LED lighting
- · Rack-and-pinion focusing with slip clutch and tension adjustment
- · Adjustable pole-mounted style
- 95 mm black and white reversible stage plate and frosted glass stage plate
- All metal construction

Product No.	Eyepiece	Magnification	Illumination	Voltage	Each
SB39115	10X wide-field	10X, 20X, 30X	LED corded	110V	\$287.00
SB39118	15X wide-field	30X, 45X, 60X	LED corded	110V	\$287.00
SB41022	10X wide-field	20X, 30X, 40X	LED cordless recharaeable	110V	\$317.00

#### Nasco Advanced Stereo Microscopes

Features the quality and versatility of larger, more expensive models, scaled to size for secondary level instruction.

#### Specifications:

- 45° inclined head raises, lowers, rotates 360° on pillar for off-base viewing
- · Locked-on 10XWF or 15X paired wide-field eyepieces with rubber eye shields
- · Interpupillary adjustment
- · Diopter adjustment on one side

WF15X

- Paired 2X objective
- · Rack-and-pinion focusing protected by slip
- Tension control adjustment eliminates drift
- LED illumination

Product No.

SB29050

SB25264

- · High-intensity, low-voltage, two-way illumination, and choice of top light only, or both top and bottom
- Frosted glass stage plate (reversible black/ white stage plate also included)
- · All parts lock on
- · Base-mounted on/off switch
- Three-wire safety cord and plugChoice of IX-2X, IX-3X turret, or 2X-4X turret

\$325.00

· Dust cover

Eyepiece	Objectives	Magnification	Rechargeable	Each
WFI5X	1X and 2X	15X and 30X	No	\$325.00

No

15X and 45X



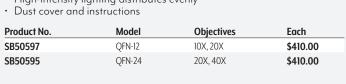
#### Nasco QFN Series Stereo Microscopes

Great for examining opaque or translucent specimens.

1X and 3X

#### Specifications:

- 45° inclined eyepieces with interpupillary adjustment from 55 to 75 mm
- · 10X wide-field eyepiece
- · Working distance: 80 mm
- Includes two 75 mm stage plates (one frosted and one reversible black/white)
- · Diopter control in left viewing tube · Coated optics for crisp image and superior
- resolution.
- · Rotating objective turret
- · High-intensity lighting distributes evenly
- · Rack-and-pinion focusing with slip clutch and tension adjustment
- Mini LED light panels on top and bottom
- Diagonally adjustable top light creates desired amount of light on stage plate
- · Separate light intensity control for top and bottom illumination
- Three-way, built-in illumination allows transmitted, incident, or dual lighting





#### Nasco QZE/QZF Zoom Stereo Microscopes

Ideal for studying living organisms, dissecting small specimens, studying crystalline or rock structure, plus electronic and small part inspections. Smooth in operation, it has a calibrated zoom range operable on both sides of the head.

#### Specifications:

- · 45° inclined head
- Diopter control ±5 on both ocular tubes
- Magnification: 7X-45XObjectives: 10X wide field
- · Working distance: 90 mm
- Interpupillary adjustment from 55–75 mm
- · Coated optics for crisp image, superior resolution, and excellent stereoscopic effect
- · Rack-and-pinion focusing with slip clutch and tension adjustment
- 94 mm clear and reversible black/white stage plate
- Diagonally adjustable top light creates desired amount of light on stage plate Separate light intensity control for top and
- bottom illumination Three-way, built-in illumination allows
- transmitted, incident, or dual lighting · Dust cover and instructions

QZE. Binocular head and a cluster of mini LED light panels for illuminating top and bottom. LED lights have long life and a cool temperature.

#### SB50598 - \$580.00

QZF. Trinocular head for CCTV or digital photomicrographic system. LED top and bottom illumination. 2.5X photo eyepiece. 35 mm camera adapter with Minolta mount.

SB50599 - \$610.00



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#### Nasco High School Advanced Binocular Microscope (Reverse Nosepiece)

#### Specifications:

- · Superior-quality locked-on 10X wide-field eyepiece with calibrated pointer
- 360° rotating head
- · Siedentopf binocular head with diopter adjustment on left eye tube
- DIN achromatic objectives 4X, 10X, 40XR, 100XR oil are parcentered and parfocal
- · Low position coaxial coarse and fine focus controls
- · Large work stage with built-in low position mechanical stage has X-Y travel in 1.0 mm graduations
- Lighting has intensity control
- Vertical adjustable 1.25 Abbe condenser



Get help choosing the perfect microscope at nascoeducation.com/guides (search right microscope).

#### National Oil Immersion Microscope with Built-In Digital Camera

A powerful teaching tool for middle through high school instruction. PC and Mac® OS X® compatible.

#### Specifications:

- · WF10X eyepiece • DIN 4X, 10X, 40XR, and 100XR (oil immersion) objectives
- 1.25 N.A. Abbe condenser with iris diaphragm
- · Built-in mechanical stage
- · Bulb life: 50,000 hours
- · Cordless LED illumination equal to a 20-watt halogen bulb

#### SB41027 - \$713.00

- 3.0 megapixel digital camera
- Operates on both PC and Mac® OS X® includes everything needed for quick Plug & Play use
- Motic Images software



SB28945

### MICROSIGHT HAND-HELD CAMERA MICROSCOPES

Intuitive software allows you to take pictures, video, and time-lapse photography



#### MicroSight Hand-Held Camera Microscope -10X-200X Basic Microscope 5MP

Intuitive software allows you to take pictures, video, and time-lapse photography. Draw, label, or measure on any captured image. Use as a microscope, presentation camera, or document camera. Integrates with all digital whiteboards. Software is compatible with all PC and Macintosh® computers. Compatible with all Chromebook™ computers as a plug-and-play external camera via USB. Comes with five labeled focal tips, one each of 10X, 15X, 30X, 50X, and 150X.

NA10395 - \$275.00





#### Celestron® Handheld Digital Microscope Pro

Fits in the palm of your hand. Five-element, IR-cut, high-quality glass lens provides sharper images and previews. Includes professional adjustable stand. Downloadable MicroCapture Pro software works with both Macintosh® and Windows®.

#### Specifications:

- · 20X-200X powers
- 4X-160X magnification
- 5 MP sensor takes and saves high-resolution images
- 10 mm-infinity focuser range
- · 1 second-1/1,000 second shutter speed with trigger on USB cord
- SB49688 \$179.95
- Adjustable still image resolution of 5 MP, 3 MP, 1.3 MP, VGA (12 MP with interpolation)
- · Video capture resolution: VGA, 30 fps
- USB 2.0 computer interface • 53/8" x 43/4" x 2"



1.800.558.9595 | nascoeducation.com





#### Celestron® LCD Digital Microscope II

Change powers from 40X to 100X to 400X (up to 1600 with 4X digital zoom) with a turn of the three-position rotating lens turret. TV output allows television or projector displaying.

- Specifications:
- Full-color 3½" TFT LCD screen with onboard software rotates 180°
- Fully adjustable mechanical stage
- Three fully achromatic objective lenses (4X, 10X, and 40X lenses on rotating turret)
- · Three-position nosepiece with click stop
- Upper and lower, built-in adjustable LĖD illuminators
- NA 0.65 condenser
- · Capture and save still images and video (built-in 5 MP camera sensor and included • Stage dimensions: 3½" x 3½" 1 GB SD card)
- SB49573 \$299.95

- · Use AV cable with external monitor, projector, or TV screen
- Încluded accessories: dustcover, canvas carry case with shoulder strap, 5 prepared slides, and four-plug multi-country AC
- Includes Exploring Cell Curriculum; Grades 6-8: Life Science, Technology, and **Mathematics**
- · Complies with NGSS MS-LS1-1 and
- · 6½" x 5½" x 13"



For a complete selection of microscopes and accessories, visit nascoeducation.com

### TURN YOUR MICROSCOPE INTO A DIGITAL CAMERA

And use the free MotiConnect app to view, capture, and edit live images



#### Moticam Al Digital 1.0 MP Microscope Camera

Turn your microscope into a camera. 1 MP resolution; display modes: 1280 x 720, 1024 x 768. Includes focusable lens, 30 mm and 38 mm eyepiece adapters, calibration slide, macro viewing tube, C-ring, USB cable, and dust cap. See specs online. Allow extra delivery time. •• NE30392 – \$236.00



# **NEW**

#### Moticam A2 Digital 2.0 MP Microscope Camera

Turn your microscope into a camera with full 2.0 MP HD resolution. Includes focusable lens, 30 mm and 38 mm eyepiece adapters, calibration slide, macro viewing tube, C-ring, USB cable, and dust cap. See specifications online.
Allow extra delivery time. NE30393 — \$355.00





#### Moticam X5 Digital 4.0 MP Microscope Camera

Turn your microscope into a camera with full 5.0 MP live resolution. Includes focusable lens, 30 mm and 38 mm eyepiece adapters, calibration slide, macro viewing tube, C-ring, USB cable, and dust cap. See specifications online. Allow extra delivery time. 🖚 NE30394 - \$473.00



# NEW

#### Moticam A5 Digital 5.0 MP Microscope Camera

Turn your microscope into a high resolution 4.0 MP streaming camera that connects to Wi-Fi. Includes CS ring adaptor; 2 eyepiece adaptors to fit eyepiece O.D.s of 28 mm–38 mm; USB cable (removable) for use with switching power adapter; calibration slides; software CD Motic Images 3.0; and macro viewing tube. See specifications online. NE30395 - \$422.00



#### LED Monocular Compound Microscope with Detachable Tablet

Digital compound microscope with detachable 8" LCD tablet. High-speed, full-resolution imaging technology built in. Use Wi-Fi® tablets, wireless laptops, and HD-ready LCD monitors/projectors to share live images to iOS or Android™ devices. Tablet includes preloaded Motic apps. Allow extra delivery time.

#### Microscope Specifications:

- · Wide-field 10X/18 mm eyepiece
- 30° inclined forward-facing monocular head
- 4X, 10X, and 40X achromatic objectives
- 70 mW, 3.5V rechargeable LED illumination with intensity control
- Separate coarse and fine focus
- Floating and rotating stage with one-touch stage clips
- · Cast aluminum, gray enamel finish

#### **Tablet Specifications:**

- 8" LCD Android™ tablet
- 1280 x 800 screen resolution
- · Wi-Fi, mini HDMI, and Micro SD card connections • 5.0 MP sensor and capture

- · 1080 HDMI
- Wi-Fi resolution
- 2.0 MP 5.0 MP
- · 720P capture video resolution
- · Built-in Motic Hub for wireless sharing



Z52095 - \$874.00

**MICROSCOPES** 



#### NexYZ 3-Axis Universal Smartphone Adapter

Connects your smartphone to telescopes, spotting scopes, binoculars, monoculars, and microscopes to capture images and video. Directional knobs (x-, y-, and z-axis) perfectly align your phone's camera with the eyepiece in seconds. Fits any eyepiece from 25–60 mm with included adapter ring. Adjustable platform fits any smartphone device. Control x-, y-, and z- axis.

SB53069 - \$74.95



#### **Universal Smartphone Optics Adapter**

Place your smartphone or tablet (with or without a case) into phone clamp, then attach to any optic. Self-centering adapter fits any 28–58 mm eyepiece. Glow-in-the-dark rubber makes it easy to use and set up in low-light conditions. Squeeze-and-release connection. Protective case. 513/16" x 21/2"x 513/16".

EL12172 - \$69.95

























#### Create a mobile microscope with any smartphone



#### **Smartphone Inspector**

Transform any smartphone or tablet into a mobile microscope. Zoom in, take pictures, or capture video close up. 60X illumination, LED and UV lights, adjustable viewing distance, clip, and carrying pouch. SB52507 - \$9.95



#### MicroMax LED™ Pocket Microscope Extremely lightweight and portable

- Built-in LED light
- 60X–100X magnification
- · Rubberized eyepiece

SB50625 - \$15.99



#### Illuminated Zoom Pocket Microscope

Precision illuminated zoom microscope.

- · 60–100X magnification power
- · Adjust focus by turning wheel
- 1¾" x 5%"L
- Vinyl storage coverRequires 2 "AA" batteries (not included)

SB20198 - \$20.50

#### A. Magnifying Lens

Plastic frame. 3X magnification. Set of 24 assorted colors. 5½"L" x 2"W.  $\triangle$  CHOKING HAZARD

SB30348 - \$73.95

#### B. Round Glass Magnifiers

Glass with plastic frame and handle designed for better conformity to natural grip of hand. 2X power.

**SB16443** 2" dia. - **\$2.50** SB16444 3" dia. - \$5.00

#### C. Round Glass Magnifiers

General-purpose glass magnifiers suitable for routine examination of biological and geological specimens. Chrome rims with black plastic handles. 2-2.5X.

SB16440 2" dia. - \$6.00 SB16441 3" dia.-\$6.50 **SB16442** 4" dia. - \$6.75

#### D. Hand Magnifier

Student magnifier molded of optical grade acrylic. 3X magnification with a 13/8" dia. lens.

⚠ See page 3 for complete Choking Hazard Label Information.

SB18007 - \$1.50

#### E. Hand Magnifier

Dual magnifier, 3X and 6X. Plastic frames. 4½"L. SB18031 - \$1.65

F. Large Dual Magnifiers

Plastic body with 2 glass lenses. 5X lens with 2½" dia. viewing area works well for basic magnification, while  $\frac{3}{4}$ " lens with 8X power is ideal for providing extra detail while remaining separate from the main lens. Pkg. of 12; 6¼"L. **SB48968** – **\$14.95** 

#### G. Tri-Lens Hand Magnifier

Plastic. 2X, 6X, and 8X magnification. Lens diameter: 25 mm SB26577 - \$2.35

H. BugLoupe™

This magnifier allows you to see the finest details. Pre-focused for quick, easy viewing at 5X power. 4" x 4" x 3".

SB33381 - \$14.95

#### I. Tripod Magnifier

Black aluminum tripod. Plastic lens holder has worm screw adjustment. Two 1" precision polished biconvex lenses magnify 10X.

SA04452 - \$8.95

#### . Acrylic Magnifier Boxes

Acrylic box has molded magnifier with 4X power that snaps on and off.  $1" \times 1" \times 34"$ .

SB10304 - \$1.90

**Large Magnifier Box.** Big 1½" cube with magnifier slip lid.

SB10305 - \$2.95

#### K. Triple Folding Pocket Magnifiers

Triple-lens magnifier with three 5X lenses for possible magnifications of 5X, 10X, and 15X. Lens diameter: 22 mm.

SB26079 - \$4.65

#### L. Pocket Loupe

Foldout doublet magnifier with 10X lens. Length open 2½" (63 mm), lens aperture ½" (13 mm), focal length 1" (25 mm).  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SA09134 - \$8.95

# For a complete selection of adapters, visit nascoeducation.com

For more magnifiers, visit nascoeducation.com

No more broken glass slides, scratchy

Non-glass, bendable, and unbreakable

plastic, or hard-to-use cover slips. Simply remove protective covering, stick specimen to slide, and view. Reusable. 6" strips are perforated at 1½". A 1½" slide works well for elementary standard mirror or prism-optic microscopes. A 3" (or more) slide works well for stereo microscopes. Pkg. of 5 strips yields 20 slides. A CHOKING HAZARD (1). Not for

SB38432 - \$13.50

Visit nascoeducation.com to watch a demonstration



**EASY AS 1-2-3** 





ONLY AT NASCO

















#### A. Plastic Slide Lab Pack

50 unbreakable 1" x 3" slides and cover slips (22 mm square), as well as a booklet of 50 sheets of lens tissue.

SB16377 - \$12.25

#### B. Plastic Micro Slides

Made from optically clear Rinzl vinyl. Will not break, scratch, or cut fingers. For all types of mounting. Disposable. 1" x 3" x .0180-0.22 thick. Box of 144.

SB14080 - \$8.95

#### C. Glass Square Micro Cover Glasses

Ideal for use in labs where the best technical quality possible is desired at budget prices. No. 1 thickness range: 0.13–0.17 mm. No. 2 thickness range: 0.17–0.22 mm. Boxes of 100.

18 x 18 mm, No. 1 Thick- 22 x 22 mm, No. 2 S08463-\$3.60

Thickness S08465 - \$3.95 22 x 22 mm, No. 1 Thick-

S08464 - \$3.95

#### D. Plastic Coverslips

Unbreakable, flexible, and non-curling. Boxes of

SB47348 18 x 18 mm - \$2.95 **SB47349** 22 x 22 mm - \$3.75

#### E. Glass Microscope Slides with Rounded Corners

No sharp corners. Pre-cleaned slides are made of quality sheet glass with ground edges. 75 x 25 x 1.0-1.2 mm thick. Box of 72.

SB50588 - \$7.00

#### F. LiveSlides®

Perfect for maintaining a shallow depth of field. Configuration has partitions to keep specimens in the viewing area. Made of reusable Makrolon® polycarbonate and is impact resistant. Can be used as both a traditional and digital slide. Includes 2 reusable Makrolon® coverslips. SB53154 - \$3.75

#### G. Glass Microscope Slides

Clear. 1" x 3" x 1.0 mm thick. Box of 72. SA04463-\$4.95

# H. Glass Microscope Slides — Single Concave Clear. 1" $\times$ 3" $\times$ 1.2-1.3 mm thick; 16 mm dia.;

0.50 mm depth.

**SB15360** Box of 12 - \$5.25 **SB15361** Box of 72 - \$21.50

> For a complete selection of microscope slides, visit nascoeducation.com



Sturdy two-piece boxes hold standard 3" x 1" microscope slides. Feature engraved numbering and reference card. Molded high-impact polystyrene.

NE30451 25 Slides - \$4.25

NE30452 50 Slides - \$5.55



**General Biology Survey Slide Set** 

Surveys major animal phyla and plant divisions, explores human and mammalian tissues, and compares and contrasts mono and dicot roots, stems, and leaves. Set of 100 in 9" x 8" x 2" hardwood storage box. SL10017 - \$280.00



#### Microscope Slides

#### Key to Abbreviations:

w.m. — whole mount

c.s. — cross section

t.s. — transverse section l.s. — longitudinal section

sec. - section of unspecified orientation

sa, or sm. — sauash or smear preparation  ${\it o.s.s.}-{\it on single slide}$ 

Set of 25 slides in wooden storage box. Mitoses in plants: pollen grains, w.m.; amoeba, w.m.; yeast cells, w.m.; green algae/spirogyra, w.m.; letter "e"; tape worm, t.s.; silk fabric, w.m.; lily leaf, v.s.; mammal lung, t.s.; meiosis in animals; Aves feather, w.m.; lily stamen, t.s.; mammal hair, w.m.; mosquito mouth parts, w.m.; housefly mouth parts, w.m.; frog blood smear; human blood smear; onion cells, w.m.; hibiscus stem, t.s.; wool fabric, w.m.; fish scale, w.m.; skeletal muscle, w.m.; herbaceous stem, young, t.s.; and skin cells, v.s. SL10016 - \$69.95





the beginner

Product No.	Description	Each
SL10018	<b>Colored thread,</b> w. m. Yellow on blue on red. Threads crossed, designed to aid in the teaching of focusing of a microscope	\$3.15
SL10019	Cork section	\$3.55
SL10023	<b>Letter "e"</b> , w.m. Useful for introducing students to the microscope by demonstrating reversal of direction and image	\$3.25



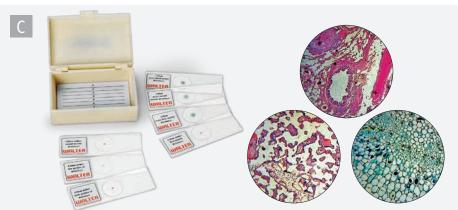
#### Enclosed Prepared Slides — Complete 48-Specimen Set

Prepared glass slides of permanently preserved specimens. Safe glass slides protected for safety. Set includes different examples of pollen/ spores, textiles, insects, tiny creatures, animals, and plants. Contains 12 slides, 48 specimens. Four labeled specimens per slide. SL10012 - \$24.95

Slides













#### A. Student Grade Slide Sets

Each slide has a description of the specimen in 8 languages. Sets of 25 in plastic case. SB47786 Insects

**SB47787** General Biology SB47788 The Cell & Animal Tissue **SB47789** Invertebrate and Insects Set - \$37.95

These 13 slides include normal human blood smear; blood smear of sickle cell anemia cells; ground human bone; Coprinus (fungus) section; foliose thallus and apothecia section; Physcia stellaris, hair (1 each of cat, human, and sheep); leaf section, Syringa vulgaris (lily), showing mitosis; Caucasian human skin; and 3 blank

#### B. Student Grade Life Science Slide Set

striated human muscle; roof tip section of Allium (onion) slides. Comes with box to hold 25 slides.

SB52950 - \$46.00

#### C. Student Grade Slide Sets

1" x 3" slides labeled and stored in slotted container.

Human Pathology. Set of 12 slides includes human blood anemia, lung cell cancer, capillary tumor, gallbladder cholecystitis, lung tuberculosis, intestines adenoma, and 6 other specimens.

#### SB47764 - \$73.00

Mammalian Reproduction. Set of 15 slides includes placenta, ovary, sperm, testis, fallopian tube, uterus, embryo, unfertilized egg, prostate, and 6 other speci-

#### SB47765 - \$44.95

Lilium Meiosis. Set of 7 slides covers different phases and divisions of Lilium ovary and Lilium anther.

SB47767 - \$52.95

#### D. Lens Paper

Recommended for cleaning microscope slides, optical instruments, and other lenses. 50 sheets;

SB48370 - \$2.10

#### **E. Student Grade Cell Development** and Reproduction Slide Set

Set of 10 prepared slides. Every slide has an individual description of the related specimen in 8 languages

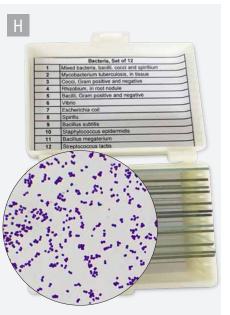
SB44055 - \$17.95

#### F. Bibulous Paper

Highly absorbent, white fiber paper for drying slides and other small lab glass items. 4" x 6" booklet contains 50 sheets.

SB08543 - \$3.05

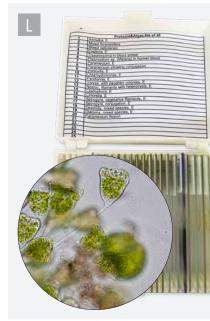












#### G. United Scientific Algae Survey Slide Set

Gr. 5+ Set of glass prepared microscope slides specific to the study of algae. Includes 15 slides in a plastic case. For more details, visit nascoeducation.com.

NE30307 - \$49.95

#### H. United Scientific Bacteria Survey Slide Set Gr. 5+ Set of glass prepared microscope slides

specific to the study of bacteria. Includes 12 slides in a plastic case. For more details, visit nascoeducation.com.

NE30308 - \$45.25

#### l. United Scientific Basic Botany Slide Set

**Gr. 5+** Set of glass prepared microscope slides specific to the study of botany. Includes 25 slides in a plastic case. For more details, visit nascoeducation.com.

NE30309 - \$49.50

#### . United Scientific Histology Slide Set

**Gr. 5+** Set of glass prepared microscope slides specific to the study of histology. Includes 25 slides in a plastic case. For more details, visit nascoeducation.com.

NE30310 - \$89.95

#### K. United Scientific **Basic Plant Anatomy Slide Set**

**Gr. 5+** Set of glass prepared microscope slides specific to the study of plant anatomy. Includes 20 slides in a plastic case. For more details, visit nascoeducation.com.

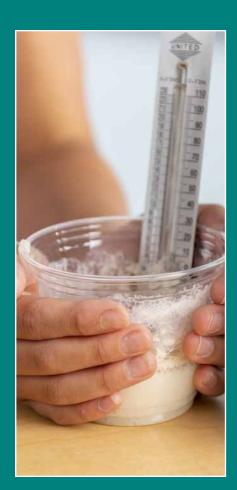
NE30311 - \$41.25

#### L. United Scientific Protozoa and Algae Slide Set

**Gr. 5+** Set of glass prepared microscope slides specific to the study of protozoa and algae. Includes 20 slides in a plastic case. For more details, visit nascoeducation.com.

NE30312 - \$76.25

### For full descriptions of these products, visit nascoeducation.com



Atoms, isotopes, organic structures, DNA, chemical reactions, elements, inorganics, molecules, compounds chemistry explores it all!

Get your students excited to learn with hands-on kits, molecular models, chemicals, and more inside of the lab.

# Quick Index

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**Lab Kits** 106–112

Chemicals 113–116

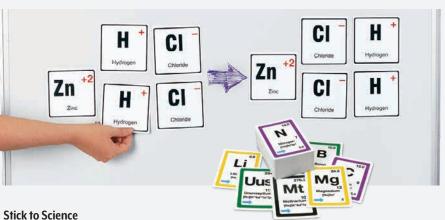
Chemical Storage 117



#### Nasco Basic Periodic Table

Large size, type styles, and three-color printing ensure maximum visibility. 118 elements. Corrugated plastic folds into quarters for storage or tabletop use. Grommets for hanging on wall or from ceiling.

**SA05540** 96" × 48" — \$175.00 **SB53270** 58" x 42" — \$139.95



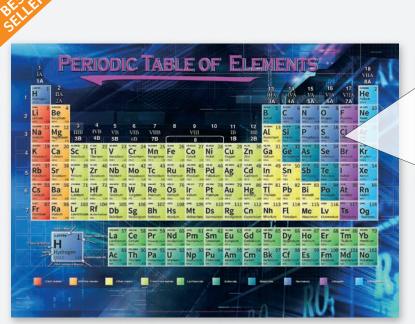
Cards stick to almost all blackboards/whiteboards.

 $\textbf{Chemical Nomenclature Cards. Gr. 7+} \ \ \text{Designed for both nomenclature systems used today. 4}$ cards are blank. 144 write-and-wipe magnetic cards (4" x 4") of the most common cations and anions and teacher's guide.

SB48578 - \$52.95

Magnetic Periodic Table Investigation. Gr. 5–10 Use to investigate the first 20 elements of the periodic table. Elements 1–20, hydride (H-), and 14 additional cards (4 hydrogen; 3 oxygen; 2 each of sodium, potassium, and chlorine; and I fluorine).

SB47691 - \$27.95





# Color-coded elements

#### **Super Size Periodic Table of Elements Poster**

Gr. 9+ Key information for 118 elements. Colorcoded for understanding relationships among elements. Instructions on reading the table, information on element composition, and grommets for easy hanging. Vinyl. 48" x 64".

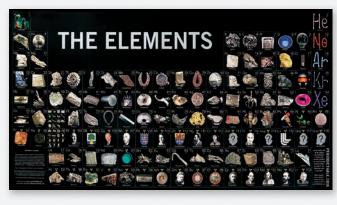
SB46808 - \$194.95



#### **Elements & the Periodic Table Kit**

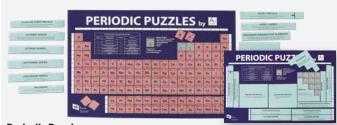
**Gr. 6+** These two activities have students compare data on physical and chemical properties of 14 elements, sort them into groups based on common properties, learn the difference between elements and compounds, and more.

SB46822 - \$116.65



#### Photographic Periodic Table

Gr. 2+ Shows photos of 118 elements that represent their diversity of texture, crystal structure, and color. Reverse side has technical data about each element along with a brief description. 53"W x 27"H. SB43808 - \$36.95



#### **Periodic Puzzles**

Gr. 7+ Teach element recognition and patterns. Magnetic tiles stick to the periodic table. Table, 118 element tiles, 13 grouping tiles, and teacher's guide.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB53070 - \$25.95

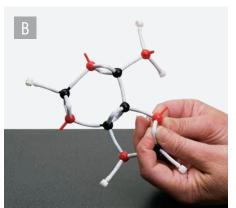
#### The Photographic Card Deck of the Elements

Gr. 3+ These 126 cards  $(5" \times 5")$  feature all 118 elements, plus additiona cards that explain the arrangement of the periodic table, present the elements sorted by various properties, and suggest activities and uses for the cards.

SB46736 - \$24.95















#### A. Molymod® Molecular Model Sets for **Inorganic and Organic Chemistry**

Sets contain the appropriate numbers of atom parts and links to make a particular structure. Made of self-colored plastic, color-coded and compatible. A CHOKING HAZARD (1). Not for under 3 yrs.

**Teacher Set.** 108 atoms. **Student Set.** 52 atoms. SB40831 - \$59.95 SB40832 - \$29.95

#### B. Molecules of Life Kit

Study the basic structure of the chemistry of carbohydrates, lipids, and proteins by constructing 3-D models. Over 1,800 molecular components. For 30 students. Includes 12 packages. A CHOK-ING HAZARD (1). Not for under 3 yrs.

SB13756 - \$174.95

#### C. Atomic Model Set

Hands-on project helps students better understand atoms.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

**Junior.** 26 connecting lugs, 37 connectors (3 lengths), 12 black balls, 6 blue balls, 10 orange balls (2 sizes), 10 yellow balls (2 sizes), 5 green balls, and 6 red balls.

#### SB46610 - \$30.50

Senior. 185 connectors in assorted sizes, 60 black balls (with 3 bond representations), 125 white balls, 30 red balls, 25 green balls, 50 yellow balls (2 sizes), 50 orange balls (2 sizes), and 30 blue

SB48267 - \$129.95

#### D. BRIGHT Science Kit™

Use to make atoms, isotopes, and ions. One BRIGHT Teacher Atom™ (holds 20 each of the protons, electrons, and neutrons) for use on a classroom whiteboard and 8 BRIGHT Atoms<sup>TM</sup> (hold 30 each of the protons, electrons, and neutrons) for student use.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. **SB46626 — \$500.00** 

#### E. BRIGHT Atom™ Model

Let students make their own atoms, isotopes, and ions. Use both surfaces to make atoms. Atoms measure ½" dia. 🛆 CHOKING HAZARD (1) Not for under 3 yrs

SB45486 - \$49.95





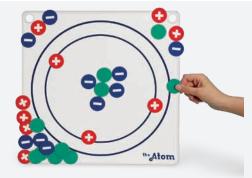
#### **Happy Atoms**

**Gr. 5+** Assemble molecular models using atom models that stick together with magnets. Use the app for iPad® and iPhone® to snap pictures of created models to identify the molecule. App recognizes tens of thousands of models and presents detailed information about 120 of the most important molecules. Requires iPad® or iPhone® (not included).

**Introductory Set.** 17 atom models represent 6 elements. SB52558 - \$64.95

Complete Set. 52 atom models represent 16 elements. EL14902 - \$155.00

Educator's Bundle. 250 atom models represent 16 elements. SB52560 - \$775.00



Gr. 7+ See and touch atom parts while "building" complete atoms up to atomic number 10. 16" x 16" background.

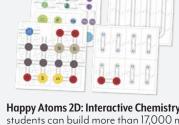
# With Powder-Coated Steel

**Background.** Holes are provided for hanging on blackboard or other hooks.

SB22526 - \$90.00

With Magnetic Vinyl Background. Magnetic back

will stick on most blackboards. SB28840 - \$66.95



Happy Atoms 2D: Interactive Chemistry Puzzles. In this 2D version, students can build more than 17,000 molecules and scan them with the app to identify them and learn in-depth information. Includes printed manual.  $\triangle$  CHOKING HAZARD (4). Not for under 3 yrs. NE30223 - \$22.95



#### Water Kits

**Gr. 6+** Each cup includes pieces for 12 water molecules, 1 sodium, 1 chloride, 1 ethane, and 1 hydroxyl group. All atoms are magnetized to reflect positive or negative charges (except for nonpolar ethane). Meets STEM and NGSS. **NOTE**: Only available in the U.S. & CHOKING

SB53356 1-Cup Set - \$62.00 SB49640 6-Cup Set - \$360.00 **SB53357** 10-Cup Set - \$580.00



#### **Model Plus: The Atom**

Gr. 6–10 An up-to-date model of the Bohr atom with a "fuzzy cloud" of electrons rather than neat elliptical orbits. Nontoxic EVA foam. 19" x 13" x 3".  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SB39250 - \$79.95





#### **Nasco Chemistry Centers Kit**

Gr. 4-5 Meets standards, teaches scientific method in a practical way, and encourages cooperative learning. Topics include states of matter; mixtures, solutions, emulsions, and surface tension; crystals; chromatography; and density.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB48564 - \$164.95



Set of 14 mini-chemistry kits. Topics include polarity of water, spectrum, crystal gel, and more. Each includes several activities and experiments, enough material for several trials, and instructions. **A** CHOKING HAZARD (1). Not for under 3 yrs. SB39050 - \$43.95





#### Thames & Kosmos® Chem C3000

**Gr. 7+** By performing more than 387 fascinating experiments in this well-balanced curriculum, students learn first-hand every fundamental principle of the essential science.

SB45947 - \$264.95



#### Thames & Kosmos® Chemistry C500

**Gr. 4+** Through fun activities like writing messages in invisible ink or performing "magic" tricks, students can learn about reactions between solids, liquids, and gases; the effects of acids and bases; and how to use common lab tools. Includes 48-page manual and equipment and chemicals for 28 safe experiments. NE30401 - \$35.95



#### Thames & Kosmos® Chemistry C1000

Gr. 4+ 80-page manual introduces famous chemists, teaches how to set up a lab space and safely handle lab equipment and chemicals, and includes detailed instructions for 125 experiments. Includes all the equipment and chemicals you need.

NE30402 - \$64.95



#### Mr. RootBeer® Kit

Kit contains all the essential ingredients to brew two batches of root beer in 3 days (each batch makes 1 gallon). Learn the chemistry behind this soda, as well as some fun facts and history. Unlike storebought root beer, this is naturally carbonated, giving it less fizz and a smoother, creamier taste. Includes root beer mix, dry yeast, flavor crystals, no-rinse cleanser, 4 reusable plastic bottles (FDA approved for food and beverage), 4 reusable plastic pressure-relief caps (designed to release excessive pressure as a safety measure), 4 labels, funnel, guide, and instructions. NOTE: Due to this carbonation process, your root beer will contain trace amounts of alcohol (approximately ½ of 1% ABV)

C32807 - \$31.99



#### American Chemical Society®: Chemistry — Investigating Your World Lab Activity

**Gr. 6+** Includes 4 lessons investigating chemical changes while giving students a sense of the many ways that chemistry is used to benefit mankind. Activities include the production of gas, chemistry and color change, formation of a precipitate, and temperature change of chemical reactions. For 24 students working in groups.

SB52488 - \$149.95





#### Elements, Compounds, and Mixtures

Gr. 7-10 Separate a mixture of an element and a compound using solubility and filtration; a mixture of two compounds using solubility and filtration; a mixture using chromatography; and a mixture by evaporation. Required, but not included: balance and laboratory supplies. For 24 students working in groups of 4. Meets National Standards for grades 7–10.

SB39434 - \$104.95



Chemiluminescence Lab Activity

**Gr. 7+** Create a chemiluminescent reaction, then observe the blue glow of the reaction, which lasts for over 10 minutes. For 15 groups. ŠB46579 — \$61.95



#### The Cool Blue Light Experiment Kit

Gr. 4+ Make a cool blue light appear in the dark. Learn about how fireflies glow, chemiluminescence, and the real quantum leap.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs.

SB31106 - \$10.95





#### **Innovating Science® Elephant** Toothpaste Individual Student Kit

Gr. 7–12 Students will learn about the effects of catalysts on a chemical reaction and phase changes, as they create a whole bunch of foam. For in-class or at-home learning.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SB53420 - \$11.25





#### Polyurethane Foam

**Gr. 6+** Mix 2 viscous liquids together to initiate a reaction producing polyurethane foam that expands to 30 times the oriainal volume.

SB43580 - \$57.95



Foam City — The Catalytic Decomposition of Hydrogen Peroxide **Gr. 7+** Produce a large quantity of foam by adding detergent and potassium iodide to hydrogen peroxide.

SB49308 - \$30.95



#### Exothermic/ Endothermic Combination

Gr. 6+ Reactions are safely carried out in plastic bags. Enough for 5 demonstrations.

SB43571 - \$44.95



Chemical **Observation Set** Gr. 10+ Study the similarities and differences between 23 elements. Periodic table included SB47044 - \$127.95



#### **Innovating Science® Density** Of Liquids: The Color Column Demonstration

Gr. K-8 Give students a colorful display of the property of density. Liquids of varying color are added to a cylinder. A density gradient is formed, resulting in a layered, multi-colored column. Includes material for 8 demonstrations.

NE30424 - \$63.95



#### **Families of Elements Experiment**

Experiment with properties of the halogen family and determine the formulas of their compounds. For 50 students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SA08240 - \$159.10

No. 110R-RC. Refill (chemicals only). ▲ CHOKING HAZARD (1) Not for under 3 vrs SA08531-\$106.05





NASCO CHEMISTRY KITS

Acids, Bases, and Salts – 26 Investigations

The Nature of Chemical Change – 16 Investigations

change, and more. & CHOKING HAZARD (1). Not for under 3 yrs.

Gr. 7–9 Learn the basis for recognizing 4 types of chemical reac-

tions, rules for writing balanced equations to describe chemical

reactions, and more.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

Types of Chemical Reactions — 16 Investigations

properties of salts, and more.

SB21517 — \$194.95

SB20216 - \$122.95

SB20218 - \$144.95

#### **Chemical Properties**

**Gr. 9+** Test the chemical properties of 7 different solutions by mixing them in every possible combination and observing their reactions, then use the info to identify any of the 4 unknowns. For 24 students working in groups of 4. Meets National Standards for grades 9-12. \( \Delta \) CHOKING HAZARD (1). Not for under 3 yrs.

SB43441-\$204.95

#### **General Chemistry: Acids,** Bases, and the pH Scale **Classroom Kit**

Gr. 7-12 Examine the effects of acids and bases on several chemical pH indicators, determine the pH of several common household materials, and use the knowledge gained to determine the composition of 4 unknown clear solutions For 15 groups.

SB46576 - \$90.95



#### General Chemistry: Acids, Bases, and the pH Scale Individual Student Kit

**Gr. 7–12** This is a take-home version of the Classroom Kit. (SB46576, above). Students can determine the pH of several household materials, learn about the effects of acids and bases on pH indicators, and figure out the composition of four

unknown solutions. Materials include: deionized water, dilute acid, dilute base, litmus, methyl red, bromothymol blue, phenolphthalein, vinegar, household ammonia, soap solution, filtered water, vitamin C, and pH test strips.



SB53422 - \$28.25



#### Acid or Base? Individual Student Kit

⚠ See page 3 for complete Choking Hazard Label Information.

**Gr. 7–12** Use as a take-home science experiment for distance learning. Students will be introduced to acids and bases, then test a dilute acid and dilute base with neutral litmus paper. Next, they'll use the additional pH strips to test common items around their household. Instructions included. Enough materials inside to run experiment twice. SB53419 - \$17.95



#### **Properties of Acids and Bases Experiment Kit**

Seven exercises involving acids and bases include reacting various metals with acids and producing hydrogen in safe quantities, collecting and testing carbon dioxide, performing a neutralization experiment, and more. For 50 students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SA08229 - \$180.35



#### Periodic Table: Nonmetals, Metals, and Metalloids

Students will examine the physical properties of several elements; test the chemical reactivity of each element; and classify each of the tested elements as either metal, nonmetal, or metalloid. Teacher's manual and student study guide copy-masters included. Enough materials for 15 groups.

SB53056 - \$68.25









# C. Simulated Urinalysis Kit

Gr. 7+ Examine simulated urine for factors such

Refill (Chemicals Only). A CHOKING HAZARD (1). Not

#### **B. Chemical Equations I**

SA08228 - \$148.50

SA08520 - \$106.95

A. pH Measurement/Indicator Kit

Pre-mixed buffers and indicators in spill-proof,

contaminant-proof bottles. For 30 students

working in teams to perform the experiments

individually.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

**Gr. 7+** Perform 2 single replacement reactions and 2 double replacement reactions. Observed are color change, formation of precipitates, and production of gases. For 28 students working in groups of 4. Experiment can be repeated twice. A CHOKING HAZARD (1). Not for under 3 yrs.

SB43452 - \$101.95

as pH, color, and clarity, as well as test for the presence or absence of proteins, glucose, and calcium. For 15 groups of students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB47396 - \$72.95

#### D. Identification of Chemical Reaction Kit

Identify 3 types of chemical reactions: color changes, precipitates, and gas generation. The 7 known solutions are mixed into any of 21 possible combinations and observed. For 50 students. ⚠ CHOKING HAZARD (1). Not for under 3 yrs.

SA08231-\$149.95

SA08525 Refill (chemicals only).

△ CHOKING HAZARD (1). Not for under 3 yrs. — \$99.90



#### E. Physical and Chemical **Properties of Matter**

Perform a series of experiments to determine density, smell, color, melting point, boiling point, and solubility, as well as the chemical properties to identify an unknown solution. For 10 groups. SB51978 - \$164.95

#### F. Characteristics of Matter Kit

**Gr. 5–9** These 10 experiments explore the properties and states of matter, physical properties of solids and liquids, melting and boiling points, solubility of solids, density, chemical properties, and identification of unknown solutions. Required, but not included: balance, ice, 24 small test tubes, test tube racks, 10 ml graduated cylinders, 6 beakers or clear cups, chemical splash goggles. For 24 students working in groups of 4.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs.

SB21299 - \$204.95



#### Innovating Science® Gas Laws Individual Student Science Kit

Because gas properties (volume, pressure, temperature, and moles) have consistent mathematical relationships, they can be used to find missing information when one of them is unknown. Great option for distance learning or in no-share classroom environments. Students will use the Innovating Science® apparatuses and temperature and pressure sensors to measure and plot the physical characteristics of gas. Kit contains an instruction manual and enough materials to run the experiment twice or for 2 students to use it

NE30083 - \$19.50



**Nasco Crystal Growing Kit** 

Learn about the development of crystals, different types and shapes of crystals, and how they form while growing your own crystals. Based on NSES. For 24 students in groups of 4.  $\triangle$  CHOKING HAZARD (1). Not for

SB47141 - \$138.95



#### Fizz Wizard and Jammin' Jelly Reaction Kit

Make soda pop and make it change colors; make polymer pudding; and learn about chemical solutions, acid-base reactions, indicators, pH, and gels.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SB31105 - \$10.95



#### Innovating Science® The Hydrogen Fuel Cell Demonstration Kit

Gr. 9-12 Show students how energy can be produced from combining hydrogen and oxygen to form water. Kit contains materials for 5 demonstrations and an NGSS-aligned guide.

NE30425 - \$54.95

#### Chromatography Paper -1 in. Wide x 100 yd. Roll

Smooth, paper for general analytical separations, electrophoresis, or chromatography requirements. Provides good resolution and a capillary rise of 24 mm/min. Compares to Whatman No. 1 for filtration.

SB16079 - \$41.95





**Chromatography Paper Strips** Gr. 7+ Pack of 100, 15 x 2 cm. SB52175 - \$3.75

⚠ See page 3 for complete Choking Hazard Label Information.





#### Flame Tests and Emission Spectroscopy Experiment Kit

By using spray mist bottles to introduce safe water solutions of various salts through a Bunsen flame, tests of metallic ions are observed with a spectroscope. For 50 students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SA08241 - \$159.10

**SA08532** Refill (chemicals only) **- \$63.65** 



#### **Food Nutrient Analysis Kit**

Provides pure samples of nutrients studied to standardize tests. Indefinite shelf life. Allows 30 students to test and identify 5 classes of nutrients: sugar, starch, lipid, protein, and vitamin C. Simple, safe, and quick tests.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB08028 - \$149.95









A. Introduction to Ionic Reactions

reactions through a series of chemical

SB51980 - \$178.95

15 groups.

SB43601 - \$181.95

B. Science in the Kitchen

Introduce students to the concept of ionic

combinations and reactions. For 15 groups.

**Gr. 6+** Incorporates a variety of scientific

techniques all based around common kitchen

materials. Perform chromatography on com-

mercial food colors, use chemical tests to identify

an unknown cooking ingredient, and more. For



#### C. OB-Scertainer® Kit (Scientific Method)

Develop a hypothesis about the inner configuration of an OB-Scertainer® by indirect observation, then test hypothesis and make a new one if needed. Reusable. Can be used by 24 students simultaneously.  $\triangle$  CHOKING HAZARD (1). Not for under

#### SA05920 - \$109.95

#### D. Enzyme Activity Study Kit

These 5 experiments have students compare an enzyme's role to that of a reacting substance, test the effect of enzyme concentration on rate of reaction, and more. For 50 students. A CHOKING HAZARD (1). Not for under 3 yrs.

SA05452 - \$199.95



#### E. Enzymes and the Process of Digestion Kit

Gr. 9+ Expose 3 nutrients (carbohydrates, proteins, and lipids) to different digestive enzymes. Compare samples to nutrients to which no enzymes are added. Use chemical tests to determine if the enzymes were effective in digesting the compounds. Enough materials for 15 groups. SB50722 - \$72.80

#### F. Red Cabbage Jiffy Juice

Gr. 5+ Very stable and easy-to-use red cabbage extract powder. A safe, all food grade material with low odor and a long shelf life. Will make several gallons of strong red cabbage juice. SB39241 - \$9.95





Some chemicals include a color-coded box for proper inventory storage.



Corrosive



Flammable

#### **DOT Classifications**











# CHEMICAL LABELS PROVIDE YOU WITH "RIGHT TO KNOW" INFORMATION



Different applications may or may not require guaranteed purity levels of the chemicals being used. As a general rule, the higher the purity of a chemical, the higher the cost will be. For this reason, Nasco Education offers a variety of purities or grades of each chemical depending on the application. Common chemical grades are:

ACS Reagent Grade – Manufactured and guaranteed to the highest specifications as set by ACS (American Chemical Society). These chemicals are necessary for analytical applications requiring the most stringent standards.

Reagent Grade — These chemicals are guaranteed to meet or be below maximum impurity limits as stated. Reagent grade is suitable for use in general analytical

Laboratory (Educational) Grade – The most economical of chemicals, these general all-purpose chemicals are suitable for use in applications where no specific purity and/or other standards are specifically called for. They are suitable for almost all educational applications.

**Biological Stains and Solutions** — We have greatly expanded our offerings of biological stains and ready-to-use staining solutions. Every effort has been made to include affordable and practical small package sizes. All dry stains are of certifiable quality. They are for use in the most exacting work in biology, cytology, etc.

**Indicators** – As with biological stains, we have also expanded the indicators in our chemical list. Small, practical, and affordable package sizes are included. All indicators and indicator solutions are of the highest quality for laboratory use.

The chemicals listed are not sold for consumption, pharmaceutical, or medicinal purposes. They are sold only for research, commercial, and educational use under proper supervision. Only orders on school letterhead, purchase order forms, or phone orders with a school purchase order number will be accepted. Chemicals will be shipped only to the school address. Sorry, we cannot accept orders placed by

#### **Shipping Containers and Costs**

Nasco Education does not charge for cartons, labels, and other packaging materials. The listed price includes all handling and packaging charges that have been established and required by the DOT (Department of Transportation). Materials that require additional shipping charges are marked with a DOT icon.

Nasco Education urges that, to the extent possible, you try to anticipate your chemical needs and combine as many items as possible to reduce shipping charges. With few exceptions, we ship via FedEx.

#### **Hazardous Materials**

We have identified all hazardous materials with DOT Classification Symbols.

Safety Data Sheets will be supplied with every shipment of chemicals.

Storage Code Key

Oxidizer —

 $\Box$  — Corrosive

Poison

Description  Alcohols — see individual listings  Alka-Seltzer ■ tablets  Alum — see Aluminum potassium su  Aluminum ■ Al, foil (household types),  25' roll	SB07643 Ilfate	Equals Pkg. of 24	
Alka-Seltzer ■ tablets  Alum — see Aluminum potassium su  Aluminum ■ Al, foil (household types),  25' roll		Pkg. of 24	
Aluminum ■ Al, foil (household types), 25' roll	lfate		\$10.95
25' roll			
	SB30673	Roll	\$3.95
Aluminum hydroxide ■ Al(OH)₃ Fw. 78.00 Grade: reagent Form: powder CAS 21645-51-2 Shelf Life: 36 months	SA09331	500 g	\$44.95
Aluminum potassium sulfate (alum, potassium) ■ AIK(SO₄)₂·12H₂O	SA09334	500 g	\$13.05
Ammonium chloride ■ NH₄CI F.W. 53.49 Grade: ACS reagent Form: granular CAS 12125-02-9 Shelf Life: 12 months	SB16962	100 g	\$5.50
Antacid ■ effervescent tablets (not for humo consumption — lab use only) Grade: laboratory Shelf Life: 36 months	sB51063	Pkg. of 24	\$13.00
В		111	I I - i a
Description	Product No.	1 Unit Equals	Unit Price
Boiling chips — see Calcium carbona	te		
Borax — see Sodium borate Bromothymol blue ■ 0.04% con., bH range 6.0 yellow to 7.6 blue Grade: laboratory	SA09399	100 ml	\$3.95
Shelf Life: 36 months <b>Buffer solutions ■</b> pH accuracy ±0.01 at 2:  C, pH 4.00 (colored red)  Grade: laboratory  Shelf Life: 24 months	5° <b>SB49247</b>		\$6.95
Burner, alcohol fuel — see Ethyl alcoh	nol		

Some chemicals include a color-coded box for proper inventory storage

DOT Classifications

Subject to a Hazardous Material Surcharge

Oxidizer

 $\blacksquare$  — Flammable

Nonhazardous

	C			
	Description	Product No.	1 Unit Equals	Unit Price
	Calcium carbonate ■ CaCO <sub>3</sub> , It. ppt. F.W. 100.09	SA09409	100 g	\$6.15
	Grade: laboratory Form: powder CAS 1317-65-3	SA09410	500 g	\$12.25
	Shelf Life: 36 months <b>Calcium chloride</b> ■ CaCl <sub>2</sub> ·2H <sub>2</sub> O  F.W. 147.02			
	Grade: reagent Form: powder CAS 10035-04-8 Shelf life: 12 months	SB16978	500 g	\$19.25
	Calcium chloride ■ CaCl₂, anhydrous F.W. 110.99 Grade: laboratory Form: granular	SB51085	2.5 kg	\$21.95
	CAS 10043-52-4 Shelf Life: 12 months  Calcium chloride ■ CaCl <sub>2</sub>		500	4=0=
	anhydrous, 4-8 mesh F.W. 110.99	SA09417	500 g	\$7.95
	Grade: laboratory Form: granular CAS 10043-52-4 Shelf Life: 12 months	SA09418	2 kg	\$19.95
	Calcium chloride ■ CaCl <sub>2</sub> ·2H <sub>2</sub> O F.W. 147.02 Grade: reagent	SA09416	500 g	\$15.25
	Form: powder CAS 10035-04-8 Shelf Life: 12 months	SA07826	2 kg	\$47.50
	Chalk — see Calcium carbonate			
	Charcoal Pellets, Activated ■ C F.W. 12.01	SB47148	1 lb.	\$13.95
	Grade: laboratory Form: pellets CAS 7440-44-0 Shelf Life: 36 months	SA05525	5 lbs.	\$60.95
	Citric acid ■ C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> , anhydrous F.W. 192.13 Grade: laboratory Form: powder CAS 77-92-9 Shelf Life: 12 months	SB01168	500 g	\$14.95
	<b>Copper</b> ■ Cu, wire, bare, 16-ga. F.W. 63.55 Grade: laboratory	SB10505	4 oz.	\$8.15
	Form: wire CAS 7440-50-8 Shelf Life: 36 months	9711270	1 lb.	\$25.65
	<b>Copper</b> ■ Cu, wire, bare, 18-ga. F.W. 63.55 Grade: laboratory Form: wire	9711269	1 lb.	\$27.35
	CAS 7440-50-8 Shelf Life: 36 months Copper ■ Cu, wire, bare, 22-ga.			
e.	F.W. 63.55 Grade: laboratory Form: wire CAS 7440-50-8	SB10508	4 oz.	\$8.15
	Shelf Life: 36 months			

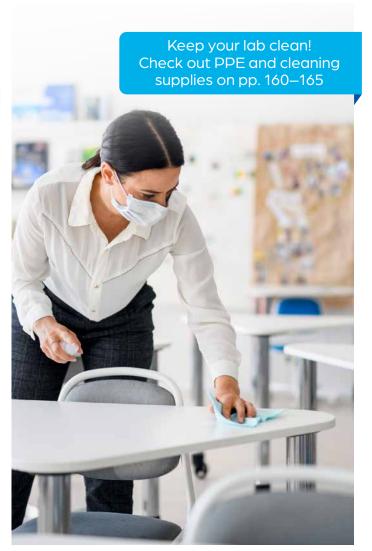
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oison	

Safety Data Sheets supplied with every shipment of chemicals from Nasco Education

Contact Nasco Education if the chemicals you require are not listed.

D		1 Unit	Unit
Description	Product No.	Equals	Price
Dehydrating agents — see Calcium cl	nloride		
<b>Dextrose</b> (glucose) ■ C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> ·H <sub>2</sub> O F.W. 198-17			
Grad: laboratory	SB07693	500 g	\$17.95
Form: powder CAS 5996-10-1		3	
Shelf Life: 36 months			
<b>Distilled water</b> ■ H <sub>2</sub> O CAS 7732-18-5	SB07177	4 liters	\$3.95
Shelf Life: indefinite	5501111	1 111013	45.55
E			
Ethanol — see Ethyl alcohol			
Ethyl alcohol (ethanol) 95% denatured	1/1100000	7.013	¢ 40 F
Grade: reagent Shelf Life: 36 months	KM00009	3.8 liters	\$40.5
F			
<b>Formaldehyde solution</b> ☐ HCHO 37% formalin	CD0117C	4.60	¢1.4.0F
Grade: laboratory NOTE: AN ALLEGED CARCINOGEN.	SB01176	4 liters	\$14.95
⚠ CHOKING HAZARD (1). Not for under 3 yrs.			
G			
Glucose – see Dextrose			
<b>Glycerin</b> (glycerol) ■ HOCH <sub>2</sub> CHOHCH <sub>2</sub> OH F.W. 92.10			
Grade: reagent	SA07847	500 ml	\$16.95
CAS 56-81-5 Shelf Life: 36 months			
Gram's iodine □	CDF274.C	F00 l	¢1C 0E
Grade: laboratory Shelf Life: 12 months	SB52746	500 ml	\$16.95
н			
Hydrochloric acid ☐ HCI			
37% concentrated, molarity 12.1 F.W. 36.46	KM00319	500 ml	\$24.50
Grade: reagent CAS 7647-01-0	KWOOSIS	3001111	Ψ <u></u> 2-1.3 (
Shelf Life: 24 months			
<b>Hydrochloric acid</b> □ 1.00N Grade: laboratory	SB10449	500 ml	\$5.95
Shelf Life: 24 months <b>Hydrogen peroxide</b> ■ H <sub>2</sub> O <sub>2</sub> , 6% solution	CDF2000	F00 I	<b>\$7.0</b> F
F.W. 34.02	SB52800	500 ml	\$7.95
Grade: laboratory CAS 7722-84-1	SB52801	1 liter	\$11.95
Shelf Life: 12 months <b>Hydrogen peroxide</b> 30%,	► KM00869	100 ml	\$6.05
stabilized Grade: reagent			
Shelf Life: 12 months	KM00870	500 ml	\$14.50
<b>Hydrogen peroxide</b> ■ 3% solution	SB52742	100 ml	\$3.95
Grade: laboratory Shelf Life: 12 months	SB01177	500 ml	\$5.95
Hydrogen peroxide 30%, stabilized			
Grade: laboratory Shelf Life: 12 months	SB51100	3.8 liters	\$49.95
Show zire. iz morning			
Indina potassium indida salution	KMOOCOC	100!	¢6.25
<b>lodine</b> potassium iodide solution ☐ Grade: laboratory	KM00626	100 ml	\$6.25
Shelf Life: 12 months	KM00627	500 ml	\$19.95
<b>Isopropyl alcohol</b> ■ 70%, rubbing alcohol Grade: laboratory	KM00635	500 ml	\$8.95
Shelf Life: 12 months  Isopropyl alcohol  70%		Case of 2,	

L			
Description	Product No.	1 Unit Equals	Unit Price
<b>Litmus paper</b> ■ blue, 100 per vial	SB14759(A)	12 Vials	\$15.95
М			
Magnesium ■ Mg, 0.006" x½" F.W. 24.31 Grade: laboratory Form: ribbon CAS 7439-95-4 Shelf Life: 36 months	KM00340	25 g	\$13.95
Marble chips — see Calcium carbor	ıate		
Methylene blue ■ saturated aqueous solution Grade: laboratory Shelf Life: 36 months	SB07740	100 ml	\$9.05
Muriatic acid — see Hydrochloric a	cid		
N			
<b>Nichrome wire</b> ■ bare, solid, 18-ga. Shelf Life: indefinite	SB10527	4 oz.	\$23.50



2			
P		4.11.11	
Description	Product No.	1 Unit Equals	Unit Price
pH Test Paper — see pp. 136-137			
Phenol red 0.02% con. ■ pH range 6.8			
yellow to 8.4 red Grade: laboratory	SA09655	500 ml	\$5.95
Shelf Life: 36 months			
Phenolphthalein ■ 1% ethanol solution  ▲	KM00686	100 ml	\$5.05
Grade: laboratory Shelf Life: 36 months	KWOOOOO	100 1111	Ψ3.03
Potassium ■ K Lumps F.W. 39.10			
Grade: laboratory	KM01004	10 g	\$134.95
CAS 7440-09-7 Shelf Life: 36 months			
Potassium iodide ■ KI F.W. 166.00	SA09682	100 g	\$43.95
Grade: reagent		-	
Form: crystals CAS 7681-11-0	SA09683	500 g	\$229.95
Shelf Life: 12 months  Potassium iodide ■ KI			
F.W. 166.00			
Grade: laboratory Form: crystals	SB07873	100 g	\$54.95
CAS 7681-11-0 Shelf Life: 12 months			
PTC paper strips ■ 100 per vial	SA07854(A)	12 vials	\$30.00
S			
Sal soda — see Sodium carbonate			
Silver nitrate AgNO <sub>3</sub>			
F.W. 169.87 Grade: reagent	KM00254	25 g	\$92.95
Form: crystals		100	****
CAS 7761-88-8 Shelf Life: 24 months	KM00712	100 g	\$254.95
<b>Sodium</b> ■ Na, metal, purified F.W. 22.99			
Grade: laboratory	KM01078	100 g	\$92.95
Form: lumps CAS 7440-23-5			
Shelf Life: 12 months  Sodium bicarbonate (baking soda)			
NaHCO <sub>3</sub> F.W. 84.01	SB07881	500 g	\$8.05
Grade: laboratory			
Form: powder CAS 144-55-8	SB51107	2.5 kg	\$23.50
Shelf Life: 36 months  Sodium borate (borax) ■ Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·10H <sub>2</sub> O			
F.W. 381.37			
Grade: laboratory Form: powder	SB07883	500 g	\$6.05
CAS 13'03-96-4 Shelf Life: 12 months			
Sodium carbonate (soda ash) ■ Na <sub>2</sub> CO <sub>3</sub>	,		
anhydrous F.W. 105.99			
Grade: ACS reagent Form: powder	SA07857	500 g	\$13.95
CAS 497-19-8			
Shelf Life: 36 months  Sodium chloride ■ (rock salt)			
NaCl, coarse F.W. 58.45			
Grade: laboratory	SA09739	500 g	\$5.95
Form: large crystals CAS 7647-14-5			
Shelf Life: 60 months	- السيال		
Sodium hydrogen carbonate – see So	aium bicarbona	те	

SA09747		
	100 g	\$44.95
SA07834	500 g	\$14.25
SB09754	100 Strips	\$15.95
SA09801	500 ml	\$13.95
SA08889	Bundle	\$5.95
SB07900	500 g	\$32.95
	SB09754 SA09801 SA08889	SA09801 500 ml  SA08889 Bundle

Safety Data Sheets supplied with every shipment of chemicals from Nasco Education

Some chemicals include a color-coded box for proper inventory storage.

Storage Code Key



Contact Nasco Education if the chemicals you require are not listed.

#### **Modular Stacking Cabinets** (Acids, Flammables, Combination) — SciMatCo

Can be used as stand-alone unit or modular stacking unit. All cabinets are constructed of 1" multi-ply plywood, have 2 locks, and feature a 2" liquid-tight spill retention floor trough. Finished with a tough, durable coating including layers of chemical-resistant epoxy. 47"W x 18"D x 18"H. Meets applicable OSHA and NFPA standards. Flammables cabinets are UL listed. Allow extra delivery time.

**Acid/Corrosive.** All-wood cabinet with polypropylene lined floor and  $22 \times 2.5$ -liter capacity.

Z15887 — \$1,112.40

**Flammables with Self-Closing Door.** Designed for stacking or stand-alone. Meets Uniform Fire Code. Capacity: 20 x 1

Z50260 - \$1,256.60

Combination Acid/Flammables with Self-Closing Door. Meets Uniform Fire Code. Internal metal lock on flammables side (capacity: 10 x 1 gallon). Plastic hasp and padlock on corrosive side (capacity: 10 x 2.5 liters).

Z50261 - \$1,390.50



**CHEMISTRY** 

Chemicals





#### SciMatCo Bench Top Safety Cabinet - Corrosive Cabinet

High-quality, low-cost, wooden storage cabinet is designed to fit most school science departments and is in full compliance with OSHA and NFPA requirements. Printed with CORROSIVE. Includes external padlock with two keys. Constructed of 1 in. multi-ply plywood and finished with multiple coats of chemical resistant paint. Wood construction eliminates rust or corrosion. Cabinet measures 21 ¼" H x 16 ¾" W x 15 3/4" D. Allow extra delivery time.

Z15886 - \$899.95

All acid and safety cabinets sold by Nasco Education are built in full compliance with all acceptable OSHA and NFPA requirements. All flammables storage cabinets are UL listed. Before purchasing any chemical storage cabinet, familiarize yourself with all local and state codes from the appropriate agencies having jurisdiction. Self-closing doors may be required for flammables cabinets.



Precise, accurate testing and requires the proper supplies.

goggles, scales to balances, and protective gear to lab equipment, get all the essentials to measure, store, and contain materials while

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Nasco Glass Beaker Set

Set of 5 includes 1 borosilicate beaker each of 50, 100, 250, 600, and 1,000 ml. SB45964 - \$15.75



Corning® PYREX® Low Form Beaker Set

Graduated with double scales. Pack of 5 contains 1 each of 50, 100, 250, 600, and

SB46695 - \$36.95

#### PYREX® VISTA™ Low-Form Griffin Beakers

ASTM E960 specifications. Blue graduations and novel marking spot

Product No.	Capacity ml	Graduation Interval ml	Each
SB46185	50	10	\$5.95
SB46186	100	10	\$4.75
SB46187	150	10	\$4.95
SB46188	250	25	\$5.50
SB46189	400	25	\$5.50
SB46190	600	50	\$5.95
SB46191	1,000	50	\$11.95



#### Corning® PYREX® Griffin Beakers – Low Form

Uniform wall thickness. Optimum balance between thermal shock resistance and mechanical strength. Type 1 Class A per ASTM E438, E960 specifications. The 250–4,000 ml beakers have double-graduated metric scale.

Product No.	Capacity ml	Graduation Range ml	Graduation Interval ml	Each
SB42606	50	10-40	10	\$4.95
SB42607	100	20-80	10	\$5.25
SB42608	150	20-140	10	\$5.50
SB42609	250	25-200	25	\$5.95
SB42610	400	25-325	25	\$6.25
SB42611	600	50-500	50	\$6.95
SB42612	1,000	50-1,000	50	\$12.55
SB42613	2,000	200-1,800	100	\$25.95



#### **Nasco Low-Form Griffin Beakers**

Low-expansion borosilicate with properties equivalent to ASTM E960 Type 1 specifications. Double graduations with a limit error of ±5% of full capacity.

a minim ciron c	n ±3/0 Of full C	араспу.	
Product No.	Capacity ml	Graduation Interval ml	Each
SB17976	50	10	\$2.05
SB17977	100	10	\$2.50
SB17978	150	10	\$2.60
SB17979	250	25	\$2.75
SB17980	400	25	\$3.00
SB17981	600	50	\$4.00
SB17983	1,000	50	\$6.25
SB17984	2,000	200	\$9.50



#### A. Nesting Graduated Beaker Set

Unbreakable plastic. Blue calibrations. Set of 5 includes 50, 100, 250, 500, and 1,000 ml.

TB23262 - \$11.95

#### B. Plastic Beakers

Molded in polypropylene. Autoclavable. Good chemical resistance. Raised graduations.

**Set of 6.** 1 each of 6 plastic beakers below. SB49209 - \$55.00

250 ml 2,000 ml SB37390 - \$3.95 SB37393 - \$9.95 500 ml 5.000 ml SB37391 - \$4.25 SB37394 - \$18.95

1,000 ml SB37392 - \$6.95

C. **Polypropylene Advanced Beaker Set**Blue-screened graduations are legible, abrasion resistant, and withstand many chemicals. Suitable for intermediate and advanced applications. Nesting. Set of 5 includes 50, 100, 250, 600, and 1,000 ml.

SA05352 - \$32.95

#### D. Plastic Beaker Set

Set of polymethylpentene beakers offers glass-like clarity with the durability of plastic. Set of 5 graduated beakers includes 50, 100, 250, 500, and 1,000 ml.

SB51331 - \$51.95

#### E. Plastic Nesting Beakers

Resistant to most bases, acids, and other solvents. Can be autoclaved up to 100° C. Raised numerical graduation scale. Includes 1 each of 30, 50, 100, 150, 250, 400, 600, and 1,000 ml. SB51120 - \$14.50

#### F. Graduated Plastic Beaker Set

A nested set of beakers including 50, 100, 250, 500, and 1,000 ml. Heat resistant up to 120° C and autoclavable.

SB19214 - \$15.50

#### G. Scienceware® Write-On™ Label Tape

Peels off without leaving sticky residue. Use pencil, ballpoint pen, or solvent ink marker. Resists moisture and most solvents. Withstands maximum temperature of 315° F for 30 minutes or 176° F for 24 hours. Can be used down to -112° F. 40 yds. <sup>3</sup>/<sub>4</sub>". Includes one each of white, red, yellow, green, blue, and orange. SB40949 — \$101.00















#### **Polypropylene Graduated Beakers**

Straight-sided and translucent. Heat-resistant up to 135° C. Square ratio design with vertical lip. Graduations and indications of material and maximum heat resistance are printed in blue. Autoclavable at 250° F (121° C).

Product No.	Capacity ml	Subdivisions ml	Height mm	Each	Qty.	Each
SB19215	50	5	51	\$3.50	12+	\$3.39
SB19216	100	10	62	\$4.75	12+	\$4.62
SB19217	250	25	82	\$7.25	12+	\$7.06
SB24114	400	50	95	\$7.25	12+	\$6.81
SB19218	500	50	102	\$9.25	12+	\$8.83
SB24115	600	50	107	\$9.50	12+	\$8.73
SB19219	1,000	100	126	\$10.50	12+	\$10.08



#### Narrow-Mouth Erlenmeyer Flask

Borosilicate glass. Tooled top finish, capacity scale, thick walls, long tapered outside contour. Strain point 520° C.

**Set of 5.** Includes 1 each of 50, 125, 250, 500, and 1,000 ml flasks

SB44510 - \$29.95

Product No.	Capacity ml	Rubber Stopper Fit	Each	Qty.	Each
SB17972	50	2	\$3.00	12+	\$2.75
SB17973	100	3	\$3.40	12+	\$3.15
SB26515	125	5	\$5.20	12+	\$4.82
SB17974	250	6	\$5.75	12+	\$5.24
SB17975	500	7	\$7.95	6+	\$7.27
SB26518	1,000	9	\$14.50	6+	\$13.40



#### **Hot Hand Protector**

Silicone-rubber molded hand protector with studded gripping surface. Withstands temperatures up to  $500^\circ$  F ( $260^\circ$  C). Retains flexibility down to  $-70^\circ$  F ( $-57^\circ$  C). Thumb and finger end pockets fit any size hand. 3%" x 7%"

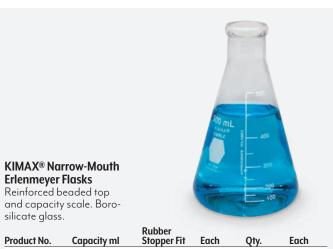
SB01889 - \$17.95



#### **Biohazard Autoclave Gloves**

Soft, pliant, all-cotton terry cloth gloves for handling hot objects out of the autoclave or oven. Heat resistant up to 450° F (232° C). No asbestos. Protects wrist and forearm. 13"L. NOTE: Gloves are not waterproof and cannot be used to handle dry ice.

SB39277 - \$47.95



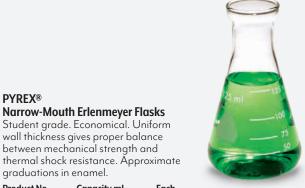
Product No.	Capacity ml	Rubber Stopper Fit	Each	Qty.	Each
SB02764	125	5	\$7.50	12+	\$6.99
SB02765	250	6	\$8.95	12+	\$8.37
SB02766	500	7	\$11.50	6+	\$10.80



### KIMAX® Flat-Bottom Florence Flasks

Flat bottom, reinforced tooled top.

Product No.	Capacity ml	Rubber Stopper Fit	Each	Qty.	Each
SB08187	500	6	\$21.95	6+	\$20.79

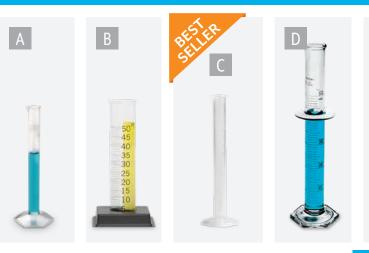


#### Student grade. Economical. Uniform wall thickness gives proper balance between mechanical strength and

thermal shock resistance. Approximate graduations in enamel.

FIGURE NO.	cupacity iiii	Lucii
SB42601	125	\$5.95
SB42602	250	\$6.95

PYREX® Erlenmeyer Flask Set. Includes 1 each of 5 sizes: 50, 125, 250, 500, and 1,000 ml. SB46694 - \$51.95



#### Superior-Grade Cylinders — Plastic

#### A. Dynalon PMP® Graduated Cylinders

Single scale. Crystal clear. Shatterproof. Raised graduations. Wide base. Superior chemical resistance, heat resistance to 350° F (177° C); no meniscus.

Product No.	Capacity mI	Each	Qty.	Each
SB16307	10 x 0.2	\$3.95	20+	\$3.67
SB16308	25 x 0.5	\$4.95	20+	\$4.50
SB16309	50 x 1	\$5.95	20+	\$5.46
SB16310	100 x 1	\$6.95	10+	\$6.35
SB16311	250 x 2	\$11.95	5+	\$10.91
SB16312	500 x 5	\$17.95	5+	\$16.51
SB16313	1,000 x 10	\$27.95	4+	\$25.62
SB23630	2,000 x 20	\$68.95	4+	\$65.46

#### B. Plastic Graduated Cylinders

Tough, transparent plastic. Accurately calibrated on yellow background. Cannot be used for concentrated acids, bases, or stronger organic solvents. Plastic surface does not create meniscus. Large, stable base.

Product No.	Capacity ml	Each	Qty.	Each
SA02306	50	\$2.25	12+	\$1.85
SA02307	100	\$2.55	12+	\$2.35

#### C. Polypropylene Graduated Cylinders, Single Scale – Class B

No meniscus. Raised graduations. Wide base. Excellent chemical resistance. Autoclavable. TC/TD 20° C. Temperature range: -4° to 275° F (-20° to 135° C). NOTE: Not recommended to keep 500 ml cylinders and larger at maximum temp. for long periods of time, as plastic can get soft and bend.

Capacity ml	Each	Qty.	Each
10 x 0.2	\$2.25	20+	\$2.03
25 x 0.5	\$2.55	20+	\$2.30
50 x 1	\$2.95	20+	\$2.65
100 x 1	\$4.50	10+	\$4.06
250 x 2	\$5.55	5+	\$5.00
500 x 5	\$7.50	5+	\$6.75
1,000 x 10	\$13.95	4+	\$12.56
	10 x 0.2 25 x 0.5 50 x 1 100 x 1 250 x 2 500 x 5	10 x 0.2       \$2.25         25 x 0.5       \$2.55         50 x 1       \$2.95         100 x 1       \$4.50         250 x 2       \$5.55         500 x 5       \$7.50	10 x 0.2 \$2.25 20+ 25 x 0.5 \$2.55 20+ 50 x 1 \$2.95 20+ 100 x 1 \$4.50 10+ 250 x 2 \$5.55 5+ 500 x 5 \$7.50 5+

#### Superior-Grade Graduated — Glass

D. Corning® PYREX® Graduated TC Cylinders, Single Metric Scale – Class A Calibrated "to contain" (TC). White enamel graduations. Bumper guards for all capacities except 10 ml. Funnel top for 10 ml; pour-out top for all other

Product No.	Capacity ml	Each	Qty.	Each
SB46672	10	\$22.95	12+	\$19.20
SB47371	50	\$28.95	12+	\$25.87
SB47372	100	\$31.95	12+	\$27.92



#### Superior-Grade Graduated — Glass

E. Class B, Cylinders, Single Metric Scale, with Bumper Kimble KIMAX® Superior grade

Product No.	Capacity ml	Each	Qty.	Each
SB08192	25 x 0.5	\$26.95	4+	\$24.26
SB08193	50 x 1	\$30.95	4+	\$27.86
SB08194	100 x 1	\$35.95	4+	\$31.46

#### F. Nasco Graduated Cylinder, Double Metric Scale with Bumper

Superior-grade glass cylinder. Double metric scale. Calibrated to contain permanent graduations. Complies with Fed Spec. NNN-C-940 for unserialized cylinders tolerance limitations. Bumper guard prevents breakage

Product No.	Capacity ml	Each	Qty.	Each
NE30362	10 x 0.1	\$8.95	12+	\$8.06
NE30363	25 x 0.2	\$11.95	12+	\$10.76
NE30364	50 x 0.5	\$12.95	6+	\$11.66
NE30365	100 x 1	\$13.95	6+	\$12.56

#### Student-Grade Graduated Cylinders — Glass

#### G. Economy-Grade Cylinders, Single Metric Scale, with Bumper Kimble KIMAX®

Student-grade, plastic base. \*SB08197 does not come with bumper.

Product No.	Capacity ml	Each	Qty.	Each
*SB08197	10 x 0.2	\$9.95	6+	\$9.40
SB08198	25 x 0.5	\$11.95	6+	\$11.25
SB08199	50 x 1	\$11.95	-	-
SB08200	100 x 1	\$14.95	6+	\$14.18

#### H. Student-Grade Cylinder, Graduated Double Metric Scale, with Bumper

Economical glass cylinder with plastic hexagonal base and bumper. Calibrated "to contain." Plastic parts easily removed.

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Product No.	Capacity ml	Each	Qty.	Each
SB17991	10 x 0.2	\$5.55	6+	\$5.05
SB17992	25 x 0.2	\$7.95	6+	\$7.28
SB17993	50 x 1	\$9.15	6+	\$8.54
SB17994	100 x 1	\$11.05	6+	\$10.26

We can create custom kits for your classroom's specific needs!. Find out more at nascoeducation.com/custom-kits.





#### Polypropylene Graduated Cylinders

Set of 7 polypropylene cylinders in calibrations of 10, 25, 50, 100, 250, 500, and 1,000 ml. Autoclavable. TB20546 - \$23.95



#### **Graduated Cylinders** Polypropylene Squat Distinct graduations Form Cylinders

for precise volume More stable than trameasurements. ditional glass or plastic Extra-wide hexagon cylinders. Graduations bases and easy-pour are molded and printed in spouts. Set of 6: 25, blue. Self-draining base 50, 100, 250, 500, allows wastewater to drain when inverted in SA05354 - \$52.95 dishwasher.



Product No.	Capacity ml	Each
SB47462	100	\$19.50
SB47463	250	\$25.95



# **Test Tubes for Kids**

**Gr. 1+** Each safe, plastic test tube holds 28 cc. Includes 12 test tubes with screw-on caps. EL12247 - \$14.95





#### Rubber Stopper Assortment

Most cost-effective way to purchase rubber stoppers. Each pack has a selection of solid, one-hole or two-hole stoppers. Size 1–6½. 1 lb. **SB16726 – \$11.95** 

#### **Cork Assortment**

Bag of 100 corks with nearly equal amounts of each size 2–8. 

△ CHOKING HAZARD (I). Not for under 3 yrs.

SB10877 - \$20.75



SB45376 - \$12.00

#### **Kimble KIMAX® K6-33 Glass Test Tubes**

With sturdy lip and marking spot of fused-on white enamel. Made of tubing with correct wall thickness.

-					
Product No.	Dia./L mm	Cap. ml	Per Doz.	Case Qty.	Case
SA04533	13 x 100	10	\$11.50	6+ doz.	\$10.82
SA04534	15 x 125	16	\$13.50	6+ doz.	\$12.75
SA05086	20 x 150	36	\$18.75	6+ doz.	\$16.87
SA04537	25 x 150	55	\$28.95	6+ doz.	\$27.56
SB33965	25 x 200	75	\$35.95	2+ doz.	\$30.97

#### Corning® PYREX® Vista™ Test Tubes

Well annealed, resistant to heat, and chemically stable. Blue marking spot. Fire-polished beaded rims. Cylindrical shape. Round bottom.

Product No.	Dia./L mm	Cap. ml	Pack of 10	Case Qty.	Case
SB46682	13 x 100	9	\$6.50	5+	\$4.75
SB46685	15 x 125	14	\$7.50	5+	\$5.57
SB46688	18 x 150	27	\$8.95	5+	\$6.55
SB46691	20 x 150	34	\$10.95	5+	\$8.09

#### Test Tube Brushes

Multi-fan tip white bristles in twisted wire.

Product No.	Dia.	Bristle Length	Overall Length	Pkg. of 1
SB16143	7⁄16"	2"	6"	\$9.50
SB16144	3/4"	3"	8"	\$10.95
SB16145	13/8"	3"	9"	\$8.95

#### Cylinder and Bottle Brush

Black nylon bristle brush with radial end. Brush is 5" L, 2" dia. Overall length: 13".

SB08102 - \$2.95 12+ \$2.57

# Beaker, Jar, and Cylinder Brush

# Black bristle brush with tufted end on wooden

handle. Brush is 6" L, 3¼" dia. Overall length: 16". SB08103 - \$5.95



SB46688

#### Chemplate®

Eliminates the need for glassware and provides a semimicro environment. Use as a rack of numbered (1–12) test tubes, a gas generator, a reservoir for water, and more. Pack of 10.

SB19151 - \$22.95

#### Well Plate

Clear polystyrene plate has 24 wells (%" D) with alphanumeric markings. 5" L x 3/4" W x %" H. Individually wrapped in plastic bag and nonsterile. Includes lid. SB47053 - \$4.95

#### **Porcelain Spot Plates**

Use for observing chemical reactions. Economically

**6-Cavity.**  $3\frac{1}{2}$ " ×  $2\frac{1}{4}$ " ×  $\frac{1}{2}$ ". SB40727 - \$2.50

**12-Cavity.**  $4\frac{1}{2}$ " x  $3\frac{1}{2}$ " x  $9\frac{1}{16}$ ". SB40728 - \$5.95







**Bottle with Dropper** ½ oz. French square flint bottles feature 20/400 bottle cap with dropper. Pack of 12. SB51111 - \$22.25



**Amber Dropping Bottles** Amber-colored glass. Rubber bulbs and pipettes. 1-oz. capacity. Neck size: 18/400. Pack of 12. SB13996 - \$15.95



**Barnes Dropping Bottle** 30 ml with rubber bulb forming tight stopper. Glass. **SB01827 – \$1.95** 



Wide Mouth Specimen lars

Clear, flint glass jars feature straight sides and threaded necks. Polypropylene F217 and PTFE lined caps are an economical alternative to Thermoset and Phenolic PTFE lined caps.

Product No.	Capacity	Case Qty.	Case
SB10990	8 oz. (237 ml)	24	\$45.50
SB10994	32 oz. (946 ml)	12	\$56.95



Clear Evidence |ar Clear plastic jars with tight-fitting, lined screw-top lids. 4 oz. SB51386 - \$1.50



20 mm closure. Tethered spout caps snap securely in place and won't break away when bottles are squeezed. Low-density polyethylene. Chemically compatible with most acids, bases, and alcohols. 30 ml

SB51259 - \$4.95

capacity.



Geissler Burettes, Straight Glass Stopcock

For all sizes. 2 mm approximate dia. of hole through plug. 0.10 ml subdivisions. Nonstick stopcock grease is recommended. 50 ml capacity. 28½"L. SA08635 - \$33.50



Borosilicate glass 50 ml burette. Individually calibrated. White enamel graduations. Graduation interval: 0.10 ml. General-purpose screw-thread stopcocks with PTFE keys provide excellent flow control and Fluon/glass seals that prevent leakage. SB39109 - \$17.95



#### Live elastin latex-free nipple, high-luster selected glass. 2 ml capacity. Pack of 12.

SA01161 - \$4.85 Pipette – Plastic

Latex-free rubber nipple with plastic tube. 2 ml capacity. Pack of 12. SB14002 - \$3.95



#### Glass Pipettes, Reusable

Heavy-wall borosilicate accurate bore glass tubing. Precision-formed jets and bevel ground ends resist chipping. Graduation marks are resistant to normal laboratory agents and repeated washing. 0.1 ml graduations. Pipettes can be autoclaved. SB39135 - \$3.35



**Two-Valve Natural Rubber Pipette Filler** Eliminates the need for mouth pipetting. 100% natural rubber. Two operating points for fluid intake and draining. Easy to clean. Colors may vary. SB43861 — \$13.95



#### **Transfer Pipettes**

Nontoxic LDPE. Excellent transparency with uniform wall thickness and precise graduations, ensuring consistent results. Nonsterile.

3 ml. Stem graduations: 0.25 ml. Length: 138 mm, fine-tip. **SB50474** Pack of 100 - \$6.00 **SB50477** Pack of 500 - \$27.00

5 ml. Stem graduations: 0.25 ml. Length: 160 mm, fine-tip. **SB50475** Pack of 100 - \$7.25 **SB50478** Pack of 500 - \$33.00

7 ml. Stem graduations: 0.50 ml. Length: 160 mm.

**SB50476** Pack of 100 — **\$7.75 SB50479** Pack of 500 - \$35.00



# LAB SUPPLIES Petri Dishes & Funnels







#### **Porcelain Mortar and Pestle**

100 mm dia. mortar with pouring lip is glazed on outside with natural rough surface inside. Oversized 90 mm pestle is glazed to grinding surface. 130 ml capacity.

SB17995 - \$8.95

**Evaporating Dishes** 

Rounded bottom and pouring lip. Glazed inside and out, except for rim. Excellent resistance to thermal shock.

Product No.	Dia. mm	Height mm	Capacity ml	Each
SB17997	70	30	50	\$3.25
SB17998	80	34	75	\$3.50
SB17999	90	40	120	\$4.95



Glazed porcelain crucibles can withstand temperatures up to  $1,922^{\circ}$ F (1,050°C) without cracking, exploding, or deforming. Comes with

Product No.	Form	Capacity ml	Size	Each
SB47674	High	15	1¼"H x 1¾" dia.	\$3.05
SB47672	High	30	1¾"H x 15%" dia.	\$3.50
SB47677	Low	30	1¼"H x 2" dia.	\$3.75





**Wood Splints** Approximately  $4 \times 140 \times 1$  mm. Bundle of 500. SA08889-\$5.95



**Nonsterile Cotton Tips** 6" wood stick. Bag of 100. SB08678 - \$1.95 10+ \$1.67



Glass Stirring Rods

Well-annealed with both ends fire polished. Packs of 12

Product No.	Dia.	Length	Per Pkg.
SB15199	¼" (5 mm)	8" (20.3 cm)	\$5.15
SB15200	¼" (5 mm)	10" (25.4 cm)	\$7.25



All-purpose lab film is a versatile, moisture-resistant, flexible thermoplastic for a wide variety of applications.

**SB39418** 2" x 250' - \$40.95 **SB39419** 4" x 125' - \$34.95

> For more lab supplies, go to nascoeducation.com



ing, and storage box. SB42284 - \$63.95





**Plastic Petri Dishes** Sterile plastic polystyrene. 100 mm dia. x 15 mm D. Pack of 10.

#### Filter Paper - Qualitative, Medium-Retention

Compares to Whatman No 1 for filtration. For routine laboratory work and student use. Medium retention of 6 um. Flow rate of 60 ml/min. Pack of 100.

Product No.	Diameter cm	Pkg.
SB16074	7.0	\$5.25
SB15188	12.5	\$7.95



#### Petri Dish, Culture

Round, disposable, sterile polystyrene. Flat bottom affords maximum area for observation of growth. 90 mm dia. Approximately 15 mm H. Pack of 20.

SA00371-\$8.25





#### Glass Petri Dishes, Culture — KIMAX®

Reinforced, beaded edges. Dishes remain clear after many uses and withstand repeated sterilization, wet or dry. Bottoms have vertical arrow on side to locate starting point for serial dilutions. 100 mm dia. x 15 mm H.

SB08219-\$1.95





Good quality polyethylene powder 100 mm funnel for general lab use. SB39202 – \$2.45

**Powder Funnel** 

# See p. 131 for ring stands

### Glass **Separatory Funnel**

Squibb-style dropping funnel made of heavy-duty borosilicate glass with glass stopcock. With 19/26 size socket with an interchangeable plastic stopper. 250 ml. SB45476 - \$24.65



**Drying Racks** 

















#### A. Draining and Drying Rack

Can be used standing up, lying down, or mounted on a wall. Galvanized metal drain pan keeps liquid off countertop. Vinyl-coated, heavy-gauge steel wire cushions glassware to avoid breaks, chips, and rusting. Capacity: 90 pieces of glassware on 72, 3" pins and 18, 5" pins. 18½" x 7½" x 19". SB23813 — \$135.00

#### B. Drying/Draining Rack

Self-standing rack can also be mounted to a wall. Holds up to 55 pieces on fifty 4" pins, two 43%" pins, and three 3" pins, all rubber tipped. Rack:  $14" \times 5\%"$ x 26". Removable heavy acrylic drain pan: 13" x  $5\frac{1}{2}$ " x  $\frac{3}{4}$ ". For lab use only; not for use by students age 12 and under. SB45747 - \$61.00

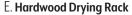
#### C. Petri Dish Holder

Used to sterilize, refrigerate, or incubate culture dishes. Soft black vinyl coating. Capacity: 18 dishes,  $100 \times 10$  mm; 12 dishes,  $100 \times 15$  mm. 9% "  $\times 4\%$ "  $\times 7\frac{1}{8}$ ". SB28540 — \$43.95

#### D. United Scientific Test Tube Racks

**Gr. 5+** These heavy-wire racks will help store tubes while students are working on or collecting different solutions at once. Durable epoxy coating and with multiple places to hold tubes in multiple sizes. Autoclavable.

**NE30291** 36 Places for 16–20 mm Tubes **— \$23.00 NE30292** 36 Places for 10–13 mm Tubes - \$18.00 **NE30293** 24 Places for 13–16 mm Tubes — **\$17.00 NE30294** 20 Places for 16–20 mm Tubes — **\$16.25** 



For storing, drying, or dispensing test tubes and 25 ml graduates. 50 hardwood pegs secured to hardwood base 13" x 73/4" x 1".

SB08484 - \$28.95

#### F. Plastic Test Tube Rack

High-impact plastic rack holds 12 test tubes up to 20 mm in dia. Easy to assemble and chemical resistant.  $9" \times 2^{3}\!\!\!/4" \times 5"$ .

SB33666 - \$5.50

#### G. 20 mm Test Tube and Drying Rack

Holds 12 test tubes up to 20 mm dia. Two shelves. Drying pins. Wood. SB30117 - \$10.75

#### H. 24 mm Test Tube Rack

Double row supports hold up to 12 test tubes each. Made of fine oil-finished hardwood. 7½" x 2½" x 55%". No drying pins included. **SB10559 – \$12.15** 

#### l. Test Tube Rack

Polypropylene, autoclavable in-line test tube rack with 6 holes (25 mm dia.) in top plate with corresponding hemispherical wells in base. Six vertical drying pins. Snap-in assembly. 9½" x 3" x 35%".

SB01890 - \$9.95

#### . Test Tube Rack

, Made of hardwood. Supports 12 test tubes upright or inverted. Has 10 holes for test tubes up to 20 mm dia., 2 holes for 25 mm test tubes, and 12 drying pins. 16½" x 3" x 3¾".

SB01635 - \$5.95



#### **Steel Forceps**

Nickel-plated to prevent rust. 5". Blunt points are file cut and fit squarely together. SB12148 - \$3.75





### Stoddard's Test Tube Clamp

Brass-plated brass spring wire. Maintains spring strength indefinitely.

SA04398 - \$2.15



#### **Test Tube Clamp**

For test tubes (Stoddard) with finger grips. Self-closing jaw. Steel wire brass finish. Jaw opening up to 1" dia. 5" SB10759 - \$2.95



#### Beaker Tongs

For beakers 50 to 2,000 ml capacity. Flat riveted joint. Maximum jaw opening: 4½". 10". Plated steel with plastisol jaws.

SA04392 - \$10.15



#### Laboratory Scoop

For scooping out small or large amounts of chemicals from bottles, etc. Stainless steel. Semicircular cross section with pointed end and blunt end. 6½" without handle.

SB08211-\$1.50



#### Crucible Tongs — Standard

For handling and moving apparatus that cannot be touched by hand. Serrated gripping surface. Steel, nickel-plated. Resists rust. 9".

SB15254 - \$6.95



#### Nuffield

Stainless steel. %" x  $\frac{1}{2}$ " scoop end and  $1^{15}/_{6}$ " x  $\frac{3}{8}$ " flat end.  $5^{11}/_{16}$ ". SB50471 - \$1.80



# Micro Spatula

Stainless steel (10–13% nickel) wire. Approximately 7". Wire: 0.156" dia. Flat ends: 2"L. Mirror finish.

SB08213 - \$3.15



#### Microspoon/Spatula

Nickel/stainless steel, mirror finish. 23 cm. Flat end length: 50 mm. Spoon end: 27 x 13 mm.

SB21567 - \$5.95

# Micro Spatula/Scoop

Stainless steel.  $1\frac{1}{4}$ " scoop at one end and  $1\frac{1}{2}$ " flat spatula on other end. SB46828-\$8.95



#### Lab Tool Kit

Crucible tongs, test tube clamp with finger grips, test tube brush, spatula with flat end and spoon end, tweezers/forceps, lab scoop, and reclosable poly bag.

SB31101 - \$18.95

Clamps



**Burette Clamp** Symmetrical. Improved type. Plated jaws, aluminum muff. Fits rods up to 3/4" dia. SB18966 - \$7.50



**Burette Clamp** Symmetrical. Round, plastisolcoated jaw with 3/8" to 13/8" opening.  $6\frac{3}{8}$ ". Clamp fits rods up to  $\frac{3}{4}$ " dia. SB18967 - \$10.50

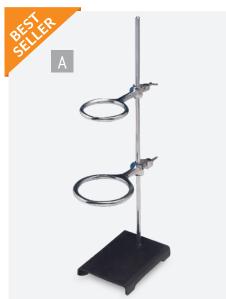
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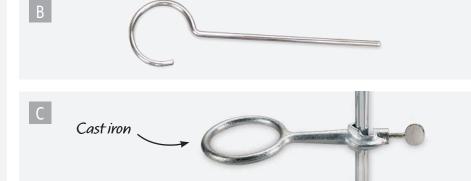


Burette Clamp — "V" law Holds small objects. One jaw is flat; the other is "V" shaped with an opening of 3/16" to 13/8". Fits rods up to  $\frac{3}{4}$ " (19 mm). Plastisol-coated jaws. SB18968 - \$6.95



**Thermometer Clamps** Adjustable 360° jaw rotation for attaching up to 3/4" (19 mm) dia. rods. Aluminum muff, with steel thumbscrew, phosphor-bronze jaws. Maximum length from jaw to muff: 43/8" (111 mm). 51/2" (140 SB18969 - \$7.95









**United Scientific 3-Prong Clamp with** Flexible Extension Rod

**Gr. 5+** The 3-prong clamp features a 12" flexible extension rod that is extremely versatile and can be placed in any position or angle. Connector securely attaches to support stands, lab frames, or any support rod up to 19mm diameter. It holds up to 2 lbs. NE30286 - \$62.95



**United Scientific Right Angle Clamp Holder** 

**Gr. 5+** This heavy-duty, cast aluminum clamp holder is for use with rods up to 19 mm in diameter. For use when clamping at 90° is required. Features a minimum to maximum grip range of 0 to 21mm and a v-grove bearing length of 55 mm NE30287 - \$9.95



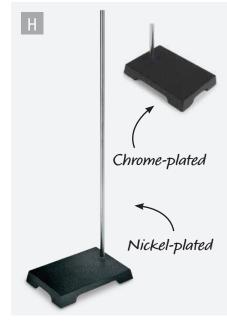
#### Adjustable Clamp Holder Incorporated

swivel can be adjusted to 360°. Lock at any angle with steel thumbscrew. Aluminum. SB48534 - \$11.95









# NEW

United Scientific Adjustable Stainless Steel Double Burette Clamp Two sets of jaws secure two burettes

or cylindrical tubes simultaneously.

**United Scientific Chain Clamp** 

Hold objects that are too large for

clamp. Chain is 21"L and can be

to  $6\frac{1}{2}$ " in diameter.

NE30454 - \$29.95

standard clamps with this handy chain

adjusted to support apparatus from 2"

Stainless-steel, PVC-coated jaws open from 15 mm to 45 mm ( $\frac{1}{2}$ ", to  $\frac{1}{4}$ ") and can be swiveled and locked at any angle up to 90° Aluminum bosshead attaches to rods up to 13 mm (½") OD.

NE30453 - \$24.95

NEW



### Universal Clamp with Holder

Vinyl-coated three-pronged jaws that open up to 21/4". Fiberglass sleeves. Clamp holder can be rotated 360°

SB47055 - \$20.50

For a complete selection of lab supplies, visit nascoeducation.com



Heavy 4" x 6" base, 18" rod, and 2 cast iron support rings (3" and 4") with clamps. SB34800 - \$32.95

#### B. United Scientific Open Support Rings

**Gr. 5+** Support equipment in the lab such as test tubes, funnels, boiling flasks, and separatory funnels with support rings. Rod diameter is 7 mm and the straight rod portion is 71/4"L.

**NE30288** Open Support Ring – 2" ID – \$5.00 **NE30289** Open Support Ring – 2½" ID – \$6.00 **NE30290** Open Support Ring – 31/4" ID – \$7.00

#### C. Support Rings

Cast iron with clamp for attaching to 5/16" to 5/8" ring stand rods.

**\$A04473** 3" O.D., 2½" I.D. — **\$8.75 SA04474** 4" O.D., 3½" I.D. — \$10.00

#### D. Wire Ring Support

Formed, heavy, aluminum-plated, bright steel wire ring with extension arm and "V" clamps which will fit rods up to \s^8 dia. 3". SB18971 - \$8.95

#### E. Burner Tripods

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Supports small objects. Legs are detachable Black enameled cast iron. SB14033 9", 3½" O.D. - \$16.95 **SB14034** 9", 5" O.D. - \$16.95

#### F. A-Base Support Stand and Rod

A-shaped base made of rugged cast iron with 9" legs. Chemical-resistant, black finish. 24" x  $\frac{1}{2}$ " dia. zinc-plated steel rod. 24" x 9" x 2". SB47749 - \$25.95



Triangular cast iron base, heavily enameled, with plated rods. Enamel coating is acid-resistant. Rods are nickel-plated steel and threaded to fit the base

**SA04544** 4" base legs, 3%" x 20" rod — \$14.75 **SB14028** 5" base legs, ½" x 24" rod — **\$20.95 SB37527** 6" base legs, ½" x 36" rod — **\$26.95** 

#### H. Ring Stand — Rectangular Support

rods. Enamel coating is acid-resistant. Rods are nickel-plated steel and threaded to fit the base. **SB14023** 4"  $\times$  634" base size, 56"  $\times$  18" rod – \$17.95 **SA04429** 5" x 8" base size, 3%" x 20" rod - \$20.95

Heavy black enamel cast iron base with plated

#### Ring Stand — Rectangular Support

Heavy, rectangular, stamped steel base. Chrome-plated steel rod.

**SB14025**  $4'' \times 6''$  base size,  $\frac{5}{6}'' \times 18''$  rod — \$15.50 **SB12181** 5"  $\times$  8" base size,  $\frac{3}{8}$ "  $\times$  20" rod — \$19.75 **SB14026** 6" x 9" base size, ½" x 24" rod - \$23.95

#### **Chemistry Sets**



#### Student Glassware Assortment

Selection for one lab station in a general science, physical science, or general chemistry laboratory. Designed for 2–5 students.

• 75 mm funnel, short stem

• 20 cm glass stirring rod

· 2 petri dishes, 100 mm

75 mm watch glass

Mortar and pestle

• 13 x 100 mm (6)

· 18 x 150 mm (6)

Test Tubes:

#### Contains the following:

- 2 bottles, 4 oz., with screw caps Evaporating dish, 75 mm · 250 ml flask, Erlenmeyer · 2 burettes without stopcocks,
- 50 ml
- · Crucible, #0
- Crucible cover
- · Dropper, pipette • 6 dropping bottles, ½ oz.

#### Beakers:

- 100 ml (2) · 250 ml (1)
- · 400 ml (1)

#### Graduated Cylinders:

- 10 ml single scale
- 50 ml double scale
- 100 ml double scale

⚠ CHOKING HAZARD (1). Not for under 3 yrs.

SB18006 - \$239.95



**Distilling Apparatus** 

Gr. 7+ 300 mm Liebig condenser, 50 mm dia. Kjeldahl ball, 500 ml boiling flask, cast iron base with support rod, clamp, tripod, wire gauze, 500 ml Erlenmeyer flask, and instruction manual. SB39318 - \$84.95



#### **Chemistry Labware Kit**

Assortment of items most commonly used in a general chemistry lab.

#### Contains:

- 2 Barnes dropping bottles, 30 ml 9"L steel crucible tongs
- 6 plastic dropping pipettes • 50 ml glass beaker
- · 100 ml glass beaker
- · 250 ml glass beaker
- 2<sup>3</sup>/<sub>4</sub>" dia. porcelain evaporating
- 6 glass stirring rods, 8"125 ml glass Erlenmeyer flask
- 250 ml glass Erlenmeyer flask
- 6 glass test tubes, 11/16" x 57%"
- 10 ml polypropylene cylinder
- 50 ml polypropylene cylinder
- 100 ml polypropylene cylinder • 5"L stainless steel forceps

#### SB49823 - \$84.95

- 3%6" dia. long stem glass funnel
- 215/16" dia. plastic funnel
- · Brass test tube clamp with finger grips
- 5" x 5" wire gauze
- with ceramic center
- 25 ml porcelain crucible with lid • 2<sup>15</sup>/<sub>16</sub>" dia. watch glass
- Plastic scoop
- Stainless steel spatula with 3"L blade and wooden handle
- 3 solid rubber stoppers
- 1-hole rubber stoppers (3)
- · 2-hole rubber stoppers (3)



# **Organic Chemistry Glassware Set**

Suitable for preparations up to 150 g. All glassware is jointed. Comes in a storage box with foam insert.

#### Contains:

- · Still head
- · Dropping funnel, 100 ml
- Pocket thermometer
- · Air leak/steam inlet tube
- · Round bottom flask, 50 ml
- · Round bottom flask, 100 ml
- · Round bottom flask, 250 ml
- Erlenmeyer flask, 250 ml
- Allow extra delivery time.
- · Reducing adapter
- · Receiver adapter with vent
- Multiple adapter · Stoppers, small, 2
- · Receiver delivery adapter, long stem

## Z50751 - \$285.00

- · Stopper, large
- Liebig condenser

# INTUITIVE, PLUG-AND-PLAY SENSORS Easily log data — no calibration or setup required







SB50671

#### **NeuLog Communication Modules**

Data logging platform with plug-and-play technology. Just plug up to 10 logger sensors into module and begin experiment. No calibration or setup time required. Each sensor stores up to 5 experiments in flash memory. Send data in digital form to computer or smart device. Sensors accommodate experiments lasting up to 31 days. Module software includes online and offline modes, tables, graphs, data analysis, double axis setup, statistic operations, and mathematical operations. Free browser-based software will work with any hardware. NOTE: Wireless (SB50671) or USB module (SB50672) is required to operate any of the sensors listed below.

Wireless Module. Connect any NeuLog sensor to any computer or smart device using Wi-Fi.

#### SB50671-\$200.00

**USB Module.** Plug into USB port of a computer, then plug sensors into module, which provides both power from the PC to the sensors and the communication between them.

SB50672-\$58.95





#### NeuLog Logger Sensor - CO2

Based on an electromechanical reaction between CO2 gas and the sensor. The result of the electromechanical reaction is voltage, measured by the logger sensor. The measure units are ppm (parts of CO2 per million of air). Features 14 bit ADC resolution, resolution of 1 ppm, and a maximum sample rate of 100 S/sec. Accommodates experiments lasting from 1 second to 31 days. NOTE: The wireless or USB module is required to operate any of the sensors.

SB51188 - \$325.00



# Take measurements of the level of free oxygen

in air or dissolved oxygen in water. The free oxygen in air mode is used to measure changes in oxygen levels during combustion or in reactions that produce oxygen. Features 13 bit ADC resolution, resolution of 0.1% (in air/dissolved) or 0.01 mg/L (dissolved), and a maximum sample rate of 100 S/sec. Accommodates experiments lasting from 1 second to 31 days. NOTE: The wireless or USB module is required to operate any of the sensors. SB50677 - \$300.00



Wide Range Temperature Based on a thermocouple sensor that enables

measuring very low temperature levels and very high temperature levels, even the temperature of a flame. Measures both Celsius (-200° to 1200° C) and Fahrenheit (-328° to 2200° F). Accommodates experiments lasting from 1 second to 31 days. Features 10 bit ADC resolution, resolution of 0.1° F (0.1° C), and a maximum sample rate of 100 S/ sec. NOTE: The wireless or USB module is required to operate any of the sensors. SB51902 - \$85.00

#### **Test Papers**



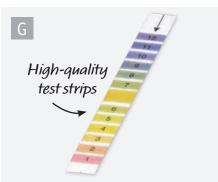
















#### pHydrion Insta-Chek 0-13

Direct reading pH paper has the widest range (0-13) available in a single paper. Simple, single color match for all pH values. One paper gives 14 colors, providing instant pH checks over entire range. Accurate, reproducible readings provide immediate response.

A. **Jumbo.** Single-roll dispenser with 50' roll of tape and color chart.

SB13596 - \$11.50

B. **Standard.** Double-roll dispenser with 2 rolls of  $15' \times \frac{7}{32}$ " tape and 2 color charts.

SB13598 - \$11.95

**Standard Refill Package.** 5 rolls of 15'  $\times \frac{7}{32}$ " tape for SB13598 dispenser.

SB13599 - \$25.95

#### C. Hydrion pH Strips 1-12

Wide-range, general purpose test papers have a distinct color match at full pH units 1–12. 100 per vial. 4½" x 3".

SB51250 Per vial - \$3.25SB51251 10 vials - \$26.95

lumbo pH Strips. 8" x 31/4". Pack of 5. SB51252 - \$25.50

Pack of 5 rolls of 15'  $\times \frac{5}{32}$ " tape.

E. Mikro Refill Package

F. **pHydrion pH Paper 1-11.** Determine pH over a range of 1–11. Two 15' rolls in plastic dispensina

clear, bright, single-color matches. Dip strip into

test solution, then instantly compare color with

matching pH color chart. 100 strips in flip-top

C08835 - \$12.95

vial. 1.0 interval.

SB48831-\$13.75

SB10879 - \$19.50

#### G. PEHANON® Test Strips 1-12

pH indicator and reference colors are on one strip. Sample color has same effect on both reference colors and reactive pad. Invisible hydrophobic barrier just above top color field. Handle remains dry and clean. Single strips can be used with color chart to determine pH values. Gradations range from 1–12. Box of 200, 11 x 100 mm.

SB50371 - \$27.95

#### D. Hydrion Spectral Plastic 0.0-14.0 pH Strips H. Wide-Range pH Paper Premium-quality, wide-range plastic strips offer

Provides distinct color for each separate pH reading in the range of 1-14. 100 strips per pack. SB08261 - \$3.75

#### . pH-Fix Test Strips

Long handle prevents fingers from coming into contact with the sample. pH indicator is chemically bound to the cellulose fiber. Four different color blocks for each pH value (0–14) ensure precise pH determination. 100 test strips, 6 x 85 mm.

SB50372 - \$18.50

For a complete selection of test papers, go to nascoeducation.com











 $100 \text{ strips } (2'' \times \frac{1}{4}'') \text{ per vial.}$ 

Product No.	Description	No. of Vials	Pack
SB14759(A)	Litmus, Blue	12	\$15.95
SA07854(A)	P.T.C.	12	\$30.00
SB10904(A)	P.T.C. (control)	12	\$18.95

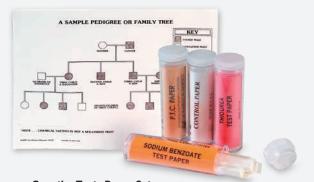
#### K. Urine/Glucose Test Strips

Multiple test strip for conducting urine tests for pH, glucose, ketones, and protein. 50 strips.

SB31063 - \$34.95

#### L. Litmus Strips

Standard indicators for acids and bases. 100 blue and 100 red strips. SB50608 - \$3.75



#### **Human Genetics Taste Paper Set**

Test the genetically determined taste response of students and families to three different chemicals. Four vials each contain 100 papers. NOTE: Some school systems ban the placement of anything in the mouth during a science class or the use of PTC taste papers. Abide by your system's state and local regulations. If you cannot use PTC taste papers, you can investigate other human genetic traits such as earlobe attachment or the ability to roll your tongue.

SB11123 - \$8.95



#### PH-200: Waterproof Professional Series pH/Temp Meter

Advanced microprocessor provides accurate readings in applications like hydroponics, purification applications, wastewater regulation, aquaculture, ecology testing, water treatment, agriculture, and more. Waterproof housing is submersible and floats (IP-67 rating). Digital automatic calibration (1 point) with digital fine tuning. Features automatic temperature compensation (ATC) auto-off function, data-hold function, and low-battery indicator. Easy-to-read LCD screen with simultaneous temperature display. Factory calibrated to pH 7.0 and three-point checked. pH range: 0–14. 75/16" x 15/16" x 15/16". Includes batteries, translucent cap, lanyard, and pH 7.0 buffer (sachet).

C35311 - \$99.95

### Test Tube pH Pen

Large LCD display. One-hand operation. Fits into standard test tubes 16 x 50 mm or larger. Automatically calibrates to pH 4, 7, and 10 buffers. Adjust to recognize any buffer. Features hold function, auto power off, low battery indicator, waterproof case, and built-in electrode kept moist with protective cap.

SB52136 - \$62.00



pH Motor PH-200



#### Portable Refractometer

Measures protein concentration, urine specific gravity, or gives the refractive index in seconds using only a few drops of blood serum, plasma, urine, or albumen. Works in ambient light with no power source necessary. Rubber-coated hand grip, covered eye piece, clearly defined scale with large measurements, and all accessories necessary for immediate use.  $6\frac{3}{4}$ " x  $1\frac{1}{2}$ ".

nascoeducation.com | 1.800.558.9595

SB48374 - \$97.95

#### **Bunsen Burners**



#### Natural Gas No-Tip Bunsen Burners

Expanded base prevents easy tipping. Spaced feet allow burner to fit comfortably under stands. Includes carry handle.

**Basic.** Airflow adjustment sleeve. 511/16" (145 mm). SB52635 - \$17.95

**Standard.** Flame stabilizer and gas adjustment needle valve. 65/16" (160 mm).

SB52637 - \$24.95

**Tirrill.** Wing nut for gas adjustment. Tube screws for air-to-fuel adjustment. 5%" (150 mm). SB52639 - \$33.95







We suggest using ethyl alcohol, 95% denatured (ethanol), for these alcohol lamps. See p. 115 for ethyl alcohol listing.







#### A. Tirrill Burner — Natural Gas

Noiseless burner allows separate control of both flame temperature and length. Clean flame from ½" to 12". Rustproof. Nickel-plated, one-piece, die-cast base and serrated gas inlet. Aluminum mixing tube. Threaded aluminum air control sleeve, brass needle valve, flame stabilizer. SB07242 - \$38.50

#### B. Safety Alcohol Burner and Stand Kit

Burner fits into a recess in the stand so that it is almost impossible to tip while in use. SB10930 - \$14.95

Replacement Wicks. Pack of 12. SB14308 - \$6.95

#### C. Alcohol Burner

Flat-bottom alcohol burner has a safety cap to prevent alcohol evaporation. 3%" dia. with  $\frac{1}{4}$ " wick. Split-sleeve wick adjustment. 4 oz. △ CHOK-ING HAZARD (1). Not for under 3 yrs.

SB34435-\$4.95

#### D. Bunsen Burner — Natural Gas

Adjustable burner with cast iron base and chrome-plated steel tube with air regulator and threaded needle valve.

SB27553 - \$15.95

#### E. Bunsen Burner Connecting Tubing

Galvanized, flexible steel tubing with gas-proof rubber insulation covered with cotton braiding to meet American Gas Association standards. Rubber connector ends attach to standard 3/8" nipples. Can be used with Tirrill burners and other high-temperature burners.

SB10461 2'-\$16.95 SB10462 3'-\$20.95

#### F. Spark Lighter — Hooded

Safer to use than matches. Sparks ignite combustible vapor only. Comes with replaceable tip. SB16654 - \$4.00

Replacement Flints. Pack of 10. SB16655 - \$5.95



#### **Digital Melting Point Device**

Determines the melting point of a substance without needing a mercury thermometer. Digital LED temperature display has a 0.1° C resolution. Adjustable speeds have indicator lights (Heating, Fast, Slow) advising procedure in process. View up to 2 samples with magnifying lens and built-in LED light. Includes a manual with detailed use instructions and a pack of 100 glass capillary tubes, open on one end. 120V, 60Hz. Temperature range from ambient temperature up to 300° C, with an accuracy of  $\pm 1^{\circ}$  C at 20° C and  $\pm 2.5^{\circ}$  C at 300° C. 81%6'' x 65%6''x 611/16". Allow extra delivery time. Z48577 - \$1,404.95



#### Portable Butane Burner

Compact burner with adjustable flame control lever, safety mechanism turn off stopper, built-in pressure release valve, and a non-tip wide base. Automatic ignition and refillable. 24 oz.

NE30217 - \$50.00

**Butane Fuel.** Prevents clogging. Provides a cleaner burn. Universal filling tube and added odorant to detect leakage. 3.38 oz. NOTE: Any quantity may be shipped without hazardous materials charge. SB38457 - \$8.50



#### **Butane Lab Burner**

Fingertip valve adjustments for flame control. 5.5-oz. container of fuel fits under 9" tripod. Delivers a hot, clean flame to 3,000° F for 5½ hours from a single disposable fuel container.

SB16434 - \$59.95

Replacement Fuel Tank (5.5 net oz.) Only SB16435 - \$13.25

#### **Single Electric Burner**

Die-cast, flat burner features high, medium, low, and warm temperature settings with a power-on safety indicator light. 9½" x 8½" x 3".

WA26024 - \$24.95



#### **United Scientific Eco-Heat Hot Plate**

Gr. 9-12 Aluminum top hot plate features powerful 500W heating element and reaches up to 280° C. Automatically stops when maximum temperature is reached. Stirring function operates at speeds from 0 to 1,600 rpm. NE30228 - \$161.95



#### Corning® Scholar® Hot Plate

White enameled steel top plate. Dual heat shields dissipate heat and keep case cool to the touch. Temperature range: 77° F to 672° F (25° to 360° C). 5" x 5" x 4". 120V power. UL/CUL approved. SB45547 - \$224.00



#### Corning® Hot Plates (Without Stirrer)

Maintains consistent and repeatable temperature settings from 5°C (if ambient temperature is 0° C or lower) up to 550° C. Digital LED temperature display is adjustable in 5° C increments. Bright LED "hot top" icon lights up when top plate is over 60° C. 120V/60 Hz with three-prong plug. UL and CUL approved.

**SB41623** Digital, 5" x 7" — \$365.00 **SB28687** Analog, 4" x 5" — \$300.00



1.800.558.9595 | nascoeducation.com

### **Hot Plates & Stirrers**



**United Scientific Eco-Stir Magnetic Stirrer** 

**Gr. 9–12** Designed for use with low viscosity liquid or a solid liquid mixture. Includes power adapter and user manual. Mixing speed goes up to 2000 rpm. NE30230 - \$109.95



Simultaneously stirs and heats liquid. Totally enclosed, cast aluminum heating surface resists chemical spills. Separate dials regulate stirring speed and temperature. Has 1" octagon stir bar with molded-on pivot ring in center, detachable 1' support bar with thermometer/pH probe clamp, and detachable power cord. Stirring capacity: up to 500 ml with a strong vortex. 180 watts. Temperature max.: 480° F (250° C). 120-1600 rpm.

5" x 5" **SB48265** 110V - \$195.00 SB52702 220V-\$197.00

7" x 7"

**SB51127** 110V — \$260.00 \*EXCLUDED FROM DISCOUNTS **SB52703** 220V - **\$255.00**\*EXCLUDED FROM DISCOUNTS

# **Analog Hot Plate** with Magnetic Stirrer

For use with beakers/flasks up to 3,000 ml in capacity. Stainless steel heating plate. Hot top indicator. Adjustable safety cut off. Double PT sensors. Maximum stir bar length: 80 mm. Knob for electronic variable speed control and for regulating variable power. Celsius temperature range. Speed range: 50–1,700 rpm. 11" x 6½" x 4¼", 230/115V, 450 watts, 50/60 Hz. SB49155 - \$374.95



#### **Corning® Stirring Hot Plates**

Closed-loop stirring control monitors and regulates stirring speed from 60–1,150 rpm for aqueous, viscous, or semi-solid solutions. Stronger, larger magnet improves stir bar coupling. Automatic ramp up speed adjustment minimizes decoupling.

**SB42262** Digital, 5" x 7" - \$600.00 **SB50648** Analog, 4" x 5" - \$575.00





#### United Scientific Eco-Mix Vortex Mixer

**Gr. 9–12** Mixer features simple touch-and-go functions. Small, compact design will save storage space. Delivers robust vortex mixing at 3000 rpm. NE30227 - \$156.95



#### **United Scientific Eco-Spin** Mini Centrifuge

Gr. 9–12 Bench-top mini centrifuge includes 12-position 2 ml tube rotor and 4-position, 12-strip PCR tube rotor. Holds 48 PCR tubes or 0.2 ml strip tubes. 4000 rpm maximum speed. **NE30229 – \$157.95** 



#### **Spinplus 8 Rotor Centrifuge**

- Gentle braking at low speeds
  Efficient separation and braking time (20–80 seconds) can be adjusted for the 0-5,000 rpm speed
- · LCD display can change between rpm and RCF setting
- Separate short spin button for quick spins
- · Run operations anywhere from 10 seconds to 99 minutes
- Bell signal and automatically opening safetylid indicates operation has finished

SB52593 - \$435.00



#### E8 Centrifuges

- · Accommodates most test tubes from 3-15 ml
- · Wide stance and suction-cup feet eliminate wobbles, vibrations, and slipping
- Brushless motor is virtually maintenance-free
- Auto switching between 110V and 220V
- Includes 8-place tube rotor, 8 tube sleeves (15 ml), and 8 tube sleeve inserts (13 x 75 mm)
- 3,300 rpm fixed speed
- Auto-off 30-minute timer with bell
  Maximum RCF: 1,350 g
- · 10" x 10" x 10"

SB46439-\$450.00



#### **Conical Bottom Centrifuge Tubes**

Sterile. 50 ml conical-bottom tubes feature screw-top lids, easy-to-read black graduations, and writing area. Suggested use in temperatures between 0° to 40° C. Pack of 50. SB45966 - \$14.95



#### Foam-Racked Centrifuge Tubes

15 ml tubes have screw top with easy-to-read white graduations. Clear, polypropylene, conical bottle tubes with writing area. Working temperature range: 0° to 45° C. Pack of 50 in foam rack.

SB43474 - \$36.95



#### **Colored Plastic Rack with Tubes**

Set of 15 ml plastic tubes comes with twotiered test tube stand. Tubes feature screw tops and graduated markings. SB44477 - \$11.95



#### **United Scientific Centrifuge Tube Brushes**

**Gr. 5+** Effectively clean centrifuge tubes, vials, small funnels, and more in the lab with these centrifuge brushes. Features tapered white nylon bristles with white nylon fan tip. Cleans tubes in various sizes. Packs of 12.

NE30295 41/2" Brushes - \$20.15 NE30296 5" Brushes - \$25.95 **NE30297** 6" Brushes — \$26.50



#### Lab Incubators

Maintains temperatures up to 62° C accurately and uniformly. Sensitive heat controller maintains temperatures to  $\pm 1^{\circ}$  C. Minimum temperature: ambient +2° C. Beakers, flasks, petri dishes, and test tube trays can be processed at the same time. Safe, non-mercury spirit thermometer. Shielded heater protects against spills. UL listed, seethrough door. Aluminum interior. No assembly required. 120V AC, 120 watts for 0.7 cu. ft. and 235 watts for 2.0 cu. ft., three-prong grounded

**0.7 cu. ft. Capacity.** Interior:  $12" \times 10" \times 10"$ . Exterior:  $12\%" \times 10^3 / 4" \times 15"$ . SB21186 - \$545.00

**2.0 cu. ft. Capacity.** Interior: 18" x 12" x 16". Exterior: 19" x 13" x 21". Allow extra delivery time.

SB26217 - \$735.00



#### **United Scientific Eco-Heat Heating Mantle**

Provide uniform heating to round-bottom flasks up to 250 mL capacity. Heating function: Electronic thermoregulation. Heating power: 100W-2400W. Max heating temperature: 380°C. Operates on 115V/60 Hz.

NE30455 - \$104.95

#### **Electro-Thermal Constant-Temperature** Water Bath

Easy-to-read digital display. Stainless steel inner reservoir. Cover with removable open ring covers allow beakers and flasks to be used while limiting water evaporation. Intelligent temperature controller with PID program. Overtemp protection.

4 Liters SB49827 - \$375.00 8 Liters SB49826 - \$500.00





#### **Digital Incubators**

Full PID microprocessor-controlled units maintain accurate temperature settings within  $\pm \frac{1}{2}$  ° C even in varying ambient or power supply conditions. Large, low-glare, four-digit LED display can be easily read across the room. Selectable °C or °F unit readout. Continuous self-diagnostic function prompts if control software malfunctions or thermocouple fails. Minimum temperature: ambient +2 $^{\circ}$  C. High-grade aluminum interior, cold-rolled powder-coated steel exterior, and bronze acrylic see-through door. UL listed. Allow extra delivery time.

0.7 cu. ft. Capacity. 7 shelf positions. Z30660 - \$823.00

2.0 cu. ft. Capacity. 13 shelf positions. Z30661 - \$1.088.00



#### **Gravity Convection Laboratory Oven**

Used for drying, baking, sterilizing, evaporating, heat treating, annealing, and testing. Automatic thermostat controls temperature. Heat shield absorbs radiant heat and distributes it more evenly. 3 racks (top and middle are adjustable). 0.7 cu. ft. Safe non-mercury spirit thermometer. I.D.: 12" x 10" x 10". O.D.: 14" x 17" x 12". Maximum temperature: 450° F (232° C). Minimum temperature: ambient +25° F. Allow extra delivery time.

Z30662 - \$670.00



#### Bell in Vacuum — Glass

Gr. 6+ Prove sound waves won't travel through a vacuum. Electric bell may be removed from jar for other vacuum experiments. Inside height: 8"; dia.: 61/4". Also includes base plate with seal and instructions.

SB44677 - \$99.95



#### **Two-Stage Laboratory Vacuum Pump**

Small, lightweight, and portable. Powerful, high-performance pump comes ready to operate. Free air displacement: 2.5 cu. ft./min. at 50 Hz and 3.0 cu. ft./min. at 60 Hz. Motor: 1/3 HP. Oil capacity: 250 ml. Comes with initial supply of high-vacuum pump oil. 115V, 60 Hz. SB47761 - \$350.00



#### **Mobile Ductless Demonstration Fume Hood**

No installation or ducting required. Self-contained, integrated system is ideal for fixed location or mobile applications. Ductless fume hoods isolate and trap chemical vapors to prevent ecological impact through release into environment. High-efficiency carbon filtration and air management system protects both the user and the classroom environment from hazardous vapors generated on and above the work surface. Clear walls permit 360° visibility, perfect for individual and group applications. Improved filter clamping prevents bypass leakage and allows filters to be easily changed, no tools required. Low airflow alarm warns of unsafe conditions, and electronic process monitoring ensures continuous safety. Mounted on a heavy-duty wheeled transfer cart with a small side storage compartment. Sized to fit through standard doorways for easy transportation from lab to lab. Meets ANSI, OSHA, AFNÓR, and BSI safety standards. 110V. Available in 220V as a special order (please specify plug type when ordering).  $28\frac{1}{2}$ " x  $39\frac{1}{2}$ " x  $77\frac{1}{2}$ ";  $31\frac{1}{2}$ " internal height. Filter included.

Allow extra delivery time. NZ10470 - \$5,000.00



#### **Hand-Operated** Vacuum Pump

PVC pump provides a vacuum of 50 mmHg or air pressure of about 2 atm with a few squeezes of the handle. Sealed and self lubricated. Pumping rate of about 15 ml per pumping. Removable cap. Elastic valve fixed on outer port provides quick vacuum release. Fits standard ¼" tubing. Includes 1' of tubing.

SA08839 - \$36.95



#### 1-Gallon Vacuum Chamber — Thermo Scientific Nalgene®

Unbreakable polycarbonate bell jar with polypropylene vacuum plate and ¼" tubing connection at rim. Connects to any vacuum source or mechanical pump. Will withstand full vacuum. Do not autoclave. Intended only for student demonstrations of vacuum procedures.

SA08835 - \$250.00





Die-cut construction withstands overloads and delivers accurate results for years. Ensures easy reading, quick zeroing, and repeatable results. Magnetic dampening minimizes oscillation and speed weighing. Spring-loaded zero adjust compensator. Deep notched and tiered beam. Capacity: 610 g. Purchase optional attachment weights (SA04482, below) to increase capacity. Sensitivity: 0.1 g.

Product No.	Model	Platform Type	Tare	Each
SA04387	750-S0	Stainless steel platform	No	\$200.00
SA09238	760-00	Stainless steel platform	Yes	\$373.00
SA09229	710-00	Stainless steel pan	No	\$339.00



Accurate and dependable like a top-loading balance while allowing students to manipulate poises, attachment weights, and rod and clamp assembly for below balance weighing (all included). Two notched and tiered beams, positive poise positioning, spring-loaded zero adjust compensator, magnetic dampening, and carrying handle. Flip transportation lock. Rod and clamp assembly for under-balance weighing. 2,610 g capacity with 0.1 g readability. 5<sup>13</sup>/<sub>16</sub>" x 5<sup>13</sup>/<sub>16</sub>" stainless steel platform. Storage compartment for included attachment weight set. Two security options. SB43359 - \$286.00



#### **OHAUS® Triple Beam Balance**

Patented design includes notched and tiered beams, magnetic dampening, and zero adjust compensator. Security loop connection allows the use of any cable that can be looped through back. Capacity: 610 g with 0.1 g sensitivity. Capacity can be increased to 2,610 g by purchasing optional attachment weights (SA04482, right).

TB24105 - \$194.00



**Attachment Weights** or Triple Beam Balances One 500 and two 1,000 gram weights. SA04482 - \$92.95



Factory-installed security slot built right into metal housing. Three graduated-tier beams for best center-point readings. Speedy zeroing with counterbalance knob. Integral weight-below hook. Built-in mass holder. Stainless steel pan. Conversion chart and ruler on housing. 0.1 readability.



610 g. Without tare. Patented design. SB44703 - \$135.00







Positive poise positioning. Notched and tiered beams. Magnetically damped to slow oscillation. Spring-loaded zero-adjust compensator.
Sensitive to out-of-level conditions. Agate bearings, steel knife edges, and stainless steel pan ensures resistance to rugged handling. Raise platform recessed in base for specific gravity determinations (apparatus included). Capacity: 311 g. Sensitivity: 0.01 g. **S00914 – \$434.00** 

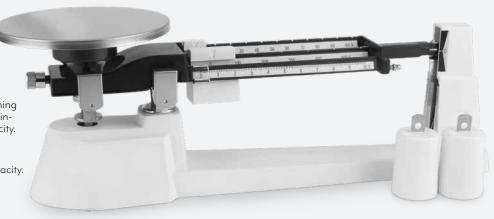


#### Nasco Triple Beam Balance

Die-cast construction, precision ground steel knife edges, dual magnetic dampening systems to slow oscillation, and large stainless steel weighing platform. 610 g capacity. Platform size: 15 cm.

SB43077 - \$122.95

**Triple Beam with Weight Set.** 2,610 g capacity. SB43078 - \$127.95





#### Nasco Double Pan Balance

Employs a two-pan design based on the classical Roberval balance principle. Commonly used for comparative weighing to determine the difference in mass between two objects. Capacity: 2,000 g. Notched and tiered beam. Sensitivity: 0.1 g. Platform size: 15 cm. Sliding weights on beams.

SB42943 - \$157.95

#### Balances



Two 500 ml colored buckets with lids. Easy-to-use sliding zero adjustment. Capacity: 2,000 g. Readability: 1 g. Activity guide. & CHOKING HAZARD (1). Not for under 3 yrs.

SA05379 - \$15.95





#### A. Simple Scale

Translucent, large-capacity pans marked at 200 ml increments hold up to 1 liter of liquid or solids. Compensator clips and 5 each of 1 g, 5 g, and 10 g stackable weights. Washable plastic.  $29\frac{1}{2}$ " x 13".  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. **TB15809** — \$13.95

#### B. Nasco School Balance

An inexpensive way to teach the same concepts learned when using more advanced mechanical weighing instruments. High-impact polystyrene plastic. Capacity: 2,000 g. Sensitivity: 0.5 g. Weight set contains three 10 g, two 20 g, and two 50 g weights. Activity guide.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs.

SB34283 - \$33.95

#### C. Nasco Student Balance

High-impact polystyrene balance offers 2,000 g capacity and 1 g sensitivity.

Features zero-adjust knob, 2 removable pans, and an 8-piece 1 g to 50 g weight set.

A CHOKING HAZARD (1). Not for under 3 yrs.

SB16480 - \$27.95

**8-Piece Mass Set Replacement.** Includes 1 each of 1 g, 10 g, 20 g, and 50 g weights; and 2 each of 2 g and 5 g weights.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. **SA05380 — \$13.95** 







#### D. OHAUS® Harvard Junior™

Metal beam, plastic base, and dual-style removable pans. Dampening feature. Zero-adjust knob. Built-in handles. Storage and transportation locking mechanism. Stackable (3 high). Eight-piece metal mass set (2 each of 10 g, 25 g, 50 g, and 100 g). PreK-5 focused Science/Math activity guide with 7 activities, background information, and assessment suggestions. Capacity: 2,000 g. Readability: 0.50 g.

SB43546 - \$166.00

#### E. OHAUS® School Balance with Mass Set

Interchangeable pans are easily removable. Dual pointers allow viewing of results from either side of balance. Zero adjustment. Plastic balance. Capacity: 2,000 g. Accuracy: 0.5 g. Includes ten 1 g, four 5 g, two 10 g, and two 25 g plastic weights. Pan dimensions:  $5\frac{1}{2} \times 5\frac{1}{2}$ .

SB31487 — \$85.95





#### Student Standard Mass Set of 27

17 hexagram weights (10 red 5 g, 5 yellow 10 g, 2 green 20 g) and 10 Weight Too® two-color 1 g weights (red and yellow).  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. TB17619 — \$7.75

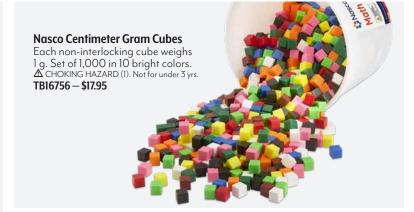




#### Nasco Interlocking Gram Centimeter Cubes

Each cube measures 1 cm on an edge, has a volume of 1 cm<sup>3</sup>, and has a mass of 1 g. Each surface is 1 cm<sup>2</sup>. Bucket of 1,000. \( \Delta \) CHOKING HAZARD (1). Not for under 3 yrs.

TA02278 - \$19.95



#### Polystyrene Weighing Boats

Lightweight, disposable weighing dishes can be used for liquids or solids. Suitable for all types of balances. Pkgs. of 500.

**Square.** Smooth surface and rounded corners. 35/6" x 35/6" x 34/4".

SB16660 - \$46.95

Hexagonal. Flat bottoms and sloping sides. Nonreactive to most substances. Resists temperatures to 158° F (70° C). Flexible. 2½" x 2" x ¾".

SB48957 - \$51.95



Balances & Scales



#### **OHAUS® Compact Scales**

Features low-profile design, large high-contrast display, auto shut-off, digital calibration from keypad, overload and underload indicators, plastic construction, and zero range to capacity by subtraction. Optimum operating temperature: 64° to 77° F (18° to 25° C). Removable stainless steel pan size: 55%" x 5". Overall dimensions: 77%" L x 55% "W x 15%"H. Requires 3 "AA" alkaline batteries (included) or AC adapter (included).

Product No.	Capacity	Readability	Linearity (g)	Weighing Units	Each
SB53213	220 g	0.1	±0.1	g and lbs./oz.	\$192.00
SB53216	2200 g	1.0	±1.0	g and lbs./oz.	\$192.00
SB53217	5200 g	1.0	±1.0	g and lbs./oz.	\$242.00

AC Power Adapter for OHAUS® Compass CX and Scout SKX Scales 5V AC power adapter.
NE30095 — \$38.50

200-lb. static overload protection internally. Sudden impact protection protects load cell against shock caused by sudden impact. Shipping/storage lock. USB, RS232, Ethernet, USB host, and Bluetooth® connectivity options. Features improved stabilization time, multiple weighing modes, and menu lockout switch. Stackable excluding mg models due to integrated draft shield. Storage cover. Touchscreen models also feature a level bubble and adjustable feet. LCD display with backlight viewable from any angle. Requires 4 "AA" batteries (not included) or AC adapter (included).

Product No.	Model	Capacity	Readability	Pan Shape	Each
SB51728	SKX222	220 g	0.01 g	Round	\$592.00
SB51729	SKX422	420 g	0.01 g	Round	\$834.00
SB51730	SKX622	620 g	0.01 g	Round	\$980.00
SB51733	SKX421	420 g	0.1 g	Round	\$342.00
SB51735	SKX2201	2,200 g	0.1 g	Square	\$570.00

Balances for a wide range of general weighing applications in laboratory and education settings





## Nasco Electronic Balances

Integrated weigh below hook, stackable design, shipping load cell lock, overload protection up to 200 lbs., 50 hours of battery life with auto shut off, security bracket (cable not included), and three-button human interface. USB and RS232 interfacing. Weighs in g and N only. Flip-top draft shield with integrated sample tray provides access to chamber through center opening. Top cover center opening is also a sample tray "weight boat" when removed and turned upside down.

\$\text{\$842894 150 g x 0.01 g readability} - \$\text{\$420.00}\$ \$\text{\$842895 300 g x 0.1 g readability} - \$\text{\$244.00}\$ \$\text{\$842896 900 g x 0.1 g readability} - \$\text{\$374.00}\$



#### Classroom Compact Scale

An electronic classroom scale featuring a tare button, auto power off, and large digital display, plus a mode button for g, lbs., and oz. Capacity: 176.4 oz./ 5,000 g. Accuracy: 0.05 oz./1.0 g. TB22736 — \$47.95

**Compact Digital Scale** 

An electronic classroom scale featuring tare button; auto power off; and large digital display; plus a mode button for g, lbs., and oz. Capacity: 176.4 oz./5,000 g. Accuracy: 0.1 oz./1.0 g.

TB25722 - \$29.95



#### OHAUS® Navigator® Balances

Features include touchless sensors, large LCD display, ultra-fast response time, and superior overload indicators. Stabilizes in less than 1 second. Capabilities include weighing, parts counting, percent weighing, checkweighing, totalization, and display hold. Displays 15 of the most common units of measurement. AC adapter (included) or 4 "AA" batteries (not included). 9% "L x 8"W x 213/6" H.

Product No.	Model No.	Capacity	Readability	Each
SB53188	NV222	220g	0.01 g	\$456.00
SB53189	NV221	220 g	0.1 g	\$267.00
SB53186	NV621	620 g	0.1 g	\$391.00
SB53185	NV1201	1,200 g	0.1 g	\$442.00
SB53181	NVT6200	6,200 g	1.0 g	\$575.00





Dishwasher safe bowl on base inverts for storage. Tare function. Capacity 4.40 lbs. (2 kg) in ½ oz. (1 g) increments.

WA26488 — \$24.95



Dual-system scale has removable plastic pan; large, clear dial with metric and customary markings; and zeroadjustment wheel. Il lbs./5 kg.

TB15544 - \$14.95



1.800.558.9595 | nascoeducation.com | 1.800.558.9595

**Balances & Scales** 

## **PRECISION MATTERS**

Weigh your options with portable and compact scales and balances



**Compact Scales** 

Easy-to-read 13.5 mm H LCD digital display. Selectable from g, oz, ozt, lb-oz., N, tael, and tola (lb-oz. not available for SB49333). Use one of three included color bars to personalize scales. Display automatically turns off after 5 minutes of inactivity. Approximately 450 hours of battery life. Security slot in rear for anti-theft lock. Stackable carry case allows scale to be used without removing it from case. Pan size: 5% "x 5%" without stainless steel pan. Overall dimensions: 7% "x 5%" x 13%". Requires 4 "AA" batteries (included) or AC adapter (not included).

Product No.	Model No.	Capacity x Resolution	Each
SB49998	HT-120	120 x 0.01 g	\$305.00
SB49333	HT-300	310 x 0.1 g	\$160.00
SR49334	HT-500	510 x 0.1 a	\$190.00



#### Ninja Scale Value Pack

Scale with high-impact plastic housing, stainless steel weighing pan, AC power adapter, 4 "AA" batteries, and plastic carry case. 2,000 g capacity. 1 g readability. **SB46572 – \$179.95** 



#### **OHAUS® Pocket Scales**

Weighing pan is integrated right into carrying case. Hinged cover, plastic housing, and stainless steel weighing pan protect balance from damage. Mechanical and software over- and underload indicators preserve scale. Extremely fast stabilization time. Blue backlit LCD display. Power-saving auto shut-off feature. Measurement units include g, oz., carat, and grain. 45/16"L x 27/8"W x 13/16"H.

Product No.	Model N	lo. Capacity	Readabi	lity Each
SB51432	YA102	100 g	0.01 g	\$133.00
SB51431	YA501	500 g	0.1 g	\$87.95



#### Adam® Core Balances

ShockProtect<sup>™</sup> overload protection up to 400+ lbs. Built-in lock-down slot secures balance in one place. Below-balance weighing with hook for density calculations. Stainless steel weighing pan and removable draft shield (available on models with 43/4" pan size. Stackable.  $6\frac{3}{4}$ " x  $9\frac{5}{8}$ " x  $3\frac{1}{8}$ ". Requires 6 "AA" batteries or AC adapter (adapter included).

Product No.	Model No.	Readability	Capacity	Pan Size	Each
SB45458	CQT 202	0.01 g	200 g	43/4"	\$315.00
SB45457	CQT 251	0.1 g	250 g	43/4"	\$175.00
SB46020	CQT 601	0.1 g	600 g	43/4"	\$250.00
SB45461	CQT 2000	1 g	2,000 g	5¾"	\$195.00

#### Adam® Compact **Balances**

Stainless steel pan and solid ABS housing is easy to clean. Weighs in q, oz., and lbs. Keypad is sealed. Battery operation for use anywhere. 5\%" x 51/8" stainless steel pan. Requires 2 "AA" batteries (included) or AC adapter



Product No.	Model No.	Readability	Max. Capacity	Each
SB49642	CB 501	0.1 g	500 g	\$100.00
SB49643	CB 1001	0.1 g	1,000 g	\$110.00
SB49644	CB 3000	1 g	3,000 g	\$125.00



Large  $5\frac{3}{4}$ " x  $5\frac{3}{4}$ " weighing pan. Displays results in g, oz., and lbs. Low battery indicator. Auto power-down saves battery life. Requires 6 "AA" batteries or AC adapter (included).

Product No.	Model No.	Readability	Capacity	Linearity	Each
SB47042	DCT 2000	1g	2,000 g	±2 g	\$125.00
SB47043	DCT 5000	2 g	5,000 g	±4 g	\$130.00

Adam® balances provide great value with smart features that make everyday lab work quick and easy. Quality construction with solid housing ensures durability for years of use. With over three decades of manufacturing balances, Adam Equipment stands behind its products.

> Highland and Core balances stack for safe and efficient storage and offer advanced overload indicator





#### Adam® Highland Precision Balances

ShockProtect $^{TM}$  overload protection up to 400+ lbs. HandiCal $^{TM}$  builtin calibration — no external calibration masses needed. Removable draft shield. 4¾" dia. stainless steel weighing pan. Below-balance weighing with hook for density calculations. Built-in lock-down slot secures balance in one place. Stackable. USB and RS232 interfaces both included with cables. Built-in rechargeable battery and AC operation (both included). 6¾" x 95%" x 3½"

Product No.	Model No.	Readability	Capacity	Each
SB45472	HCB 123	0.001 g	120 g	\$495.00
SB45470	HCB 302	0.01 g	300 g	\$450.00



Provides direct readings for both force and measurements. Calibrated in both Newtons and grams. Top is leveled for easy use with an inclined

'		
Product No.	Capacity	Each
SB42822	100 g/l N	\$4.95
SB18125	250 g/2.5 N	\$4.95
SB14406	500 g/5 N	\$4.95
SB24748	1000 g/10 N	\$4.95
SB24749	2000 g/20 N	\$4.95
SB16478	3000 g/30 N	\$4.95
SB16479	5000 g/50 N	\$4.95
SB42821	10,000 g/100 N	\$4.95



#### **Memory Force Meters**

Measures force by pushing or pulling an object. Calibrated in both Newtons and grams. Clear plastic tube allows students to see the action of the spring. Includes activity guide.

Product No.	Capacity	Color	Each
SB50546	1,000 g/10 N	Beige	\$6.95
SB50547	2,000 g/20 N	Red	\$6.95
SB50542	5,000 g/50 N	Yellow	\$6.95
	-		

# **GET EXACT MEASUREMENTS**

for a variety of objects



**Aluminum Spring Scales** 

Anodized aluminum with steel hooks. Hook at top allows for easy attachment to support rods.

Product No.	Capacity	Graduation	Color	Each
SB53244	100 g/1 N	2 g/0.02 N	Black	\$6.15
SB53245	250 g/2.5 N	5 g/0.05 N	Blue	\$6.15
SB53247	1,000 g/10 N	20 g/0.2 N	Brown	\$6.15
SB53248	2,000 g/20 N	40 g/0.4 N	Red	\$6.15
SB53249	3,000 g/30 N	50 g/0.5 N	Silver	\$6.15
SB53250	5,000 g/50 N	100 g/1 N	Gold	\$6.95

#### **Spring Scales**

Metal case, pointer, spring, suspension ring, and load hook. Calibrated in both Newtons and grams, with zero adjustment.

Product No.	Capacity & Readability	Each
SB25288	0-100 g/1 N	\$5.95
SB25289	0-250 g/2.5 N	\$5.95
SB25290	0-500 g/5 N	\$5.95
SB25291	0-1000 g/10 N	\$5.95
SB25292	0-2000 g/20 N	\$5.95
SB25294	0-5000 g/50 N	\$5.95



#### A. Hooked Weight Set of 9

Cast-iron weights with black enamel finish.
One each of 10 g, 50 g, 100 g, 500 g, 1,000 g, and 2 each of 20 g and 200 g weights. SB37395 - \$48.50

#### B. Stainless Steel Hooked Weight Set of 10

Set of 10 weights includes one each of 5 g, 10 g, 50 g, 100 g, 500g, and 1,000 g weights and two each of 20 g and 200 g. Includes plastic storage

SB47084 - \$129.95

#### C. Plastic Hooked Weight Set of 25

Strong weights with brass hooks and in-built bars in bottom of body to hook additional weights. Plastic box includes ten 1 g, ten 2 g, and five 5 g weights.  $\triangle$  CHOKING HAZARD (1). Not for under

SB43491 - \$14.35

D. **8-Piece Mass Set Replacement** Includes 1 each of 1 g, 10 g, 20 g, and 50 g weights; and 2 each of 2 g and 5 g weights.

A CHOKING HAZARD (1). Not for under 3 yrs. SA05380 - \$13.95

#### E. Hooked Weights

Nickel-plated steel weights are engraved on surface and feature a hook at one end.

**500 g.** △ CHOKING HAZARD (1). Not for under 3 yrs. SB48969 - \$13.95

SB43551 - \$15.95

#### F. Basic Hooked Weight Set

Stainless steel. Set of 10 includes four 20 g, three 50 g, two 100 g, and one 200 g weights. **SB49818 – \$48.75** 

#### G. Aluminum Hooked Mass Set

Plastic base. Includes two each of 10 g and 20 g and one each of 50 g and 100 g weights. **SB37270 – \$14.95** 

#### H. Brass Mass Set of 10

Set includes two each of 1 g, 2 g, 5 g, and 10 g and one each of 20 g, and 50 g.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs.

SB37228 - \$16.50

#### |. Aluminum Slotted Weight Set of 12

Includes two 5 g, one 10 g, and nine 20 g weights. 50 g hanger. SB53083 - \$18.95











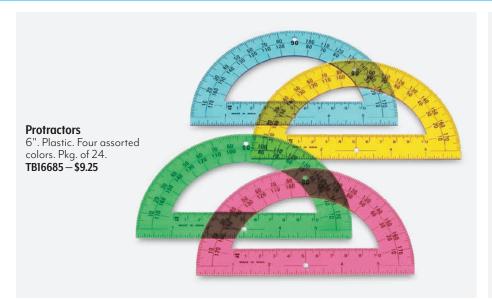


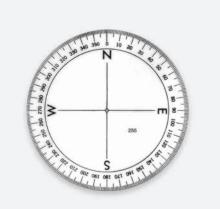






#### Measurement





#### C-Thru® 360° Clear Protractor

Calibrated in degrees. Laminated with solid center.  $3 \% {\it ''}.$ 

SB27450 - \$1.95



#### **SAFE-T® Compass**

Draw circles from ¼" to 10" in diameter in ½" radius increments. No sharp point. Made of shatter-resistant plastic. Two mini-rulers (inches and metric).

9704224 - \$1.95

Classroom Pack of 30 TB17429 — \$52.55





#### Retractable Tape Measure

60" on one side, 150 cm on the other. Locks and holds in position, lies flat, doesn't curl, and is flexible. Virtually indestructible. 5/16".

TB15105 — \$0.95



#### Windup Meter Tapes

Virtually indestructible, high-quality fiberglass tapes in ABS plastic windup cases. Calibrated on one side in 0.5 cm and inches on the other. Will not tear, break, rust, or stretch.

SB33643 10 m - \$6.95 SB33641 30 m - \$8.95 SB33642 50 m - \$15.95



#### **Vernier Caliper**

A steel double-scale caliper with adjustment roller and locking screw. 120 mm x 0.1 mm and 5" x 1". Margin of error: ± .5 mm.

SB27537 - \$6.95



#### **Trundle Wheel**

Roll wheel forward or backward to produce a loud "click" every meter. I m wheel circumference. Wheel edge grips smooth surfaces and is calibrated in cm (numbered in cm every dm). Plastic with molded, collapsible handle. Use indoors or out. \$\Delta\$ CHOKING HAZARD (1). Not for under 3 yrs.

TA05347 - \$13.50

#### A. Clearview Flexible Rulers

Made of shatter-resistant material. Pack of 12 includes two 12" rulers each of 6 colors.

TB23368 - \$8.95

#### B. **30** cm Clearview Ruler

Clear ruler has mm on one side and cm on other side. **SB35027** — **\$1.00** 

#### C. **30 cm Senior Ruler**

Both edges calibrated in mm. One edge numbered in cm; other in mm. Plastic.

SB30240 - \$1.20

#### Meterstick

Hardwood, clear varnished, with black markings. One side scaled in mm, with cm and dm numbered. Reverse side is graduated in inches with ½" divisions.

D. Half Meter Plain Ends. 50 cm in length. SB12163 – \$3.95

E. Metal Ends SB12161 — \$4.95

F. Plain Ends TB24794 — \$2.85

G. **Senior Meter Stick.** One side is calibrated in 0.5 cm and numbered each cm. Reverse side is calibrated in

SB52796 - \$3.95

H. Hardwood Meterstick 1" x 5/16" thick.

SB47938 - \$3.25

#### |. Customary/Metric Tape Measures

Inches on one side and cm and mm on the reverse. Pkg. of 10; 60". Assorted colors. Plastic.

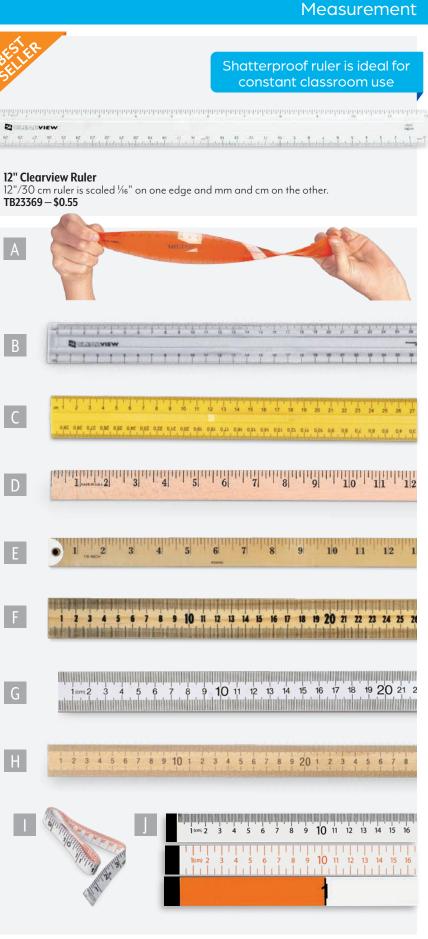
TB15183 - \$5.95

#### . 4-Sided Meterstick

Each surface is calibrated in sequence in dm, cm, and mm. Solid 6 mm thick plastic. 2 cm square.

 $\triangle$  See page 3 for complete Choking Hazard Label Information.

SB19024 - \$8.95



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#### TI-84 CE Python Graphing Calculator

Give students the power of portable programming for math class and other applications. This lightweight and durable calculator features a color screen, an easy-to-read display, and a rechargeable battery. It has eight different graph styles and can save up to 10 graphing functions. Real and complex numbers can be calculated to 14-digit accuracy and displayed with 10 digits plus a two-digit exponent. USB cable and protective case included.

#### NE30224 - \$175.00

#### TI-84 Plus CE Python EZ Spot Teacher Pack. 10 EZ Spot units and rechargeable batter-

ies, 5 USB cables, 5 unit-to-unit cables, TI charging station CE, and poster.

NA10409 - \$2.000.00



#### **TI-83 Plus Graphing Calculator**

- Functions for algebra, calculus, and science applications
- Equation solver editor solves for different variables interactively
- Applications can be installed for customization
- Works with CBL™ System and CBR™ for analysis of real-world data
- Link cable (included) allows data sharing with another TI-83 Plus. TI-82. or TI-83
- 7 different graphing styles
- Slide-on hard case
- Requires 4 "AAA" batteries (included)

NA10404 - \$139.00

Teacher Kit. 10 TI-83 Plus calculators. NA10405 - \$1,375.00

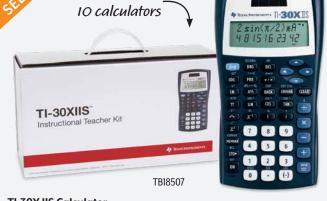


#### TI-84 Plus Graphing Calculator

- Connectivity to existing TI ViewScreen<sup>TM</sup> panel and TI-Presenter<sup>TM</sup> video interface, allowing students to show work to the entire class
- Built-in USB port with cable (included) Preloaded handheld software applications
- High-contrast display
- Fully compatible with CBR™, CBL™, and CBL2™ data collection systems; TI keyboard; and TI-Navigator™ Classroom Learning System
- Requires 4 "AAA" batteries (not included) NA10406 - \$139.95

EZ Spot Teacher Kit. 10 TI-84 Plus EZ Spot calculators.

NA10407 - \$1,350.00



Includes

#### **TI-30X IIS Calculator**

- View entry and result at same
- · Edit current entry

TB18506 - \$20.00

- · Menus with functions and mode setting
- 5 variable memories
- 1- and 2-variable statistics include results for linear regression and trendline analysis
- Enter/delete/insert/edit individual statistical data elements
- · Trigonometric functions in degrees and radians
- Common and natural logarithms
- Fractions and fraction/decimal conversions
- · Degrees, minutes, seconds/ decimal degrees conversions

**Teacher Kit.** 10 calculators, poster, teacher's guide, and carrying case. TB18507 - \$185.00



#### **TI-1706V Solar Power Calculator**

- · 8-digit display
- · 3-key memory
- Change sign (+/-) and square root keys
  ANYLITE solar power allows operation
- even in low light
- Protective slide case

TB17148 - \$9.95

#### **Nasco Primary Calculator**

Features the 4 main functions. three-key memory, and auto power-off. Solar and battery powered.  $\triangle$  CHOKING HAZARD (1).

TB23305 - \$3.95



#### TI-108 Solar Calculator

Features percent key and sign key (+/-). Protective slide case. Solar and battery powered.  $4\frac{1}{2}$ " x  $2\frac{3}{5}$ " x 4". TB14985 - \$7.95

**Teacher Kit.** 10 calculators in cardboard storage box with string handle, poster, transparency, and teacher's guide on CD.

TB17145 - \$69.95

Classroom Set. 30 calculators, 3 posters, 3 teacher's guides on CD, and 3 cardboard storage boxes with string handle.

TB17146 - \$210.00







#### Accusplit® Survivor II Stopwatch Set of 6

Features cumulative split timing, 1-2 fast finish, event time-in and time-out, and magnum XL display. Timing range: 30 minutes to  $1/\!\!/ \omega$ of a second, 24 hours to 1 second. Water-resistant to 100 ft./30 m. Breakaway lanyard

PE03203 - \$69.95



#### Ultrak® 310 Timer Set of 6

Features start/stop and reset. Measures up to 10 hours. Includes 1 each of 6 colors with lanyards.

PE06883 - \$58.95



#### MyChron™ Student Timers

Three-key operation (Lap, Start/Stop, Reset); clear display of hours, minutes, seconds, hundredths/seconds; auto shutoff; and hole for attaching to hanging cord. Magnetic strip, spring clip, belt clip, magnet, easel back, and storage box.

**TB17781** Set of 6 - \$66.95

**TB17891** Set of 12 — \$132.95



#### All-Purpose Digital Stopwatch

Hour, minute, and seconds display; calendar display; 24-hour stopwatch; alarm; hourly chime; 12/24-hour mode option; //ooth-second chronograph; split time; and total time. Carrying cord. Color and style may vary.

TB14784 - \$3.95 SB51407 Set of 12 - \$35.00

#### **EZY Timer**

Digital timer with three-button operation. Display shows time in hours, minutes, seconds, and hundredths/seconds. Magnetic back clip. Top right corner features a hole for hanging cord (not included).

TB26033 Set of 6 - \$47.00 TB26034 Set of 12-\$87.00





#### **Clip-On Timer with Magnetic Clip**

Counts down or up. Times up to 99 minutes 59 seconds. 60-second alarm. Magnetic back clip holds to metal surfaces and converts to stand. Requires 1 "AAA" battery (not included). A CHOKING HAZARD (1). Not for TB16742 - \$7.95



#### **Dual Power Timers**

Time up or down to 99 minutes and 59 seconds. Alarm sounds when time has been reached. Solar panel and internal battery. Display size: 21/16" x 1". Overall size: 2%6" x 2%6" x ½". Pkg. of 5. **TB26740 – \$34.95** 

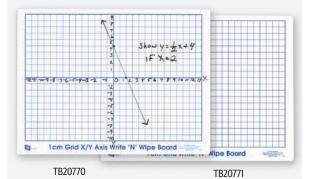
1.800.558.9595 | nascoeducation.com nascoeducation.com | 1.800.558.9595 ▲ See page 3 for complete Choking Hazard Label Information.

## LAB SUPPLIES Data Recordina



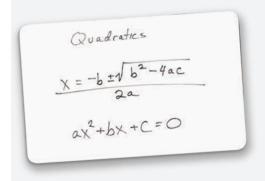
#### Nasco Individual Student **Dry-Erase Board Kit**

Low-tech solution for high-tech learning. Give each student one of these dry-erase board kits so they don't have to share with their classmates. Perfect for working out a math problem or recording an answer to show to the teacher via a Zoom class. Kit includes 9" x 12" dry erase board, black dry erase marker, mini eraser, and zippered plastic bag. NE30026 - \$4.95



#### Write 'N' Wipe Board Class Sets

Two-sided, no-tear, plastic boards for use with dry- or weterase markers. Blank on one side and available with x- and y-axes or 1 cm grid on other side. Sets of 30; 9" x 12" each. **TB20771** 1 cm grid **TB20770** X- & Y-axes Each — \$34.95



#### Single-Sided Unlined **Dry-Erase Board** Blank board is ideal for various activities. 12" x 18" SB36895 - \$4.95



Nasco Cone-Point Dry-Erase Markers — Black Long-lasting, ultra low-odor, cone-tip dry-erase markers. Box of 30. TB21488 - \$26.80





#### Sharpie® Ultra-Fine Point Markers

The permanent marker for precise, detailed marking. Water- and fade-resistant ink. Use on wood, plastic, glass, and metal. Quick drying. Box of 12. Black. Nontoxic. 9717998(A) —\$14.50 24+ \$12.15

#### **Sharpie® Fine-Point Markers**

The original pen-style permanent marker. Fade- and waterresistant. Permanent on most surfaces. Quick drying. Box of 12. Black. Nontoxic.

9717997(A) - \$14.50

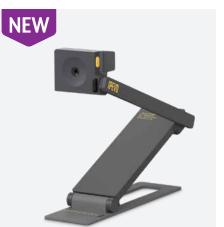


#### Nasco No. 2 Pencils - Sharpened Pkg. of 144

Now you can afford to supply all your students with this economical box of 144 standard pencils. Sharpened pencils are certified nontoxic and feature a quality #2 writing core and latex-free eraser. NE20211 - \$22.35

#### **Fine Point Industrial Markers**

For industrial and laboratory use. Resists bleeding and fading when exposed to extreme heat and steam (up to 500° F), processing chemicals and cleaners, and ultra-violet light. Use on glass, metal, plastic, and wood. Black. 9720900 - \$2.30 12+ \$2.10



#### **IPEVO DO-CAM USB Document Camera**

It just takes a flip of the camera head to switch from doc cam to webcam! 8MP CMOS sensor can stream up to 30 fps at 1080p. Integrated USB Type-A cable connects the camera to your Mac, Windows, or Chrome computer. Ultra-portable at only 0.74 lb. No built-in microphone.

NE30413 - \$129.00



## **Ultra HD USB Document Camera**

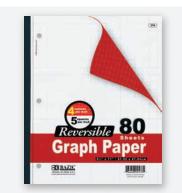
Advanced noise filter is highly effective at removing background sounds while maintaining the natural sound of your voice. 8MP CMOS sensor can stream at up to 30 fps at 3264 x 2448p. Integrated USB Type-A cable connects the camera to your Mac, Windows, or Chrome computer. Built-in microphone, LED, and fast focusing speed. NE30412 - \$149.00



## **Ultra HD USB Document Camera**

Livestream presentations and scan documents in high resolution. 8MP CMOS sensor can stream at 30 fps when in Full HD. Integrated USB Type-A cable connects the camera to your Mac, Windows, or Chrome computer. Built-in microphone and fast focusing speed.

NE30411 - \$101.00



#### Reversible Quad-Ruled Wireless Notebook 4x4 squares per inch on front and 5x5

squares per inch on reverse. 80 sheets, 8½" x 11". Assorted colors (no choice).

TB26495 - \$3.20 12+ \$2.46



#### **Glass Marking Pencils**

Paper covered, self sharpening with pull string. Writes on all types of surfaces. Waterresistant, colorfast marks still remove from nonporous finishes. Packs of 12.

**SA04393** Red **SA04394** Blue 9701022 Black



#### **Luna 2 Interactive Projection Camera**

All-in-one projection tool, webcam, and photo/video camera. USB connection for computer or whiteboard. Capture photos or video and download. Features 3.0 MP images.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

TB26743 - \$150.00



### **Graph Paper**

Increments are already perfectly spaced. Pad of 50 sheets, 8½" x 11".

⚠ See page 3 for complete Choking Hazard Label Information.

9706099 - \$2.25



# The Document Camera Stand

Turn your iPad® into a document camera Share work, ideas, and inspiration. Height adjustable stand with 90° rotating mount that swivels and tilts. Headphone holder and mounting holes on base for security. Fits iPad® 2, 3, 4, Air, Air 2, Mini, Mini 2, and Mini 3, plus various smartphones with or without a case. Frame is  $10\frac{3}{4}$ " x 15" x  $12\frac{3}{4}$ "-23". Lifetime warranty.

TB26685 - \$86.95

Copernicus® Camera Stand with Microscope & LED Light. Microscope feature with 5X or 10X magnification and adjustable LED light. Lifetime warranty. EL14305 - \$99.95



**Thermometers** 



#### **General Purpose Nonstick Coated Thermometers**

Nonstick sleeve remains intact. Filled with blue column of organic liquid on bright yellow background. Yellow back glass with silk screen printed blue scales. Reverse side indicates immersion. Indelible and resistant to aggressive chemical agents. Triangular ring top prevents rolling. 1° C divisions. 12"L.

Product No.	Range °C	Immersion	Each
SB33542	-20° to 110°	Total	\$17.95
SB33545	-20° to 150°	Partial	\$19.95



#### **Enviro-Safe® General Laboratory Thermometers**

Filled with safe, biodegradable, nontoxic liquid dye. Biodegradable and environmentally friendly. Calibrated with NIST (NBS) standards. Envirokleen certification, 12" L.

Product No.	Range Low High	Scale	Division	Immersion	Each
SB23911	-20° to 110°	C	1°	Total	\$14.95
SB23912	-20° to 110°	C	1°	Partial (76 mm)	\$14.95
SB23914	$-20^{\circ}$ to 150 $^{\circ}$	C	1°	Partial (76 mm)	\$17.95
SB23916	–10° to 260°	C	1°	Partial (76 mm)	\$15.95



#### **General Laboratory Red Liquid Thermometers**

Use in all general lab applications including hot ovens and incubators. 12"L. & CHOKING HAZARD (1). Not for under 3 yrs.

#### Single Scale

Product No.	Range Low High	Scale	Subdivision	Back	Immersion	Each
SB14147	-20° to 110°	C	1°	White	Partial (76 mm)	\$4.25
SB14148	-20° to 110°	C	1°	White	Total	\$3.95
SB14149	-20° to 150°	C	1°	White	Partial (76 mm)	\$3.95
SB15198	$-20^{\circ}$ to $150^{\circ}$	C	1°	White	Total	\$3.95
			- n n n n n			
		18			12	2"L

#### Double Scale

Product No.	Range Low High	Scale	Subdivision	Back	Immersion	Each
SB15197	0° to 230° -20° to 110°	F C	1° 2°	White	Partial (76 mm)	\$3.95
SB14150	0° to 230° -20° to 110°	F C	1°	White	Total	\$3.95



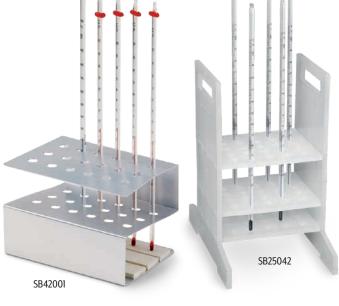
#### **Student Thermometer**

SB19157 - \$5.95

6"L. Filled with safe red liquid. Total immersion. Non-roll sleeve.

Range: 0° to 220° F/-10° to +110° C. Range: -10° to +110° C. Single scale. Dual scale. 2° subdivision for F;

2° subdivision. SB14280 - \$5.95



#### Thermometer Stand (18 Total)

Aluminum stand with stove enamel finish. Protective rubber foam bottom prevents bulbs from being damaged. Holds up to 18 thermometers. SB42001 - \$19.50

#### Thermometer Storage Rack (25 Total)

Polypropylene with sturdy base and large handles. Hole diameters in top and middle plates are 5/16"; base plate drain holes are 1/8". SB25042 - \$42.95

eter is held in a hole

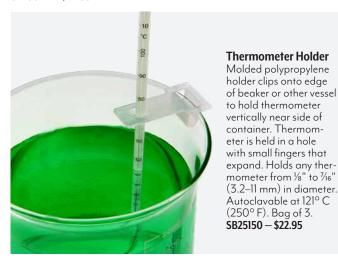
with small fingers that

mometer from 1/8" to 7/16'

(3.2–11 mm) in diameter.

Autoclavable at 121° C

(250° F). Bag of 3.



#### **NeuLog Wide Range Temperature** Logger Sensor

This sensor is based on a thermocouple sensor that enables measuring very high temperature levels, even the temperature of a flame, as well as very low temperature levels. Measures both Celsius (-200° to 1200° C) and Fahrenheit (-328° to 2200° F). Accommodates experiments lasting from 1 second to 31 days. Features 10 bit ADC resolution, resolution of 0.1° F (0.1° C) and a maximum sample rate of 100 S/sec. NOTE: Requires either Wireless Module (SB50671) or USB Module (SB50672) to operate (both sold separately at nascoeducation.com). SB51902 - \$85.00



#### A. Digital Thermometer

On/off switch, stainless steel probe, and probe cover. Switch from °C to °F. Waterproof. Range: -58° to 302° F (50° to 150° C). SB33569 - \$20.95

#### B. Digital Thermometer

Use with liquids, semi-solids, and gases. Maximum/minimum memory. Data hold. 5" stainless steel probe reaches easily into cuvettes, test tubes, flasks, and more. Temperature range:  $-58^{\circ}$  to  $392^{\circ}$  F ( $-50^{\circ}$  to  $200^{\circ}$  C) with accuracy of  $\pm 1^{\circ}$  C from  $-20^{\circ}$  C to 120° C; otherwise ±2° C. Calibrated at 0° C and 100° C. Resolution: 0.1 °F/°C. 7%" x 1". CE marked.

SB47505 - \$64.95

#### C. Pen-Shape Digital Thermometer with Min./Max. Memories

Extra-wide temperature gauge, 14° to 410° F (-10° to 210° C). Min./max. memory. Heatresistant 4" stainless steel probe. Probe cover with pocket clip. Colors may vary. SB39069 - \$19.95

#### D. Instant-Read Dial Thermometer

Accurate from 0° to 220° F. Shatterproof plastic lens. Pocket case. Stainless steel stem. SB39402 - \$3.95



#### E. F°/C° Student Thermometers

Large, easy-to-read markings for 0° to 120° F (-20° to 50° C). White polystyrene backing. 6¼"L. Filled with red liquid. Pkg. of 10. TB19654 - \$9.15

80

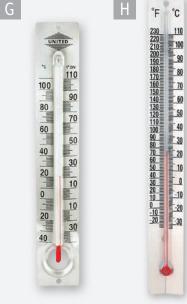
70 60 50

30

#### F. Student Thermometer

Temperature range:  $-30^{\circ}$  to  $230^{\circ}$  F ( $-30^{\circ}$ to 110° C)

SB33327 - \$3.95 **SB47751** Set of 5 - \$16.95



#### G. Celsius Classroom Lab Thermometers

Metal-backed, with  $-30^{\circ}$  to  $110^{\circ}$  C scale with ° and 5° divisions. Large, easy-to-read numbers. 5" red liquid-type tube. 6½"L. Pkg. of 5. SA08157-\$7.95

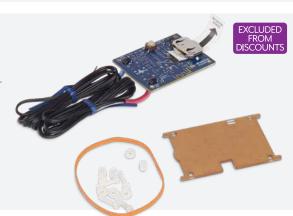
#### H. C°/F° Classroom Thermometers

Metal. Celsius scale in 1° divisions, Fahrenheit in 2° divisions. 5" red liquid-type tube. Aluminum back. 6½" L. Range: -20° to 230° F (-30° to 110° C). V-shaped. Set of 5. SB47135 - \$9.95

#### PocketLab Thermo

Gr. 6+ Let this simplified twotemperature probe turn your next science lesson into an exploration. Wireless, multi-functional and remote-ready. Thermo is a dual temperature sensor that includes two thermistor probes with simultaneous measurement capabilities. Compare any two temperatures—any time, anywhere. 4<sup>3</sup>/<sub>4</sub>" x 3½" x 1½'

NE30107 - \$49.95





Easy-to-read 0.3" LCD readout. High temp range from -58° to 500° F (-50° to 260° C). Stainless-steel stem. Pocket sleeve. NSF® certified.

⚠ See page 3 for complete Choking Hazard Label Information.

SB33552 - \$21.95



in reusable storage box. SB42013 - \$23.95



## SAFETY AND **IMPACT GOGGLES**

Designed to protect your eyes from flying objects

## SPLASH GOGGLES

Designed to protect your eyes from chemical splashes

















#### A. Safety Glasses

Wide, one-piece lens. Adjustable temples. Polycarbonate. Meets ANSI Z87.1 high impact standards.

SB32854 Blue Frame SB39510 Black Frame Each — \$3.95

#### **B. Visitor's Glasses**

Meets most semi-hazardous conditions. Can be worn over glasses. Wraparound side shields. Meets ANSI Z87.1 standards.

SB16273 - \$4.25

#### C. Small Size Safety Glasses

Black or blue frame (color varies). Wide, onepiece lens. Adjustable temples. Polycarbonate. Meets ANSI Z87.1 high impact standards. SB39512 - \$3.65

#### D. Visorgog Economy Safety Goggles

Fits over glasses. Clear frames and lenses. Meets ANSI Z87.1 high-impact standards. SB46877 - \$11.25

#### E. Chemical Splash Goggles – Indirect Ventilation

Scratch-resistant, UV-absorbing polycarbonate. Adjustable strap fits over prescription eyewear. Indirect ventilation. Meets ANSI Z87.1-2003 standards as well as ANSI+ high impact standards.

SB47688 - \$17.95

#### F. Safety Goggles – Direct Ventilation

One-piece polycarbonate lens. Perforated frame for full direct ventilation. Meets ANSI Z87.1 standards.

SB25323 - \$2.45

#### G. Chemical Splash Goggles – Indirect Ventilation

High-quality PVC frame. Polycarbonate lens. Meets ANSI Z87.1 standards. SB06969 - \$9.95

#### H. Chemical Splash Goggles -Indirect Ventilation

High-quality PVC frame. Polycarbonate lens. Meets ANSI Z87.1 standards. Light blue or light green tint.

SB25324 - \$2.95

#### I. Softsides™ Safety Goggles -Indirect Ventilation

Soft vinyl body molds snugly to face. Fits comfortably over most prescription glasses. Extended face flanges close gaps over nose and cheekbone areas for better protection. Scratchresistant, FogLess<sup>TM</sup> coating front and back. Clear blue transparent frame prevents yellowing Meets ANSI Z87.1.

SB50521-\$6.95



#### **UV Sanitization Cabinets**

Sanitize goggles, supplies, lab equipment, or other shared materials quickly and safely. These cabinets are simple to operate and efficiently disinfects everything of germs, bacteria, viruses, and fungi. Powered by a UV-C lamp to kill germs. Allow extra delivery time. 🖚 **NE30051** Large Cabinet, holds 35 pairs **-\$695.00** 

**NE30208** Small Cabinet, holds 20 pairs - \$460.00



**UV Sanitization Chamber** 

Youth Safety Goggles - Direct Ventilation Ideal for elementary and middle school students. Mini impact. Not chemical splash resistant. Meets ANSI Z87.1 standards. SA05431-\$1.95



Youth Safety and Splash **Goggles-Indirect Ventilation** Clear flexible vinyl body. Clear uncoated

polycarbonate lens. 15% smaller than standard safety eyewear. Meets ANSI Z87.1 high impact standards.

SB46780 - \$3.95



Provides the same protection as full-size goggles. Polycarbonate lens with fluorescent frame. Both lens and frame are ANSI Z87.1 certified. Latex free.

#### Sets of 5 Splash Goggles

Indirect ventilation. One of each color below. Due to stock availability, duplicate colors may need to be substituted.

**SB41988** 5" Elementary - \$15.95 **SB46930** 6" Secondary - \$17.50

5" Elementary **SB31477** Pink SB33955 Green **SB33954** Blue SB33957 Orange SB33956 Yellow Each — \$5.95 6" Secondary

**SB46957** Pink SB46955 Green **SB46956** Blue SB46958 Orange

SB46959 Yellow Each - \$6.50

21" Straps for Goggles. Black.

**Sets of 5 Safety Goggles.** One of each color below. Due to stock availability, duplicate colors may need to be substituted.

**SB41987** 5" Elementary — \$14.95 **SB46929** 6" Secondary – **\$15.95** 

5" Elementary **SB31476** Pink SB33952 Green **SB33950** Blue SB33953 Orange SB33951 Yellow Each — \$4.95

**SB46952** Pink SB46950 Green **SB46951** Blue SB46953 Orange SB46954 Yellow Each — \$5.50

6" Secondary

**SB49984** Pkg. of 25 – **\$8.75 SB49983** Pkg. of 100 - \$30.95

#### Powder-free

#### A. Gold Latex Powder-Free Exam Gloves

Minimum risk of potential glove-related chemical or protein allergies. Made with light chlorination rinse. Nonslip, tacky surface provides excellent grip for dry and wet applications. Box of 100 for medium and large; box of 90 for X-large. 4 mil. **C31908** Medium **C31909** Large

Each - \$16.95

#### B. Nitrile Gloves

Ultra soft and super stretchy. Reduces hand fatigue. Textured surface. Thinner for maximum dexterity. Superior barrier protection. 100% synthetic. Box of 100 for sizes X-small, small, medium, and large; box of 90 for size X-large. 4 mil.

**SB48874** Large **SB48872** Small **SB48875** X-Large

SB48873 Medium Each - \$24.95

#### C. Black Nitrile Gloves

Ultra soft and super flexible. Simulates fit and feel of latex gloves. Masks stains, inks, dyes, and grease while allowing quick identification of light-colored substances. Finger thickness: 4.3 mm. Box of 100.

**SB49978** Small SB49980 Large SB49979 Medium **SB49981** X-Large

Each - \$24.95

#### D. Blue Nitrile Gloves

100% synthetic nitrile polymer gloves are odor free. Thermal sensitive, polymer compound absorbs body heat and conforms to user's hands and exerts virtually no pressure on hands. 5 mil. Box of 100 for sizes small, medium, and large; box of 90 for size X-large.

**C20032** Large **C20030** Small C20031 Medium C20033 X-Large

Box - \$19.95



#### Powdered

#### E. Latex Gloves

Natural rubber latex disposable gloves stretch and flex for comfortable fit. Provides dexterity and tactile sensitivity. Powdered with edible corn starch. Box of 100. 5 mil.

**SB48876** Small SB48877 Medium **SB48878** Large

Each - \$13.95



#### **Economical**

#### F. Low Density Polyethylene Gloves — Powder Free

Are ideal for lab work in biology and chemistry. Dispenser box of 100. 11/2 mil.

**SB48963** Small 2100320 Medium

Each - \$4.95

#### G. Vinvl Powder-Free Gloves

Made from a special synthetic component and soft PVC material. Soft like premium leather. More elastic to fit snugly and comfortably. 4 mil. Box of 100 for sizes small, medium, and large; box of 90 for size X-large.

2100321 Large

**C31841** Large **SB50313** Small C31840 Medium

Each - \$12.95

C31842 X-Large





# **Knee-Lenath Lab Coats**

Made of 65% Dacron® and 35% finely combed cotton. Lapel collar; double-thickness cuffs: adjustable belt in back; upper left pencil-seamed breast pocket; two deep lower pockets; side slit openings; and buttons. Fabric U.S.A.

H. Men l. Women **SB08098** Medium (40) **SB10912** Small (34) **SB08099** Large (44) **SB10913** Medium (40) **SB08100** X-Large (48) **SB10914** Large (42) Each — \$24.95 Each -\$30.95

#### . Unisex Lab Coats

Soft poplin fabric coats with high cotton content for more breathability and moisture absorption. 80% polyester/20% cotton.

**SB47454** X-Small - \$22.95 **SB47458** X-Large — **\$23.95 SB47455** Small - \$22.95 **SB47459** 2X-Large — **\$23.95 SB47640** 3X-Large — **\$25.95 SB47456** Medium - \$22.95

**SB47457** Large - \$22.95

#### K. Translucent Lab Aprons

6-mil thick plastic. Resistant to lab chemicals, acids, bases, oil, and grease. Ties at waist and neck are reinforced with cloth tape.

Child's Size 30"L x 24"W 42"L x 27"W SB37255 - \$6.95 SB37256 - \$6.95 36"L x 27"W 46"L x 36"W SB37257 - \$7.95 SB37258 - \$7.95

#### Disposable Aprons Tough, smooth white

**All-Purpose** 

aprons of 1.75-mil polyethylene are liquid-proof. Covers most people below the knee. Plastic ties and neckline band fit comfortably. 28" x 45". 100 aprons per dispenser box. 5 dispenser boxes per case. W05863

Box of 100 - \$24.95 W05864

Case of 500 - \$114.95

## L. Rubberized Laboratory Aprons

Chemical-resistant, flexible, and lightweight.

36"L x 27"W Child's Size. 30"L x 24"W SB37272 - \$8.95 SB37271 - \$7.95 42"L x 36"W 42"L x 27"W SB37274 - \$10.95 SB37273 - \$9.95

#### M. Disposable Knee-Length Lab Coats

White, 44" splash- and spray-resistant lab coats feature three pockets (one upper and two lower front), heavy-duty snaps, cuffs, and latexfree construction.

**SB47104** Medium **SB47105** Large Each - \$2.95

Combine chemistry and

art to create tie-dye lab

aprons that pop with color

#### N. Youth Lab Apron Tie-Dye Kit

Students learn the simple concepts of the tie-dye process and the chemical reactions involved (solubility, color mixing, and the movement of molecules). Includes 30 lab aprons, needed materials, and instructions. △ CHOKING HAZARD (1). Not for under 3 yrs

SB48484 - \$174.95

Youth Lab Apron Only. No pockets. 24" x 30". White.

SB48483 - \$4.95

## LAB SUPPLIES **Cleaning Supplies**

## Health & Safety

#### **Face Shield**

Get full-face splash protection while still allowing students to see all of you with this lightweight, anti-fog face shield. Soft elastic, padded headband offers all-day comfortable wear, and clear polyethylene construction makes it affordable enough to be disposable. Can also be sanitized for even more economical reuse. NE30025 - \$2.95



Adult 3-Ply Disposable Face Mask

Protect students and staff with these disposable, non-medical face masks for use in a simulated medical environment. Convenient behind-the-ear straps and adjustable nose wire (bridge clip) for comfort. Pack of 50.







#### First Aid Kit

Ideal for home, office, and vehicles. Contains 88 first aid items. Go to nascoeducation.com for a complete list of contents.

C29348 - \$22.69

• 6 sterile pads (4" x 4")

• 1 waterproof tape (1" x 2½")

• 3 sterile cotton-tip applicators

• 1 ABD pad (5" x 9")

• 1 eye wash (½ oz.)

· 2 tongue blades

· 2 eye pads

· 1 cold pack



Portable Eye and Face Wash Station

Provides both hot and cold running water. For eye washing, simply pull "activator" pin out. Contains a 6-gallon tank for fresh water and a 7-gallon tank for waste water. Safety-lock casters. Cabinet: 32"L x 18%"W x 39½"H. Basin: 9"L x 11"W x 5"D. Allow extra delivery time.

Z42349 — \$2,625.00



#### First Aid Kit

For any place with up to 25 people. Balanced assortment of supplies.

#### Contents:

- · CPR mask, 2 gloves, and 2 alcohol · 1 triangle bandage with pins 2 sterile pads (2" x 2")
- prep pads per unit box
- · 4 vinyl gloves, large
- 12 alcohol prep pads, sterile
- 15 BZK antiseptic wipes
- · 2 iodine antiseptic wipes
- · 3 Soothe-A-Sting™ wipes • 6 burn cream packets
- 6 triple antibiotic packets
- · 32 woven bandages (1" x 3")
- 10 juniors bandages (3/8" x 11/2")

- · 1 stretch gauze bandage (4")
- 1 pair of scissors · 1 stretch gauze bandage (2") 1 pair of forceps · 1 first aid manual Packaged in a weatherproof plastic case with wall-mounting handle/hanger. Complies with OSHA requirements. Contents meet ANSI Z308.12009.

SB13977 - \$39.95



#### Rapid-Clear™ Portable Eyewash Stations

The ideal first response when a continuous or safe water supply is not available. Quickly flush contaminants from eyes with the sterile, buffered, preserved saline solution. Eyewash includes tamper-evident seal with easy-to-open twist-off top and is datecoded for easy inspection. Highly visible green plastic backboard can be wall mounted or placed on flat surface. FDA approved.

**NE30357** Single Unit Station - 16 oz. - \$39.95 **NE30358** Single Unit Station - 32 oz. — **\$54.95 NE30359** Double Unit Station - 32 oz. - \$79.95 **NE30360** Eyewash Refill Bottle - 16 oz. — **\$17.95 NE30361** Eyewash Refill Bottle - 32 oz. — **\$28.95** 



#### Lysol® All-Purpose Cleaner

Cleans, disinfects, deodorizes, and kills 99.9% of bacteria on hard, nonporous surfaces. Lemon scent. 32-oz. bottle.

WA34866 - \$7.10



#### Maxim® Hard Surface Sanitizer

Sanitizing spray for use on food contact surfaces. 32-oz. bottles. Case of 12. WA35390 - \$50.75

#### Tek-Trol® Disinfectant Cleaner Concentrate

For use on ratite ranches, aviaries, swine producing facilities, equine facilities, veal barns, and calving operations. Effective against *Staph*ylococcus, Pseudomonas, Salmonella, Aspergillus, Tuberculosis, viruses, fungi, parvo, and mildew. Kills H1N1. Do not use in milking stalls, milking parlors, or milk houses. Gallon.

C33308 - \$59.99



#### E-Z Spray Bottles

Polypropylene sprayer with adjustable spray

C05706 Quart - \$3.05 C07664 Pint - \$2.85



#### **Ultrasonic Cleaner Lab**

Quiet, solid state circuitry; high-powered transducer for superior cleaning; large tank capacity; and cooling fan. Five cycles with digital time display. 1,400 ml (2.40 pints)



#### Kimwipes® Delicate Task Wipers

Absorbs many times their own weight. Plastic guard on dispensing box reduces airborne lint, keeps contaminants out, and reduces electrostatic discharge. Box of 280; 4½" x 8½"

SB44520 - \$5.95



#### **Paper Towels**

Strong, absorbent towels. 16 packages of 250 white 1-ply towels each 9½" x 10½". **WA04312(A)** — \$129.00



#### **Dust Pan and Broom**

Broom stores inside 12"W pan and clips to handle. Handle grip has hanger hole. Locks in upright position. Built-in tilt when open allows user to leave open. Dust pan is 36".

WA35395 - \$24.99

For a complete selection of cleaning supplies, visit nascoeducation.com

1.800.558.9595 | nascoeducation.com nascoeducation.com | 1.800.558.9595 **165** Connect with us on Facebook facebook.com/nascoeducation

LAB SUPPLIES LAB SUPPLIES

Description	Product No.	Unit	Price	Description	Product No.	Unit	Price
Alcohol, Isopropyl, 1 pt.	KI01036(J)	Each	\$5.95	Clips, Paper, box/100	9732828	Box	\$0.70
Aluminum Foil, 12" x 25' roll	SB30673	Roll	\$3.95	Clips, Paper, Jumbo, box/100	9732829	Box	\$1.10
Aluminum Foil Pan, 4½"	K01049(H)	Each	\$0.55	Cloth, Wool, 6" x 6" pc.	SB13244	Each	\$3.95
Aluminum Foil Pan, 9", pk/30	K01054(S)	Pack	\$29.95	Corn Syrup, Light, 32 oz.	KI01041(K)	Each	\$10.95
Bag, Paper, 10 x 20 x 7½ cm, pk/40	K01045(A)	Pack	\$4.55	Cornstarch, 16 oz.	KI01039(V)	Each	\$4.75
Bag, Reclosable, 4" x 8", pk/50	SB51441	Pack	\$7.95	Cotton Balls, Nonsterile, pk/300	KI05571(A)	Pack	\$4.95
Bag, Reclosable, 6" x 9", pk/100	SB51450	Pack	\$12.95	Cotton Balls, Triple, bag of 100	KI05571	Bag	\$1.95
Bag, Reclosable, 8" x 10", pk/100	SB51452	Pack	\$13.95	Crayons, Crayola®, #8, box of 8	9700786	Box	\$1.05
Bag, Zipper Closure, 4" x 6", pk/100	SB50618	Pack	\$7.00	Cup, Paper, 5 oz., pk/12	K01054(H)	Pack	\$2.95
Bag, Zipper Closure, 6" x 8", pk/100	SB50616	Pack	\$10.00	Cup, Paper, 12 oz., pk/25	KI01431(B)	Pack	\$3.45
Bag, Zipper Closure, 9" x 12", pk/100	SB50614	Pack	\$13.50	Cup, Paper, Cone, 4 oz.	K03250(C)	Each	\$0.10
Bag, Zipper Closure, 12" x 15", pk/50	SB50619	Pack	\$13.95	Cup, Plastic, Clear, 3 oz., pk/40	KI01037(B)	Pack	\$6.70
Bag, Zipper Closure, 12" x 15", pk/100	SB50620	Pack	\$19.95	Cup, Plastic, Clear, 10 oz., pk/16	KI01033(N)	Pack	\$4.95
Bag, Zipper Closure, Quart, pk/100	SB51413	Pack	\$47.95	Cup, Plastic, Clear, 10 oz.	SB41297	Each	\$0.55
Bag, Zipper Closure, Gallon, pk/100	SB51414	Pack	\$66.95	Cup, Styrofoam™, 8 oz., pk/50	SB51682	Pack	\$5.00
Baking Soda, 1 lb.	K00365	Each	\$1.95	Detergent, Liquid, 8 oz.	KI01054(V)	Each	\$4.25
Balls, Golf, 1 doz.	PE00962	Pack	\$20.60	Dish, Culture, 90 mm, bag of 20	SA00371	Bag	\$8.25
Ball, Steel, 3/6", pk/24 A CHOKING HAZARD (3). Not for under 3 yrs.	K01041(B)	Pack	\$34.50	Dissecting Pins, 2", ½ lb. Box	SA01463	Box	\$10.95
Balloon, Assorted, 11", pk/12	SB51399	Pack	\$2.50	Dominoes, Double Six, pk/28  ⚠ CHOKING HAZARD (1). Not for under 3 yrs.	TB15635	Pack	\$2.25
Balloon, Assorted, 12", pk/12 CHOKING HAZARD (2). Not for under 8 yrs.	SB51400	Pack	\$2.95	Dropper, Medicine, 3" – 2 ml, pk/12	SA01161	Pack	\$4.85
Balloon, Round, 7", pk/35  CHOKING HAZARD (2). Not for under 8 yrs.	K01039(T)	Pack	\$4.95	Dropper, Plastic, Eye, pk/15	KI01066(A)	Pack	\$3.35
Balloon, Round, 9", pk/35 CHOKING HAZARD (2). Not for under 8 yrs.	K01046(P)	Pack	\$5.95	Electrical Board, Wooden, 8" x 9" x 1/8"  CHOKING HAZARD (1). Not for under 3 yrs.	SB14180	Each	\$18.55
Balloon, Round, 9", pk/144 CHOKING HAZARD (2). Not for under 8 yrs.	SB51401	Pack	\$21.95	Fastener, Paper, #2, ½", box of 100	9701168	Box	\$1.90
Balloon, Round, 12", pk/50 \( \Delta \text{CHOKING HAZARD (2). Not for under 8 yrs.} \)	9742228	Pack	\$7.35	Film Canister, pk/48	K01045(B)	Pack	\$27.25
Battery, Size CR2032, 3V	PE07892	Each	\$1.95	Fishing Line, 25-yd. spool	9742234	Spool	\$3.50
Battery, Size D, Heavy Duty	K00131	Each	\$1.25	Flashlight	SB13626	Each	\$5.00
Beaker, 250 ml, Glass	SB17979	Each	\$2.75	Flour, 2 lbs.	KI01058(K)	Each	\$4.95
Blindfold, No Slots	SB41298	Each	\$2.15	Food Coloring, Blue, 30 ml	KI01054(L)	Each	\$2.95
Blindfold, pk/8	K01042(D)	Pack	\$18.30	Food Coloring, Green, 30 ml	KI01210(D)	Each	\$2.95
Bulbs, Mini Lamp, 2.5V, #41, pk/10	S09289	Pack	\$4.00	Food Coloring, Red, 30 ml	KI01039(X)	Each	\$2.95
Cards, Index, 3" x 5", Blank, pk/100	KI01046(Q)	Pack	\$1.95	Food Coloring, Box of 4	K00454	Box	\$10.95
Cards, Index, 3" x 5", Ruled, pk/100	BE01119	Pack	\$1.60	Funnels, 2½" dia., pk/15	K01066(B)	Pack	\$14.70
Carton, Egg, pk/25	C14067	Pack	\$10.75	Graph Paper, 8½" x 11", 50 sheets	9706099	Pack	\$2.25
Chalk, White, box of 12, Anti-Dust®	SB09901	Box	\$0.90	Gravel, 1 kg	K01042(F)	Each	\$2.95
Cheesecloth, Purewipe®, 2-Sq. Yd. Piece	KI01045(E)	Each	\$2.90	Gravel/Pebble, 1 kg (2.50 lbs.)	KI01049(I)	Each	\$4.50
				Humus, 4-liter pkg.	K01048(J)	Each	\$5.75

Description	Product No.	Unit	Price
lce Cream Sticks, pk/30	KI01046(X)	Pack	\$1.20
Iron Filings, Shaker, 1 lb.	S06119	Each	\$6.25
Lighter	KI03662(H)	Each	\$3.30
Litmus Paper Strip, Blue, pk/100	K00173	Pack	\$1.85
Litmus Paper Strip, Blue and Red, pk/200	SB50608	Pack	\$3.75
Litmus Paper Strip, Red, pk/100	K00174	Pack	\$1.85
Magnet Bar, 2"L, 1 pair	SB14309	Each	\$10.50
Magnet, Ring, Ceramic, pk/6 ⚠ CHOKING HAZARD (1). Not for under 3 yrs.	K01056(K)	Pack	\$8.95
Magnifier, Plastic, 3X/6X	SB18031	Each	\$1.65
Magnifiers, Plastic, pk/10	SB26621	Pack	\$10.00
Marble, 1", pk/16 ⚠ CHOKING HAZARD (1). Not for under 3 yrs.	K01033(P)	Pack	\$3.95
Marble, %", pk/20 ⚠ CHOKING HAZARD (1). Not for under 3 yrs.	KI01046(F)	Pack	\$1.95
Marble, ¾", pk/90 ⚠ CHOKING HAZARD (1). Not for under 3 yrs.	K01056(L)	Pack	\$9.95
Masking Tape, ¾" x 60 yd.	9722434	Each	\$2.55
Measuring Cup, 8-oz.	SB41295	Each	\$1.75
Medicine Cup, pk/100	K01044(A)	Pack	\$3.05
Mirror, Acrylic, 3" x 5", pk/16	K01043(B)	Pack	\$20.50
Nutrient Agar, Liquid, 125 ml	KI03630(CB)	Each	\$6.00
Pail with Lid, Polyethylene, 3½-gal.	C05575	Each	\$11.29
Pan, Aluminum, 8" Square	KI01049(C)	Each	\$1.05
Pan, Aluminum, 9" dia., pk/12	K01065(E)	Pack	\$14.95
Paper, Chromatography, 15 cm x 2 cm, pk/100	SB52175	Pack	\$3.75
Paper, Graph, ¼", 11" x 17", pd/50	9706100	Pad	\$3.25
Paper Roll, 30" x 100'	KI01042(G)	Roll	\$8.55
Paper, Tracing, 9" x 12", pd/50	9704157	Pad	\$6.85
Paper Towel, White, 100 Sheet Roll	K00786	Roll	\$4.50
Pencil, China Marking, Black, pk/12	9701022	Pack	\$11.95
Ping Pong Ball, 1½" (38 mm) dia., pk/16	KI01033(D)	Pack	\$3.75
Pipe Cleaner, White, bag/100	0500592(A)	Bag	\$2.35
Plastic Wrap, Clear, 12" x 100'	KI01037(I)	Each	\$3.95
Plate, Paper, 9", pk/40	K01046(T)	Pack	\$4.95



Description	Product No.	Unit	Price
Potting Soil, 4 qt.	KI01037(P)	Each	\$3.95
PTC Paper Strips, Vial of 100	K01525(F)	Each	\$4.05
Pulley, Single Sheave	SB12099	Each	\$3.55
Rod, Stirring Glass, 8"	K00186	Each	\$1.00
Rope, Clothesline, Cotton	SB41296	Each	\$5.25
Salt, Table, 26 oz.	K00359	Each	\$2.55
Sand, Fine, 1 kg	KI01054(U)	Each	\$2.60
Sand, Fine, 2.5 kg	KI01046(V)	Each	\$6.25
Seeds, Bush Bean, 14 g	KI01037(J)	Each	\$2.95
Seeds, Radish, 1 oz.	KI01037(N)	Each	\$4.45
Seeds, Sunflower, Gray Stripe, 1 oz.	SB07340	Each	\$3.95
Soap, Clear, Hand, 7.5 oz.	K03607(NB)	Each	\$3.85
Soap, Clear, Ivory®, 24 oz.	KI03620(QA)	Each	\$6.95
Soap, Hand, Dial® Clean Citrus, 7.5 oz.	SB51198	Each	\$6.95
Soil, Clay, 16 oz.	K01049(L)	Each	\$6.95
Spoon, Metal, Teaspoon, pk/16	K01046(K)	Pack	\$20.00
Spoon, Plastic, pk/25	KI01046(L)	Pack	\$2.25
Straws, not wrapped, pk/200	KI01033(U)	Pack	\$5.75
String, 300'	K00129	Each	\$3.95
Sugar, Granulated, 1 lb.	KI01044(F)	Each	\$4.00
Tagboard, White, 9" x 11", pk/25	K01034(I)	Pack	\$2.25
Tagboard, White, 22" x 28", pk/100	9700994(B)	Pack	\$30.00
Tape, Adding Machine, 2¼"	KI01043(G)	Each	\$0.98
Tape, Electric, Black, ¾" x 60'	SB50541	Roll	\$1.75
Thermometer, Immersion  ⚠ CHOKING HAZARD (1). Not for under 3 yrs.	SB15198	Each	\$3.95
Tongue Depressors, box/500	5500190	Box	\$9.50
Toothpicks, Flat, pk/750	KI01046(Y)	Pack	\$2.95
Tray, Brown, 10" x 14"	SB41303	Each	\$4.75
Twine, General-Purpose Twisted Cotton, 430'	K00876	Each	\$4.25
Magatakla Oil 24 oz	KI01044(D)	Each	\$6.50
vegerable Oii, 24 Oz.			
	K00364	Each	\$2.50
Vinegar, 5% Solution, 1 pt. Washer, <sup>3</sup> 4" O.D., pk/100	K00364 K01041(I)	Each Pack	\$2.50 \$8.95
Vinegar, 5% Solution, 1 pt.  Washer, ¾" O.D., pk/100  CHOKING HAZARD (I). Not for under 3 yrs.  Washer, 1½" O.D., pk/100			
Vinegar, 5% Solution, 1 pt.  Washer, ¾" O.D., pk/100	K01041(I)	Pack	\$8.95
Vinegar, 5% Solution, 1 pt.  Washer, ¾" O.D., pk/100  ⚠ CHOKING HAZARD (1). Not for under 3 yrs.  Washer, 1½" O.D., pk/100  ⚠ CHOKING HAZARD (1). Not for under 3 yrs.  Wax Paper, Roll, 111¾" x 75'  Wipes, Disinfecting, 35 wipes	K01041(I) K01033(R)	Pack Pack	\$8.95 \$34.95
Vinegar, 5% Solution, 1 pt.  Washer, ¾" O.D., pk/100  △ CHOKING HAZARD (1). Not for under 3 yrs.  Washer, 1½" O.D., pk/100  △ CHOKING HAZARD (1). Not for under 3 yrs.  Wax Paper, Roll, 111¾" x 75'	K01041(I) K01033(R) K101046(Z)	Pack Pack Roll	\$8.95 \$34.95 \$4.95

# **EARTH SCIENCE**



Earth Science gives students the ability to explore the connections between the land, ocean, atmosphere, and life on our planet.

Start their exploration with experiments, weather kits, solar system replicas, and other tools that will help them learn about the planet we call home.

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#### Nasco Soil Classroom Kit

Gr. 5–9 Gain an understanding of soil formation, soil composition, and soil chemistry, plus how soil factors into plant growth and ecosystems. Test the pH and NPK levels of soil samples, differentiate soil samples, and grow plants in various soils.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB48134 - \$235.00



#### Combination pH, Nitrate, Phosphorus, Potassium Outfit

Great for AP Environmental Science classes. Combination soil test kit with step-by-step instructions for individual or classroom use. Test result readings are measured against Mylar® laminated color charts. Enough reagents for 30 pH tests, 15 nitrogen tests, 20 phosphorous tests, and 15 potassium tests, plus 2 booklets. Comes with a hard case.

C08704 - \$87.95



Soil NPK Test Kit

**Gr. 5+** Perform up to 50 tests each for nitrogen, phosphorus, and potassium levels using non-hazardous TesTabs®. Comes with apparatus, instructions, and a laminated color chart. SB42195 - \$39.95



#### Soil Analysis Kit

Determines texture, composition, particle size range, density, permeability, porosity, and pH. Kit comes with loam, silt, clay, sandy soil, topsoil, fine sand, coarse sand, and gravel. Includes sieve sets and all required supplies for testing, complete instructor's manual with worksheets, assessment materials, answer keys, and a reusable plastic tote. Allow extra delivery time. 🖚

Z51293 — \$329.95



Give soil a checkup with simple, three-step tests that detect levels of common chemicals. Kit includes comparator box and 10 capsules for each of the following tests: pH, nitrogen, phosphorus, and potassium.

Refill Pack for Soil Test Kit. Includes 10 capsules for each test (pH, nitrogen, potash, and phosphorus).

C34288 - \$11.95

### Great for AP environmental science classes



#### LaMotte Soil Science Field Testing Outfit Model AM-31

Great for AP Environmental Science classes. All materials needed for establishing an accurate and detailed soil evaluation program. Chemical test equipment provided for soil pH, nitrogen, phosphorus, and potassium. Instructions and sufficient materials for making 50 tests. Includes apparatus for determining texture of soils, soil sampling tube, 50 soil sample bags, and carry case.

C08681-\$615.00

**Refill Unit for Model AM-31.** Reagents for 50 tests of each factor (250 tests total)

C08682-\$335.00



#### **Chemical Composition of the Soil**

Perform chemical determinations on locally derived soils for percentage of water; soil organic content; pH; reagent tests for calcium, carbonates, magnesium, and phosphates; and test paper determinations for potassium, sulfates, nitrate, ammonium, and iron. Discussion questions included. For 30 students working in pairs. SB09431 - \$194.95



Contains liquid reagents and equipment for the given number of tests.

20 tests each for soil pH, nitrogen, Includes 50 tests each for soil pH, phosphorous, and potash. C25446 - \$32.95

Soil Test Kit with 80 Tests. Includes Soil Test Kit with 200 Tests.

nitrogen, phosphorous, potash. C25448 - \$150.00



Presents and defines each layer of soil (organic, topsoil, eluviation, subsoil, regolith, bedrock). Display is topped off with a stem of grass showing the roots, as well as a mushroom with mycelium extending into topsoil. 12" x 16". C34457 - \$194.95





#### United Scientific Metal Sieve Set

Gr. 5+ Separate soil or sediment particles of multiple sizes with these stackable metal sieves. Set includes 6 sizes: 4000 micron, 2000 micron, 500 micron, 250 micron, 125 micron, and 63 micron. All sieves are 20 cm in diameter and 4 cm deep.

NE30299 - \$215.95



#### **Elementary Sieve Set**

Soil sorting just got easier for younger students with this colorful, nearly unbreakable set. Separate particle sizes into layers with the 5 plastic sieves. Each 8" dia. sieve is a solid-molded piece of polypropylene plastic. Catch pan at the bottom holds the smallest particles. Includes 5 mesh sieves with hole sizes of  $\frac{9}{6}$ ,  $\frac{1}{2}$ ,  $\frac{7}{6}$ ,  $\frac{5}{16}$ , and  $\frac{1}{4}$  and instructions

SB48161 - \$36.95



#### Soil Analysis Kit

Gr. 6+ Soil composition has been a keystone in earth science classrooms for many years. This kit will teach students the skills needed to properly conduct soil composition tests as well as allow them to collect and evaluate local soil samples. By bringing in local soil samples, the students can build a stronger connection to their own local environment while still building on a knowledge base that can be applied to any other environment.

SB52473 - \$265.00



#### **How Soils Are Formed** Collection

SB43552 - \$60.95

C30192 - \$30.25

Contains rocks and minerals that break down to become the major components for soils. 15 number-coded specimens in a compartmented container with 1½" x 1½" compartments. Soils come in plastic bags.



## Oil Test Paper

Light blue paper turns dark blue in the presence of hydrocarbons, particularly gasoline, fuel oil, and lubricating oil. Box of 100.

Measures light, soil moisture, soil pH, and soil fertility. Soil pH measured on a scale of 0–9, and a combined nitrogen-phos-

phorous-potash reading based on USDA

SB51167 - \$46.00

4-Way Analyzer

C25384 - \$35.95

standards



#### Soil Probe with Handle

Window slot for easy sample recovery. Sturdy design prevents probe from bending or twisting out of shape. Use without a liner. Includes a removable, corrosion-resistant, 10" cross handle with grips.

Easily sample soil to learn

more about it

%" x 21"

**C35620** Nickel plated — \$149.99 C35621 Stainless steel - \$149.99 %" x 33" **C35619** Nickel plated — \$149.99 C35622 Stainless steel - \$134.99



Gives accurate pH reading of soil on outside scale of the dial while showing soil's moisture content on inner scale. Instructions and carry case with belt loop.

C09002 - \$150.00



## United Scientific 4-in-1 Soil Meter

Monitor sunlight, moisture, pH, and temperature levels all in one convenient handheld device. Features large, easy-to-read LCD screen, low-battery indicator, and 8"L probe to reach root-deep into soil. Requires 9V battery (not included).

NE30446 - \$29.99



#### Nasco Soil Classes Kit

Eight glass jars in thermo-formed plastic tray (one each of sand, sandy loam, clay loam, peat loam, silt loam, loam, clay, and muck). LS00519 - \$50.95

For a complete selection of soil products, visit nascoeducation.com



#### **Digital Tapwater Tour**

Gr. 4-8 Hands-on science curriculum and water test kit lets students investigate how and why the characteristics of tap water can vary and affect everyday activities. After reviewing material about pH, chlorine, hardness, copper, and iron, students work independently and in teams to test their own tap water samples. Classroom color chart, reagents, sample test bags, and an access code to downloadable versions of the instructor and student manuals. For 50 students. SB53277 - \$94.95

Refill Kit SB53278 - \$78.95



#### Innovating Science® **Urban Water Investigation Kit**

Gr. 6-12 Help students learn about how water quality affects urban areas. Collect water samples and test them for chloride, copper, iron, hardness, nitrate, pH, phosphates, and temperature. Kit contains materials for 10 tests and an NGSS-aligned instruction manual. NE30416 - \$125.50



#### **Green Water Monitoring Kit**

**Gr. 4+** Low-cost, portable, easy-to-use water testing kit will analyze water samples for phosphate, temperature, turbidity, coliform bacteria, pH, dissolved oxygen, biochemical oxygen demand, and nitrate. Test fresh, brackish, or saline aquatic environments. Nonhazardous Tes Tabs®, instructions, and color chart. For 5–6 students. SB33597 - \$52.95



#### **Urban Water Test Kit**

Gr. 3+ Introduce the basic concepts of water chemistry. Test tap water from any source and study the impact of urban water on the city's environment.

EL12088 - \$69.95



#### **United Scientific Water Sampler**

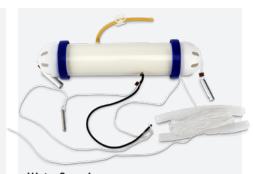
**Gr. 5**+ Capture water samples from specific depths with a water sampler. Made from impact-resistant PVC with soft rubber seals. Holds up to 1½ liters of liquid. When the desired depth is reached, students should pull the attached line to close the apparatus. Includes 20 m line on Styrofoam winding float and an activity guide.





#### **Nitrate/Nitrite Water Quality Test Strips**

Fast, easy, and reliable water test strips. Measure nitrate nitrogen and nitrite nitrogen. Nitrate range: 0, 0.5, 2, 5, 10, 20, and 50 ppm. Nitrite range: 0.15, 0.3, 1 1.5, 3, and 10 ppm. Results obtained in 60 seconds. 50 test strips. SB27487 - \$19.95



#### Water Sampler

Sample water from any desired depth. Single-line trigger mechanism uses one line to both raise and lower the sampler and a trigger to seal the collection chamber; eliminating tangled lines. Flow-through design provides 1½-liter volume of water from which temperature and dissolved oxygen content can be determined. 18\%"L x 3\\%" dia. SB21418 - \$81.95







#### Water Test Strips

A quick and easy method of accurately mea-

suring water quality. Lacti lest has 50 strips							
Product No.	Test	ppm	Intervals	Each			
SB42508	Phosphate	10-100	0, 10, 25, 50, and 100 ppm	\$17.95			
SB42510	Hardness		0, 50, 125, 250, and 500 ppm	\$15.95			
SR42511*	Fluoride	10-100	0, 10, 25, 50,	\$16 50			

and 100 ppm \$10.50 \* Test strips may be used to determine presence of fluoride in drinking water. NOTE: In order for the strips to work properly, hydrochloric acid solution (see p. 116) is needed. Use 1 oz. water to 1 oz. hydrochloric acid.

#### WaterWorks 9-Way Classroom Test Kit

**Gr. 3-9** Test strips for testing 9 different parameters (free chlorine, total chlorine, pH, total alkalinity, iron, copper, total hardness, nitrite nitrogen, and nitrate nitrogen). Nonhazardous test strips feature quick, accurate, and inexpensive water testing with easy-to-follow dip and read instructions. 60 tests for each parameter, activity booklet, pipettes, and vials. For 30 students.

SB31266 - \$115.95





#### TesTab® Water Investigation Kit

Investigate water pollution using safe, simple TesTab® reagents. Lightweight, field carrying case houses 12 individual test modules. Each module contains diagrammed instructions that are easy to read, color chart, test factor flash card, and all the necessary apparatus and nonhazardous TesTabs® to perform 100 tests. Also includes a manual and The Monitor's Handbook. SB31250 - \$325.00

#### Water Nitrate-Nitrogen Test Kit

Two-tablet reagent system to measure nitrate-nitrogen from 0 to 15 ppm (0 to 66 ppm as nitrate) in one-third of the time required for other nitrate kits. Unit-dose, foil-packaged tablet reagents eliminate the use of cadmium. Tablets for 50 tests; plastic test tubes with spill-proof caps; and plastic Octa-Slide color comparator with values 0.1, 2, 4. 6, 8, 10, and 15 ppm nitrate-nitrogen.





nascoeducation.com | 1.800.558.9595











#### A. Nasco Creature Seeker Pond Kit

Gr. 3-9 Use microscopes and photo keys to identify creatures in the water, relate organisms found to the health of the ecosystem, keep records of results, and more. Includes field trip collection container, 3½-gallon pail, nylon pipette, 4 petri dishes, 4 plastic spoons, 4 plastic cups (3 oz. each), two-way microscope, 4 hand magnifiers, 8" x 12" plant trays, 4" plastic forceps, dry-erase marker, nylon ladle, insect net, 3 different laminated keys to macroinvertebrates sheets, and instructions.

▲ CHOKING HAZARD (1). Not for under 3 yrs.

SB44662 - \$77.95

#### B. Fieldmaster® Student Net

Investigate ponds, streams, lakes, and seashores. Net has 3 mesh openings. Nitex® nylon collects even the smallest size plankton. Patented Mini Dolphin™ adapter with 125 ml sample bottle can be used in place of a bucket. Fine mesh, 80 microns.

SB37276 - \$125.00

#### C. Student Aquatic Net

8" square steel hoop, 6"D mesh capturing bag, soft  $\frac{3}{16}$ " mesh grid size, and 20" knotless pine handle.

SB43412 - \$6.25

#### D. Dissolved Oxygen TRACER PockeTester™

Waterproof PockeTester<sup>TM</sup> can be intermittently submerged to a depth of 3'. Waterproof feature makes cleanup easy and quick. Oxygen level displayed as % saturation from 0 to 200.0% or concentration from 0 to 20 ppm (mg/L). Adjustable altitude compensation: 0-20,000' in 1,000' increments. Adjustable salinity compensation from 0–50 ppt. Memory stores up to 25 data sets with DO and temperature reading. Self-calibration on power up, data hold, auto power off, and low battery indicator, DO electrode, protective sensor cap, spare membrane cap, electrolyte, four 1.5V SR44W batteries, and 48" neck strap.

# E. Armored Thermometer

SB40757 - \$560.00

Precision, non-mercury thermometer in protective plastic jacket with window opening. Engraved graduations on white tubing increase readability over range of -5° C to  $45^{\circ}$  C in  $0.5^{\circ}$ increments. 6"W x 1"H.

SB42137 - \$30.95

For a complete selection of earth science products, visit nascoeducation.com



#### **Coliform Test Kit**

**Gr. 7+** Coliforms are a broad group of bacteria mostly found in the intestines of warm-blooded animals. Presence of coliforms may indicate a possible presence of other pathogenic or disease-causing organisms. Students add a small amount of collected water to a sample tube and incubate for 24–48 hours. Distinct color change indicates that coliforms are present. Instructions and 25 lactose tubes. SB49025 - \$62.95



#### **Qualitative Introduction to Water Pollution Kit**

**Gr. 8+** Perform qualitative tests on natural and treated water to become aware of the significance of water pollution. Identifies 10 common pollutants, as well as the determination of pH. Tests include ammonia, chlorine, chromium, copper, cyanide, iron, nitrate, phosphate, silica, sulfide, and pH determination. Teacher's instruction booklet and background information. For 50 students. 🛆 CHOKING HAZARD (1). Not for under 3 yrs.

SA08211 - \$281.10



#### **Pondwater Tour Kit**

Gr. 4–8 Hands-on test kit guides students through the study and measurement of changes in dissolved oxygen, nitrate, pH, and ammonia in a lake, stream, pond, or aquarium. Lecture materials, handouts, teacher tips, test procedures, data sheets, games to reinforce key concepts, TesTabs® reagent tablets, and sample test bags for a class of 50 students.

SB26203 - \$110.95 Reagent Refill Only

SB26204 - \$87.95

 $\triangle$  See page 3 for complete Choking Hazard Label Information.



#### Leaf Pack Experiments Stream Ecology Kit

**Gr. 3+** Design, implement, and analyze a scientific investigation while discovering the value of aquatic macroinvertebrates as living indicators of water quality and the overall health of a stream ecosystem. Includes instructor's manual with background material on stream ecology, glossary, diagrammed instructions, experiment ideas, and field and lab data sheets. Use for AP Environmental Science classes. SB29984 - \$310.00

**EARTH SCIENCE** 





#### Nasco Ocean Acidification Kit

Gr. 6-12 While most discussions about climate change focus on atmospheric CO2 concentration and surface temperature changes, this kit explores changes to our oceans. How could climate change affect them? Aligned to NGSS, students will build their own conclusions through research, discussion, and experimentation. Includes air sensor for data collection, beakers, pH solutions, and two teacher discussion guides (middle school and high school). SB53393 - \$505.00



#### Ocean in a Box

Set of 20 specimens includes algae, sea bean, finger sponge, silk or wool sponge, sea horse, hard coral, soft coral, sea star (starfish), sand dollar, barnacle shell, center-cut shell, tusk shell, moon snail shell, turritella shell, olive shell, turkey wing shell, pectin shell, clam shell, murex shell, and turban shell. Specimens individually bagged with fact card. 10" x 7" x 4" cardboard box. Specimens may vary. SB40476 - \$46.95



#### How Clean is the Water We Drink and the Air We Breathe?

Make the invisible, visible. Students sample water and air and then grow any microbes present overnight. A safe way to teach about pollution. Includes 1 bottle of ReadyPour™ Agar, 3 sleeves of Petri plates, 2 pipettes (10 ml), pack of 1 ml pipettes, a 20 ml sterile water sample, and a guide with activities.

SB26185 - \$70.00



## 9 EXPERIMENTS IN 1

Take the entire class on an environmental testing journey



#### Innovating Science® Environmental Testing Kit

**Gr. 6–12** This kit includes 9 different tests to determine the air and water quality of samples you collect from your community. Kit contains materials for 30 students working in groups. Teacher's guide and student worksheets aligned to NGSS included.

NE30414 - \$66.50



Oil Spill Cleanup: Biological vs. Physical Lab Gr. 9+ Apply both a special blend of oil-degrading microbes and a hydrocarbon-encapsulating polymer to oil and examine the results, drawing conclusions on the effectiveness of each approach. Includes a stained vegetable oil to simulate crude oil, allowing the use of real oil without any of the hazards and associated disposal costs. Materials for 15 students, teacher's manual, and student study guide copy-

SB50315 - \$95.95



#### Innovating Science® Ocean Acidification Kit

**Gr. 6–12** Through 3 different activities, students will investigate the cause of ocean acidification and the effects it can have on the ecosystem and marine life. Kit contains materials for 15 groups of students. NGSS-aligned teacher's guide and student study guide copymasters included.

NE30415 - \$34.75

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Environmental











#### A. Environmental Chemistry: Acid Rain, Weathering, and Erosion

**Gr. 7+** Learn about the effects of acid rain on both naturally occurring and man-made surfaces by exposing many rock materials and metals to an acidic environment and contrasting the reaction of these materials to the same materials exposed to "normal" rain (tap water). For 15 groups, including teacher's manual and student copy-masters.

#### C29411 - \$65.95

#### B. Electrochemical Remediation of Wastewater

**Gr. 6+** Perform an alternative, greener approach to wastewater treatment. Electrocoagulation, a process for treating wastewater carried out by an electrical charge. For 15 groups.

#### SB45474 - \$74.95

#### C. Innovating Science® STEM Investigations: Design a Water Filter Kit

**Gr. 6–12** Students will learn about the processes performed at water treatment facilities and engineer their own small-scale filtration plant. Contains materials for 15 groups of students. NGSS-aligned teacher's guide and student study guide copymasters included.

NE30426 - \$69.95

## E. Water Treatment & Filtration Kit

D. PocketLab Air Sensor

**Gr. 6+** Water delivered by municipal water supply must be treated prior to delivery to ensure health and safety. Perform several of these steps on "raw" water and examine changes in the physical properties after each step. For 15 groups.

Wireless sensor sends data to an app for exploring the world and investigating air quality and climate. Sensor functions allow viewing of data in

real-time. Connect to your device via Bluetooth® 4.0 and instantly stream

data simultaneously on carbon dioxide, ozone, particulate matter, air quality index, barometric pressure, humidity, light, and ambient tem-

perature. Record up to 30,000 measurements to the onboard memory and integrate through PocketLab Cloud Software, Google Drive<sup>TM</sup>, or Microsoft® Excel. App is compatible with iOS, Android<sup>TM</sup>, Mac OS®, and

Wireless range: 250' (76 m) line-of-sight. 4" x 2½" x 15/16".

Chromebook™. Rechargeable lithium polymer battery lasts up to 12 hours.

SB45473 - \$76.95

SB53295 - \$348.00



#### Climate Change: Carbon Cycling Kit (Developed by EDC)

Engage in four activities related to carbon and its movement through the carbon cycle. Students build molecular models to better understand some of the everyday reactions that allow carbon atoms to form different molecules and move from one place to another; next, students do a basic analysis of Earth's major carbon sources, sinks, and associated fluxes. For 32 students per class. Contains no consumable materials.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

C34433 - \$239.95



#### Innovating Science® The Carbon Cycle in Soil Kit

**Gr. 6–12** In 3 different activities, students will investigate the carbon cycle in soil, how soil impacts global warming, and the effects of a positive feedback loop. Includes materials for 15 groups of students, teacher's guide, and student study guide copymasters.

NE30417 - \$79.95



#### **Ecosystems Teaching Poster Set**

Focus on food chains, food webs, and energy pyramids show how energy moves through an ecosystem and the interactions between organisms within it. Cycle models show how matter flows through organisms and the physical environment. Includes 4 posters (17" x 22"), 4 reproducible activity sheets, and a teacher's guide.

SB50481 — \$9.95



#### **Decomposition Kit**

Gr. 5+ Explores two very important concepts in studying life cycles: biodegradability and decomposition. Participants investigate the effect of various factors on decomposition and biodegradability. For 50 students or 24 groups. & CHOKING HAZARD (1). Not for under 3 yrs. SB28793 – \$187.45



#### Now You See It, Now You Don't™ See-Through Compost Container

Learn about decomposition, composting, life cycles, and environmental education. Three aerated compartments let students view the decomposition process and make side-by-side comparisons. 5½"D x 13"W x 8"H clear plastic box with faux grass top, thermometers, and guide.

SB47477 — \$44.95



Use molds made from actual animal tracks to make replicas to help students identify wildlife



**Ecological Succession Gr. 6+** Game provides an active learning alternative to passive methods of studying ecological succession. Within each successional stage, students react to disturbance events and come to understand how disturbances affect the different communities. For 24 students working in groups of 4. ▲ CHOKING HAZARD (I). Not for under 3 yrs.

SB51216 - \$136.35



#### **Habitat Connections Kit**

**Gr. 3–8** Introduces students to their own local environment through games, hands-on activities, in-depth lessons, and citizen-science projects. Comprehensive curriculum kit allows for both indoor and outdoor learning. Contains 7 lessons, reference guide (student readings), journal pages, and a glossary; cards used in various lessons (Stay or Go, Migration Obstacle, and Bird Survivor); posters; brochures; and background information and access to videos and slide decks online.  $\Delta$  CHOKING HAZARD (I). Not for under 3 yrs.

KI04553 — \$29.95



#### Science Learning Center - Ecosystems, Food Chains, & Food Web

**Gr. 5+** Learn and review essential standards-based environmental science skills. Designed for teacher-directed instruction or independent learning working in groups of 2-4 students. △ CHOKING HAZARD (I). Not for under 3 yrs.

SB53130 - \$34.95



#### Nasco Earth Science Lab Kit

Student earth science lab station in a well-packaged, portable container designed for non-conventional lab situations such as home schooling, or any situation that calls for an uncompromised lab experience with or without the presence of an experienced lab teacher and without the need for a traditional lab facility. Preparation, safety, and cleanup is convenient and easy. Hands-on lab course has everything needed to perform 31 earth science experiments (other than some common household items), including over 40 types of equipment, 24 different types of rock and mineral samples, and a 150-page manual with step-by-step instructions written to clearly teach an earth science concept. Allow extra delivery time.



#### **Nasco Track Mold Kits**

- · Identify wildlife from tracks
- Use in all animal and bird study
- Plaster casting, 5 lbs.Study adaptation to
- · Ink prints

 Reproduce tracks and track patterns in class

Aids students in the study of animal life. By making replicas, they become familiar with tracks of wild, domestic, and exotic animals. Kits contain all materials needed for making replicas — a variety of molds made from actual animal tracks, 5-lb. tub of casting plaster, and instructions.

#### Volume 1

One foot of wolverine, wolf, and yearling moose; fore and hind foot of fisher, porcupine, snowshoe rabbit, and land otter.

### SB33680 - \$149.95

#### Volume 3

Fore and hind foot for mink, coyote, woodchuck, gray fox, opossum, gray squirrel, and deer.

SA05425 — \$134.95

#### Volume 4

Fore and hind foot molds of mountain lion, badger, antelope, and jack rabbit; I foot of elk and buffalo.

SA05426 - \$172.95

Casting Plaster. 5-lb. package. 9730282 — \$21.00 24+ \$18.22



SB33680



Individual Tracks

SB46523 Yearling moose.

8%"L x 3/4"W x 15%"H — \$27.95

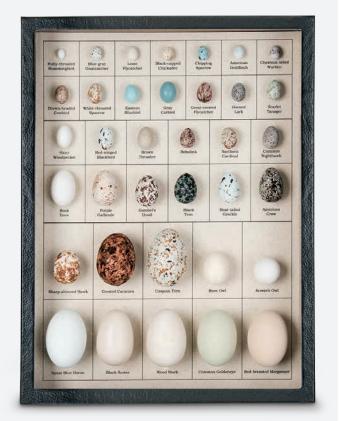
**SA00398** Bald eagle. 8¾"L x 3¾"W x 1½"H **- \$11.00**  **\$A00397** Crow. 3¼"L x 1½"W x ½"H **- \$10.00** 

**Environmental** 





Use for group field identification. PVC pipe grid is easily folded and stored. 20"L x 20"W. SB42804 - \$32.95



#### **Eggs of North American Birds**

Set of 36 true-to-life replicas show eggs laid by a diverse collection of North American birds, from the diminutive ruby-throated hummingbird to the great blue heron. Replicas secured in a labeled 12" x 16" exhibit case

SB51345 - \$430.00



#### A. Nasco Food Web Collapse Game

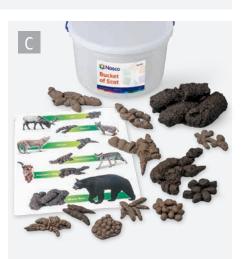
**Gr. 5–8** Fast-moving strategy game teaches the structure and function of food webs. A round takes 10–15 minutes. Aligns with all state standards for teaching about food webs. Guide sheets, cards, stickers, and instructions. For up to 30 players.

SB47891 - \$42.95



#### B. Animal Bites™

**Gr. 2+** Learn about the diversity of diet within the animal kingdom. Includes samples from each group: herbivore (beaver, mountain gorilla, hippo); carnivore (coyote, African lion, alligator); and omnivore (human, grizzly bear, baboon). Includes lesson plans and interactive exercises. SB37286 - \$119.95



#### C. Nasco Bucket of Scat

Includes 13 scat replicas of common North American animals in storage bucket. SB49923 - \$129.95

## Discovery is a hoot with owl pellet dissection

Give students owl pellets and watch them dig into a variety of science concepts. They can learn about the relationship between predator and prey, evaluate animal populations in an owl's habitat, investigate the skeletal anatomy of prey, study owl feeding habits, and more.



#### **Nasco Owl Pellets**

Compact balls of fur, feathers, and bone that have been regurgitated by an owl after feeding. Dissection of these pellets helps students gain insight to predator-prey relationships.

SB09759 - \$4.25

Small Pellets

SB09759(SM) - \$2.55

Nasco Bucket O' Pellets – Large. 100 large pellets in plastic bucket with lid. SB42866 - \$325.00





**Gr. 4–8** Everything you need to begin owl pellet dissection. Teaches predator-prey relationships, energy transfer through food chains, and more. Includes a bucket with 100 owl pellets, 15 learning guides for students working in pairs, and a 40-page resource guide with lessons, vocabulary, and assessments. Aligned to NGSS.

SB53337 - \$415.00



#### Nasco Basic Owl Pellet Kit

Gr. 3-7 Study food chains from regurgitated owl pellets easily dissected to expose skulls and other skeletal parts. Undigested remains provide bones, teeth, hair, or feathers of prey animals. Charts of skulls and skeletons help identify prey animals. Includes 15 dried and fumigated owl pellets wrapped in aluminum, 15 student worksheets, and teacher's guide. SB20193 — \$58.95



#### Nasco Advanced Owl Pellet Kit

Gr. 7+ Learn about predator-prey relationships through analysis of owl pellets. Observe skeletal features to identify prey animals consumed and learn about energy transfer through food chains. Includes 15 dried and fumigated owl pellets wrapped in aluminum, probes, owl pellet study chart, 15 student worksheets, and teacher's guide. SB20192 – \$81.95





#### Acurite® 5-in-1 Weather Station with Color Display

Keep current with temperature, humidity level, barometric readings, wind readings, and forecast. Forecast indicator includes icons with 14 different weather conditions and self-calibrates for altitude. View past temperatures, humidity, and barometric pressure readings. Continuous streaming weather ticker scrolls text and provides weather alerts. Connect display to a computer to download weather data. Main unit has a temperature range of 32° to 122° F (0° to 50° C) and a humidity range of 16% to 98%. Outdoor sensor has a temperature range of  $-40^{\circ}$ to 158° F (-40° to 70° C), humidity range of 1% to 99%, wind range of 0–99 MPH, RF range of 330' (100 m), and measures rainfall up to 100" AC adapter for display included. Sensor requires 4 "AA" batteries (not included). 2 year battery life. View your sensors on any iPhone, Android smartphone, computer or tablet with the complimentary My AcuRite App. SB50359 - \$274.99

With Lightning Detector. Measures temperature, humidity, wind speed, wind direction, and rain. Alerts you to oncoming storms from up to 25 miles (40 km) away, with real-time streaming | capabilities. Outdoor sensor temperature range: -40° to 158° F (-40° to 70° C). Humidity range: 1% to 99%. Wind range: 0 to 99 mph. Rainfall: 0.05" per inch of rainfall. Wireless range: 330'.

SB52022 - \$232.95



#### Vantage Pro2<sup>™</sup> Weather Station

Transmits weather data wirelessly up to 1,000' outdoors. Solar powered sensor suite includes rain collector, temperature/humidity sensors, anemometer, 40' anemometer cable, and solar panel. Electronic components housed in weather-resistant shelter. Powered using included AC power adapter or with 3 "C" batteries (not included). Typical range through walls is 200' to 400'. Mounting hardware.

SB36619 - \$790.00



#### United Scientific Mini Weather Station

Gr. 5+ Introduce students to basic weather concepts with this versatile apparatus. Use to measure temperature and wind speed, then reference the chart to calculate wind chill. It freely rotates to indicate wind direction. Removable rain gauge can be used to quickly assess rainfall.

NE30302 - \$8.95



#### **AcuRite® Digital Weather Station**

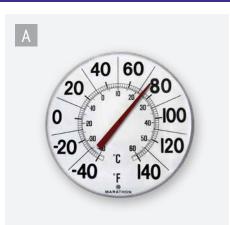
Teach students all about the weather by monitoring conditions in real-time! Measures and displays outdoor temperature, humidity, daily high/low records, and barometric pressure; indoor temperature and humidity; moon phase, date, and time. LCD display and wireless sensor. Requires 2 AA batteries (not included) Includes one-year limited

NE30445 - \$49.99



#### AcuRite® Atlas 7-in-1 Weather Station

Engage students with minute-by-minute weather updates! Measures and displays outdoor temperature, humidity, wind speed/ direction, UV, light intensity, barometric pressure, rain totals, indoor temperature, humidity, and barometric pressure. HD display with optional battery backup, wireless sensor, and lightning detector. One-year limited warranty. NE30444 - \$359.99





# **Galileo Thermometer**

Glass cylinder thermometer contains hand-blown, calibrated glass spheres, each imprinted with designated temperature reading medallions. As temperatures fall, spheres will rise; as temperatures rise, spheres will sink Range: 60° to 100° F. 24"H.

SB31402 - \$74.95



#### AcuRite® Galileo Thermometer & Barometer

Temperature range: 64° to 80° F. Determine atmospheric pressure by the level of liquid in the barometer. Low level indicates high pressure and fair weather; high level predicts bad weather is on the way. Instruments come together on a wooden base.  $4\frac{1}{2}$ " x  $\frac{3}{4}$ " x 9". SB48147 - \$39.95





## A. Indoor/Outdoor Giant Round Thermometer

12" dia. display thermometer with large numbers for reading at a distance. Range: -40° to 140° F  $(-40^{\circ} \text{ to } 60^{\circ} \text{ C})$ . Keyhole slot for mounting. SB42182 - \$24.95

#### **B. Thermometer with Relative Humidity**

lumbo thermometer is easy to read at a distance. 12" dia. Fahrenheit, Celsius, and relative humidity scales. Hang indoors or out. All metal construction with plastic covered face.

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SB01068 - \$29.95



#### C. AcuRite® Color Weather Forecaster

Measures indoor/outdoor temperature. Displays daily highs and lows. 12- to 24-hour forecast. Atomic clock and calendar. 1"D x 7%"W x 63/16"H. For tabletop or hang on wall. Sensor range: -40° to 158° F (-40° to 70° C) and an RF range of 330'. Requires 5 "AA" (not included). SB52517 - \$81.95

#### D. AcuRite® Indoor Temperature and **Humidity Monitor**

Temperature sensor:  $-40^{\circ}$  to  $158^{\circ}$  F ( $-20^{\circ}$  to 70°C). Indoor humidity: 1% to 99%. 24-hour highs and lows. Wireless, 2½"L x 1"W x 3"H. Requires 2 "AAA" batteries (not included). SB52516 - \$22.95



#### E. AcuRite® Color Weather Station

LCD screen with indoor/outdoor temperature and humidity, barometric pressure, cloud cover, precipitation, 12-hour weather history, calendar. and clock. Tabletop or wall mount. Wireless range: 330'. Iemperature range:  $-40^\circ$  to  $158^\circ$  F ( $-40^\circ$  to  $70^\circ$  C); accuracy  $\pm 2^\circ$  F. Humidity range: 1% to 99%.  $8"L \times 7"W \times 3"D$ . Sensor requires 2 "AA" batteries (not included). SB51160 - \$102.95



#### Taylor® Weather Thermometers

Spirit thermometer is easy-toread. -40° to 120° F (-40° to 50°C). Weather resistant. Indoor/outdoor use. Set of 6; 75/8" x 23/8"

S01034 - \$19.95



## **Classroom Thermometer**

Indoor/outdoor use. Wallmounted Range: -40° to 120° F (-40° to 50° C). 14" x 3".

TB18809 - \$8.75



#### Giant Classroom Thermometer

30" wall-mounted thermometer has 23" tube on a wooden base. F°/C° scales. Range: -40° to 120° F (-40° to 50° C). TB15831 - \$39.95



#### Rain Gauge/ **Thermometer Combo**

Monitor rainfall up to 5". -40° to 120° F (-40° to 50° C). Large read-out gauge is easy to read. 15" H x 5¼"D at base. SB39194 - \$14.95



Large, clear, dual scale in hPa (hecto Pascal), and mmHg on a 4" dia. dial that is easy to read from a distance. Áccuracy of ±3 to 4 hPa. Wall mount. SB23610 - \$30.95



#### **Aneroid Barometer**

Perfect for giving demonstrations. Features a protective transparent case, air-tight seal, and pressure bulb to force movements

SB48285 - \$25.95



#### Weather Ball Barometer

Indicates changes in air pressure quickly and accurately. Once the ball is filled with colored distilled water, air trapped inside ball is no longer subject to variations in atmospheric pressure. 7½"H x 4" dia.

SB33482 - \$36.95



#### Sling Psychrometer Kit

**Gr. 7+** Use to measure relative humidity. Two plastic-backed Celsius thermometers: one for dry bulb measurements and one for wet bulb measurements. Mounted on a wooden handle so they can be spun to obtain temperature readings. Activity guide

SB51739 - \$10.95 SB51740 Set of 15 - \$109.95



#### Centigrade Pocket Sling Psychrometer

With recessed psychrometer bulbs to prevent breakage during use. Range of -5° to 50° C in 1° divisions. Red liquid filled. Water reservoir eliminates need to constantly re-wet wick. Carry case and plastic chart.

SB47136 — \$138.95

For a complete selection of weather products, visit nascoeducation.com





Soda Bottles Cap not included, sold separately (SB53276, below).

Product No.	Size	Each	10+
SB53274	2 liter	\$1.75	\$1.56
SB53275	20 oz.	\$1.35	\$1.22

Soda Bottle Cap. △ CHOKING HAZARD (1).

SB53276 - \$0.50 10+ \$0.45





the slightest wind. Tip-resistant

Vane length (rudder to pointer):

7½". ▲ CHOKING HAZARD (1). Not for

plastic base. 3½" x 3½" x 75%".

SB43543 - \$25.00

#### Anemometer

Demonstrates operating principle of cup anemometers. Extra-sensitive model responds to wind velocities of 2 mph. Made of corrosive-resistant materials for outdoor use. Includes teacher's guide.

SB16581 - \$14.95

**Hand-Held Anemometer** Get a direct reading of wind speed without count revolutions. As wind blows harder, arms move, lifting reading bar SB25130 - \$34.50



Plug-and-play technology allows for an intuitive, easy-to-use data logging platform. Wireless (SB50671) or USB (SB50672) required to operate sensor. See p. 35 for complete description.

SB51188 - \$325.00



Monitor wind speed, air temperature, and relative humidity. Lightweight unit with backlight senses airflow as low as 0.4 m/s. Min./max. and hold features. Wrist strap, carry pouch, and button cell battery.  $4\frac{3}{4}$ " x 13/4" x 7/8"

SB49886 - \$137.95



#### AcuRite® Portable Anemometer with Inspection Light

Measures real-time, average, and peak wind speeds. Extendable air velocity meter ensures accurate wind speed readings and measures wind velocity in hard-to-reach places. Customizable wind speed alarm. Backlit LCD and LED inspection light offers reading visibility and vane placement in dimly lit areas. Wind speed range: 0–60 mph and 0–52 knots. Temperature range: -40° to 158° F (-40° to 70° C). 13/16"D x 2½"W x 73/16"H. Requires 3 "AAA" batteries (not included).

SB52515 - \$50.95



Weather

Weather







ONLY AT NASCO

#### A. Nasco Weather Kit

Gr. 6–8 Inquiry-based, idea-centered, hands-on kit dealing with weather phenomena, measurement, and interpretation of weather data. Includes equipment and materials to conduct 70 different investigations/activities, storage chest, replacement parts available at reasonable cost, and specific weather instrument kits available as separate items. Teacher's guide with blackline masters and answer keys. A CHOKING HAZARD (1, 2). Not for under 3 yrs.

SB22636 - \$232.00

#### B. Innovating Science® Exploring Meteorology Kit

Gr. 6–8 Students will study pressure changes and wind speed, create their own barometer and anemometer, and learn how to read a weather map. Includes experiment materials for 30 students working in pairs, enough materials for 5 demonstrations, and NGSS-aligned teacher's guide. NE30418 - \$66.95





#### C. Nasco Weather Mini Kit Instrument Pack

Includes one of each: weather vane, anemometer, barometer, hygrometer, and thermometer. Instructions. 

CHOKING HAZARD (1). Not for under 3 yrs. SB24802 - \$42.95

#### Nasco Weather Kit Instrument Packs

Use to collect weather data for extended periods. For individual or classroom use. Packs of 10.

D. Weather Vanes SB22658 - \$49.95

E. Barometers SB22660 - \$104.95

F. Anemometers SB22659 - \$64.95



#### Sea Floor Simulation Kit

**Gr. 6+** Hand-held or submerged seascape model teaches about sea floor topography, sea floor currents, and plate tectonics. When submerged in a 10-gallon tank (not included), model can simulate current movements with colored dye (not included) and create volcanic eruption bubbles with the use of an air pump (not included). Sea floor model (19"L' x 9"W x 6"H), air bubble lines with connectors, suction cups, profilevocabulary decals, and teacher's guide with 4 activities.

SB47450 - \$208.00



#### **Weather Forecasting Set**

**Gr. 5–8** Students work together in teams to interpret weather maps from 8 consecutive days. Each team interprets the map for a single day and constructs a weather report for that day. Teams assigned the same day combine to prepare and present their weather report to the class. Information from all 8 days is then used to forecast the weather for the unknown ninth day. Teaches global patterns of atmospheric movement.

SB46825-\$55.95





#### **Water Cycle Model Activity Set**

**Gr. 5+** This 3-D demonstrator creates a water cycle as it occurs in nature. Model actually causes rain to fall, then evaporate in a continuous cycle. Also graphically shows distillation of water as it changes to gas. Study cards, activity notebook, and full-color overhead transparency.

SB25175 - \$117.50 SA09171 Water Cycle Model Only - \$101.95



data projector, laptop

32"D x 42"W x 85"H

(46"D when shelf is up).

extra delivery time.

Z50585 — \$10,050.00

Sand not included. Allow

loaded with visualization

software, and instructions.

Weather



EnviroScape® Nonpoint Source Watershed Model

Teaches the watershed concept as well as point and nonpoint source pollution. Two waterways flow into a larger water body, which is representative of a lake, river, bay, or ocean. Model tracks pollution from various nonpoint sources, including residential areas, forestry areas, transportation, recreation, agriculture, and construction, as well as from industry as a point source. Pollution and runoff are visually apparent when rain falling over landscape top carries soil (cocoa), chemicals (colored drink mixes), and oil (cocoa and water mixture) through a watershed to a body of water. Best management practices include felt buffer strips as vegetation, clay to create berms, and other methods to show conservation and water pollution prevention measures. Unit comes with everything you need to demonstrate the movement of water through a watershed and the pollution that runoff may cause.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. Allow extra delivery time.

Z41122 - \$989.00



#### **Density Flow Model**

Use scientific inquiry techniques to explore concepts related to geology, meteorology, and fresh and saltwater systems. Flow of brightly colored fluids help students visualize density concepts as they relate to plate tectonics, sea floor spreading, air masses, fronts, air pressure, winds, ocean currents, thermoclines, haloclines, upwelling, El Niño, and more. 75-page manual includes set-up instructions, student activity masters, and answer keys. 44"L x 3¾"W x 6"H. Allow extra delivery time.

Z19342 - \$464.95

Density Flow Model Junior. Like the larger model above, this smaller model is a teacher demonstration apparatus. Includes 64-page manual with instructions, activity masters, and answer keys. 22"L x 3<sup>3</sup>/<sub>4</sub>"W x 6"H. Allow extra delivery time.

Z20652 - \$249.95



#### **Landform Studies Program**

Eight separate landform models form a 3' x 3', three-dimensional model of mountains, lakes, rivers, deserts, glaciers, coastlines, canyons, and cultural points of interest. Students explore coastal plains, canyon lands, fault block mountains, folded mountains, and volcanoes. A lesson plan provides a glossary keyed to features on the models, plus question-and-answer exercises and supplementary activities.

SA05779 - \$350.00

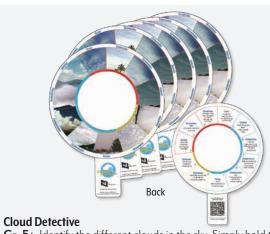
For a complete selection of weather products, visit nascoeducation.com



#### **Wild Weather Poster Series**

Dramatic photos depict some of nature's most extreme conditions. Descriptive text provides facts, figures, and scientific background about each weather phenomenon. Set of 8.

SB48563 - \$130.00



**Gr. 5+** Identify the different clouds in the sky. Simply hold tool so cloud can be seen through observation hole, then try to match cloud to images on outside of tool. Opposite side contains additional information related to color, shape, and current weather to ensure correct identification. Pkg. of 5.

**Modeling Convection Currents** 

**Gr. 6+** Students in small groups investigate convection currents in water and develop an understanding of the relationship between water temperature and its movement. Analyze data about the earth's layers and convection currents in the lithosphere. Explains tectonic plate motion. & CHOKING HAZARD (1). Not for under 3 yrs.

SB45742 - \$111.35



#### **Instant Snow Powder**

SB50551 - \$17.95

Demonstrate the super absorbent properties of a polymer while making snow in your classroom that will feel cool to the touch. As the polymer absorbs water, it will expand to over 40 times its original volume. The end result is fluffy flakes of fake snow that won't melt and can be reused again.

**NE30203** Bag (400 g) - \$37.95 **NE30204** Bottle (3.5 oz.) **- \$13.50** 



#### **Laminated Cloud Charts with Weather Forecast**

A quick, accurate way to forecast weather. Waterproof chart is used by the U.S. Coast Guard and the FAA. Contains full-color photos with captions. 15" x 18". Laminated.

SB40703 - \$15.95

Geology



**Gr. 6+** Using a mini stream table, students create, observe, describe, and interpret the erosional and depositional patterns created when "rainwater" flows over an area. Features commonly formed include canyons, braided streams, and deltas. For 24–30 students working in groups of 4 or 5. △ CHOKING HAZARD (1). Not for under 3 yrs. SB44075 — \$214.50





# A Demo A Day

A Demo A Day™ — Earth Science **Gr. 7+** Use demonstrations to introduce a topic, illustrate a point during a lesson, summarize a lesson, or review a concept. 205 pages. SB43859 - \$48.95



#### **Groundwater Table**

Gr. 5+ Transparent plastic tray can be used on an overhead projector or on a tabletop. Use the included pump to move colored dye throughout the model to demonstrate groundwater concepts such as aquifers, sinkholes, caverns, geysers, and hot springs. Includes self-contained groundwater table, water pump (120V AC), tubing, eyedropper, and teacher's guide.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SB46712 - \$169.95

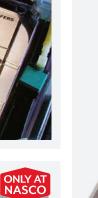


#### **Nasco Soil Erosion** Simulator Kit

Introduce students to the science behind soil erosion through simulation. This kit uses hands-on scientific procedures to study soil erosion, how it occurs, and how to prevent it. Teach conservation methods that can be used, natural vs. unnatural erosion, and how soil erosion affects our lives. Kit includes two soil erosion simulator trays, water catch basin, oat seeds, watering cart, two angle ladders, and a guide with assessment questions, follow-up activities, and instructions.

SB45434 - \$109.95 Potting Soil, 4 qt. KI01037(P) - \$3.95





#### Stream Table Kit

Sturdy plastic tray is large enough for group study or individual investigations. A special trough can be used for relating the rate of erosion to slope and stream volume.

SB01704 - \$101.95

Set of 4 Kits

SB16231 - \$369.95 \*EXCLUDED FROM DISCOUNTS

For a complete selection of science products, visit nascoeducation.com



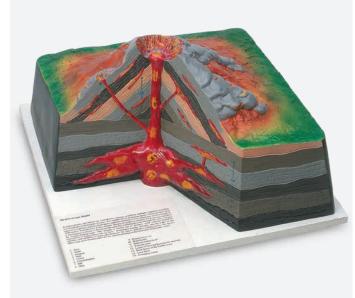
Bring the deep layers of the earth to light. Outside surface of 5" foam model illustrates continents and oceans with raised features. Separate to discover the earth's core. Each brightly colored hemisphere shows layers, temperatures, and depths. Activity/fact guide.

SB40887 - \$19.95



**Erupting Volcano** Classroom Pack

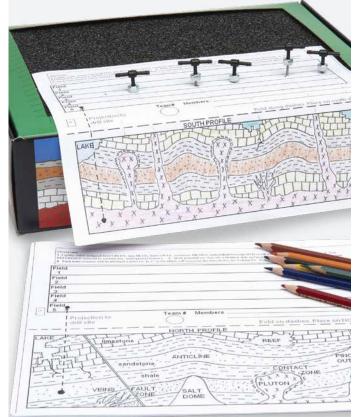
student guides. SB45529 — \$119.95



#### Volcano Model

Gr. 5-9 Detailed stratovolcano and composite volcano model. Illustrates the various crusts, lava tube, volcano formation, and step sided formation of cone shape.  $16\frac{1}{2}$ "L x  $16\frac{1}{2}$ "W x 8"H.

SB40678 - \$168.00

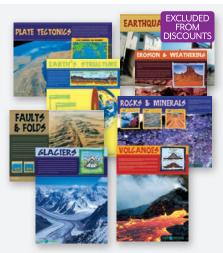


#### Rock Cycle Resource Kit You Be the Geologist!

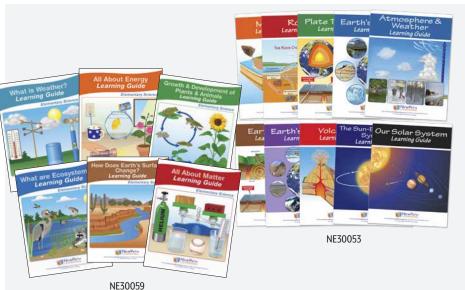
Gr. 6+ Provides opportunities for inquiry and developing an understanding of the "dynamic equilibrium" of geologic events. Comes in an interactive box with underground formations displayed on the side and colored clay blocks (representing deposits of gold, oil, etc.) positioned on the inside for students to discover using several scientific techniques. Includes 2 foam boards; hand-held drill rigs; and teacher guide with lab worksheets, reference materials, and activities. 133/4" x 101/4" x 33/4"

SB47449 - \$80.95





#### **Earth Processes Poster Series**



#### NewPath Learning® Earth Science Workbook Sets with Digital Access

These colorfully illustrated workbook sets are perfect for classroom or take-home use. In-depth, interactive lessons are based on NGSS concepts.

**36+ pages of self-directed readings in each workbook.** Each workbook contains readings, illustrated explanations, guiding questions, a lab investigation, key vocabulary review, and

One-year, corresponding digital access. Includes animated and narrated tutorials, interactive exercises and activities, virtual labs, online glossary, visual resource library, and an inquiry based student activity guide. Even works with classroom presentations on whiteboard. For complete description of the workbooks with digital access, visit nascoeducation.com.

#### Gr. 3-5 Set. Includes 6 workbooks.

- · Growth & Development of Plants & Animals · What is Weather?
- · How Does Earth's Surface Change? NE30059 - \$69.95
- Gr. 6-10 Set. Includes 10 workbooks. All About Minerals
   Earthquakes
- All About Rocks
- Volcanoes • Earth's Surface
- Plate Tectonics NE30053 - \$129.95
- What are Ecosystems? · All About Matter
  - · All About Energy
  - - Earth's Atmosphere Our Solar System & Weather · Sun-Earth-Moon
    - · Earth's Climate

# **Gr. 6+** Photos and diagrams introduce students to the fascinating processes that shape Earth's surface. Set of 8; 18" x 24". Laminated. SB40701-\$130.00

#### **Tectonics Model Set**

Demonstrate plate tectonic principles, plate boundary interactions, and the geometry and relative motions of faulting geologic layers using 3-D manipulative models. Includes 3 geoinformation activities, materials needed to perform the demonstrations, and an access code to download teacher and student guides, videos, geoinformation data sets, and other resource information. SB53255 - \$197.00



#### **United Scientific Fault Model Set**

**Gr. 5+** Demonstrate normal faulting, reverse (thrust) faulting, and horizontal faulting with this set of six 3-D models. Includes an access code to download interactive guides, videos, data sets, and more. NE30301 - \$164.95



#### Making and Interpreting Topographic Maps

**Gr. 6+** Hands-on investigation uses the model to construct contour lines and create a topographic map of an area. For 6 groups of 4-5 students. A CHOKING HAZARD (1). Not for under 3 yrs. SB44071 - \$122.95



Compass with a strong plastic case and clear top. 2" dia. SB19121 - \$3.95



#### 40 mm Compass

Magnetic compass has clear visibility Plastic carry case. Pkg. of 20. SB37264 - \$17.25





#### **United Scientific Mapping Compass**

**Gr. 5+** Explore the basics of navigation and orienteering in the lab with this compass. Features a sight finder as well as markings in both metric and English scales. Map scale is displayed in mm with a ratio of 1:25000. Detachable lanyard included.

NE30300 - \$11.95





# **Field Orienteering Map Compass** Liquid-filled chamber stabilizes needle

quickly and cushions against impacts. Compass and scale have luminous points. 13/4" dia. compass mounted on clear plastic base  $(5\frac{1}{2}$ " x  $2\frac{1}{2}$ "). Graduated 0° to 360° scale in 2° increments has a declination correction scale. Base has built-in magnifier, 4 stencils, and lanyard.

 $\triangle$  See page 3 for complete Choking Hazard Label Information.

SB47544 - \$7.95



Compasses made of clear, scratch-resistant acrylic feature snap-lock lanyard. Ergonomically designed to fit into palm of hand. Instructional compass is larger for group use and has manually manipulated moving parts. 30 compasses  $(2^{3}/_{6}" \times 3^{1}/_{2}")$ , instructional compass (141/8" x 8"), and carry case. PE05278 — \$509.95



Globes & Maps













#### A. The Pioneer Globe

12" political globe with mounting that swings up and down for better viewing. Thousands of place names. Raised relief. 16½"H.

SB16464 - \$85.50

#### B. Land Cover Writable Globe

Raised-relief globe shows cropland, natural vegetation, landforms, and water features that make up Earth's landscape. Features detailed relief shading along with political boundaries and names. Writable. 12".

SB48527 - \$168.95

#### C. Adventurer Globe

12" political globe features raised-relief, blue ocean ball with distinctive colored boundaries; easy-to-find geographic locations; and a plastic base. 16"H.

SB39256 - \$52.50

#### D. The Atlantis Globe

12" world ocean globe in raised and indented relief on Gyro-Matic mounting with numbered full meridian. Land areas in true-to-life colors to illustrate mountains, deserts, forests, and grasslands. Oceans show undersea physical features.

SB16465 - \$104.95

#### E. Day/Night Globe

Shows the striking colors of a blue ocean political map when not lit. Turn light on and witness how the sky changes at night as it transitions into a night globe naming and depicting 88 constellations and more than 35 of the brightest stars. Corded. 16½"H x 12" dia.

SB50412 - \$99.95

For a complete selection of globes and maps, visit nascoeducation.com











#### F. Laminated Poster Map Set

Large scale political poster maps in bright colors and easy-to-read type can be marked. Laminated. 49" x 33". Includes 1 of each map below. **SB52652** — **\$53.95** 

**U.S. Map.** Shows interstate highways, cities, capitals, rivers, places of interest, and more. SB49728 - \$29.95

World Map. Country locator lists every country in the world by latitude and longitude. SB49729 - \$29.95

#### G. Topographical Inflatable Globes

Beautiful physical globe that shows the Earth with natural topographical covering. **SB49723** 12" Globe — \$10.25

**SB49724** 16" Globe—**\$12.95** SB49725 27" Globe-\$32.95

#### H. Terrene Globe

Blue political globe lights up. 6" dia. x 8½"H. SB50411 - \$32.50

#### . Apollo Globe

Bright, contrasting colors with thousands of place names. Easily remove from or place on base for close-up viewing. 9" dia. x 12"H. SB49731 - \$39.50



#### **Classroom Collection of Rocks and Minerals**

Basic study in mineralogy and general geology in rock-forming minerals; igneous, sedimentary, and metamorphic rocks; ores of common metals; gemstones; and minerals in the scale of hardness. 50 numbered 1" specimens, compartmented container, and study guide. SB46077 - \$64.95



**Rock Collection** 

Includes 5 each of igneous, metamorphic, and sedimentary rocks, including obsidian, granite, basalt, scoria, rhyolite, sandstone, limestone, shale, travertine, conglomerate, slate, marble, quartzite, gneiss, and amphibolite. 15 numbered 1½" specimens in a compartmented

SB10942 - \$28.95

#### **Rock Study Kit**

Includes 5 each of igneous, sedimentary, and metamorphic rocks; guide; and magnifying glass. SB39180 — \$23.50



Rock Collection Set #1

Set of 9 (basalt, obsidian, pumice, shale, sandstone, limestone, marble, gneiss, slate) in a 4" x 7" cardboard box with a partitioned plastic tray. Each one is 1" to 1½".

SB41176 — \$13.95



#### **Rock Collection**

Sedimentary, metamorphic, and igneous rocks in a solid storage box. △ CHOKING HAZARD (1). Not for under 3 yrs.

SB47390 - \$20.95



#### Rocks, Minerals, and Fossils of the U.S.A. Collection

Representatives of rocks, minerals, and fossils of the U.S. that are either mined for economic value or are commonly found in the state listed. Some minerals and fossils have been deemed a "State Gem" or "State Fossil," which is noted, as well as other facts. 50 numbered specimens (approximately 1" x 1") in a compartmented container. SB46093 - \$54.95



SB10943

#### **Igneous Rock Collections**

Representative specimens of intrusive and extrusive igneous rocks. Materials provide a basis for understanding geologic processes at work in the earth.

**Demonstration.** 15 numbered 1½" specimens in a compartmented tray. SB10943 - \$23.50

Classroom. Smaller samples of specimens above. 100 pieces total. SB50622 - \$10.95



#### Mineral Study & Test Kit

**Gr. 5+** Learn to identify 15 common minerals by observing and testing physical properties. Includes activity guide, magnifying glass, streak plate, and nail.

SB37929 - \$22.95



#### **Hardness Scale with Test Kit**

Includes 9 minerals used in Mohs' scale, streak plate, glass plate, nail, and identification key in a polystyrene tray with lid.

SA02792 - \$16.95



SB10945

#### **Sedimentary Rock Collections**

Contains representative sedimentary end products.

**Demonstration.** 15 numbered 1½" specimens in a compartmented container.

SB10945 - \$23.50

Classroom. Smaller samples of specimens above. 100 pieces total. SB50623 - \$12.95



SB10944

#### **Metamorphic Rock Collections**

In geologic processes usually associated with pressure and heat, rocks may reform to become new metamorphic rocks.

**Demonstration.** 15 numbered 1½" specimens in a compartmented

SB10944 - \$23.50

Classroom. Smaller samples of specimens above. 100 pieces total. SB50624 - \$10.50



#### Mineral Test Kit

A great kit in case you have minerals available already. Includes a streak plate, glass plate, hand lens, dropper bottle, magnet, nail, penny, hardness scale, and zip closure bag.

SB48163 - \$12.95



#### **Mineral Test Kit with Minerals**

Gr. 4+ All the tools necessary for rock, mineral, and fossil identification. Minerals include muscovite, hematite, quartz, magnetite, calcite, talc, gypsum, microcline, and pyrite. **SB48458** – **\$16.95** 

nascoeducation.com | 1.800.558.9595





For UV lights, visit nascoeducation.com

#### Fluorescent Minerals Collection — Longwave and Shortwave

Illustrates the response of certain minerals to UV radiation. 15 numbered specimens (1½") that correspond to key. SB09563 - \$49.50



#### Classifying Sedimentary, Igneous, and Metamorphic Rocks

Gr. 6+ A reading on the formation of igneous, sedimentary, and metamorphic rocks supplements student observations as they examine, describe, and group rock samples. Samples are 1" x 2" x 1" or larger and show characteristics of each rock type. Student worksheets. Materials for 32 students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB40664 - \$159.10



#### Mineral ID Kit with Sort Cards

Gr. 4-12 Get students started on their earth sciences journey with this mineral identification kit. Kit includes: 20 mineral specimens, sort cards, magnet, magnifier, streak plate, nail, ID list, and segmented storage tray. NE30087 - \$99.95





#### **Rock Specimen Storage Box**

Create your own collection with this 17-bin, clear storage container (rocks not included).

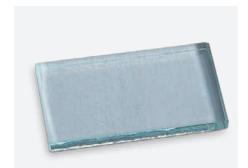
9721278 - \$6.75



Soft Vinyl Impact Goggles

Goggles mold to all faces comfortably. May be worn over prescription glasses. Frame perforated for full ventilation. Large polycarbonate lens offers wide vision. Meets ANSI Z87.1 standards.

SB25323 - \$2.45



#### **Glass Plates**

Thick,  $\frac{1}{4}$ " glass plates for hardness testing of rocks and minerals. Pkg. of 10. 1" x 2". SB14188 - \$17.95



#### **Streak Plates**

Unglazed porcelain tiles for streak testing of rocks and minerals. Pkg. of 10. 2" x 2". SB14187 - \$9.95



#### Black Streak Plate

Unglazed black porcelain tiles are ideal for streak testing of light colored minerals. Pkg. of 10.1" x 2".

SB26433 - \$14.95

For a complete selection of rocks and minerals, visit nascoeducation.com





**Polished Amber** with Ancient Insects Each piece of polished amber contains at least one prehistoric insect. Sizes vary. SB28498 - \$14.05



#### **Evolution: Examining Fossil and DNA Evidence**

**Gr. 6+** Use whale fossil records to support the theory of evolution. Compare DNA from a number of vertebrates. Teacher's guide, 28 student worksheets/guides, 12 sets of 5 skeleton cards, 12 whale fossil charts, 12 mysticetes skeleton cards, 12 sets of 5 DNA cards, and 3 transparencies. For 24 students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB51696 - \$75.95



#### **Examining Fossils Kit**

Gr. 6+ Examine 8 different fossils from various localities and geological ages. See the power and limitations of using fossils as evidence of past life and as bases for determining evolutionary relationships. Introduces the geological time scale. Reusable. For up to 32 students. & CHOKING HAZARD (1). Not for under 3 yrs.

SB40670 - \$194.65

#### Nasco Fossil Molds

Soft, flexible molds create exact fossil replicas: fish from 40 million years ago; gastropod from 65 million years ago; cephalopod from 100 million years ago; pecopteris, annularia, neuropteris, and lepidodendron from 300 million years ago; crinoid, brachiopod, and bryozoa from 450 million years ago; horn coral from 400 million years ago; and trilobite from 500 million years ago. Set includes 6 molds (some molds have more than 1 fossil), 5 lbs. of casting plaster, and molding instructions. Not for use by children without adult supervision.

SA04671-\$99.95

Nasco Casting Plaster. 5-lb. package. Not for use by children. 9730282 – \$21.00 24+ \$18.22





Fossil Starter Bag **Gr. 5+** Includes 15 individually bagged and labeled fossil specimens commonly used in classrooms to illustrate major life forms through history. Teacher's insert describes each fossil. Also includes full-color geologic time student chart.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB48142 - \$14.95



#### **Fossil Hunt Kit**

**Gr. 6+** Students learn to identify different fossils after digging them out of a gravel mixture. 1-lb. bag of gravel mixture with 12 real fossils (two each of six types) and corresponding large identified specimens, magnifier, forceps, and teacher's guide in storage box.

SB33401-\$28.00



Vertebrate and invertebrate fossils from the Paleozoic, Mesozoic, and Cenozoic eras are included. 15 numbered specimens. SB10961-\$28.95



#### **Advanced Fossil Collection**

Includes demonstration specimens of animal phyla and plants. 30 numbered specimens in a compartmented container. SB10963-\$44.95



Help your students reach for the stars by exploring space science. All they need are the tools and resources to expand their understanding of astronomy concepts and open their world to new possibilities.

# Quick Index

**Astronomy** 204–209



#### **Moon Phaser**

Gr. 3+ Assembly instructions, blackline masters, suggested activities, and DVD that provides practical information on teaching lunar motion and the phases of the moon. Moon globe: 4" dia. Presentation rod: 23". SB34839 – \$126.95



## Nasco Moon Phases Posters

8 phases of the moon. Laminated card stock.

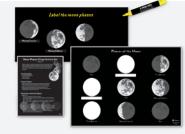
28" x 8" SB37751 — \$14.95 96" x 18" SB49897 — \$39.95





#### Official NASA Moon Globe

**Gr. K–12** Extraordinary 12" dia. globe depicts the geographical features of Earth's moon, including craters, "seas," and mountain ranges. NASA approved. 15". **SB36728 – \$97.95** 



#### **Moon Phases Cling Activity Set**

**Gr. 2–5** Help students understand the phases of the moon using this interactive cling set. Includes 25" x 18" moon phases cling sheet, 12" x 27" black cling board, weterase marker, and instruction sheet. **SB44373 – \$29.95** 



#### **Moon Phase Demonstrator**

**Gr. 7+** Show how the moon's appearance changes over a one-month period. Select a phase of the moon by turning the front disc. Earth's rotation is simulated by rotating the discs together from sunrise to sunset, illustrating the relative paths of the sun and moon. Rear disc is screened with a visualization of the perceived shape of the moon throughout the lunar cycle. **SB48259 – \$45.95** 



#### The Planets Learning Posters Set

**Gr. K+** Bring space discovery to life in the classroom with this set of engaging and educational posters. Reinforce science lessons with images of the eight planets of the solar system along with interesting facts. Set of 8;  $10\frac{3}{4}$ " x  $16\frac{1}{8}$ " each.

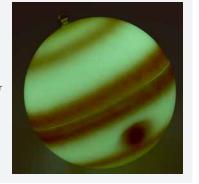
NE30238 - \$15.95



#### 3-D Solar System™

Gr. 5+ Turn the lights off for an amazing display of the solar system with glow-in-the-dark components. Includes 8 planets, Pluto, over 200 adhesive stars, string, putty, and a guide. △ CHOKING HAZARD (I). Not for under 3 yrs.

SB49325 − \$21,95

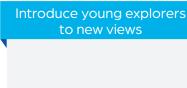




#### Inflatable Solar System

**Gr. K–12** Realistic–looking set teaches size and distance relationships of planets, the moon, and the sun; as well as rotation, revolution, and orbit. 23" sun and proportionate planets and moon with sizes ranging from 5"–23". Includes a foot pump, teacher's activity guide, and hooks for easy hanging. Deflate for easy storage.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SB37813 - \$49.95



#### Make-Your-Own Telescope Kit

Great choice for art, science, or STEM/STEAM units. Kit includes enough materials for 12 cardboard telescopes. Includes easy-to-follow instructions and stickers for decorating. Incorporate discussions about light, mirrors, or the solar system. 10"L x 2½" x 2½".

NE20043 — \$55.95



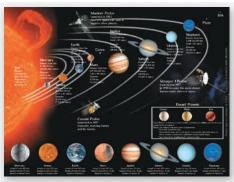


Gr. 1+ Build a mechanical model of our solar system, wind it up, and watch the planets revolve around the sun. Learn about the planets' relative sizes, orbits, and appearances, as well as fundamental gear mechanics. Includes 28 pieces and 8-page illustrated guide.

NE30119 - \$29.95



Gr. 5+ Game takes you to the outer reaches of the solar system as students learn basic astronomy terms. 30 playing cards (5" x 6"), 100 vocabulary cards, master word list, directions, and plastic markers. SB48565 – \$21.95



#### Planet Poster

Shows the correlated distance between the sun and planets, as well as the size of each and explains each planet's year length, rotation period, and number of moons. Dwarf planets, including Pluto, are also featured. 18" x 24". Laminated.

SB42980 - \$20.95

Astronomy

Astronomy



#### Trippensee® Hand-Driven Illuminated Planetarium Model

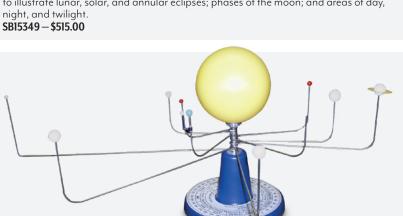
Shows synchronized motions of Venus, Earth, moon, sun, and other planetary phenomena, including all the important Earth/moon/sun relationships. Light is used to illustrate lunar, solar, and annular eclipses; phases of the moon; and areas of day, night, and twilight.



#### Celestial Star Globe

**Gr. 6–12** This model shows the apparent positions of the stars visible from earth. The 3D representation allows the relative angular positions of the constellations to be visualized and permits students to estimate which stars will be visible from different places on earth for any rotational position of the planet. The globe consists of two concentric spheres mounted on a common axle.

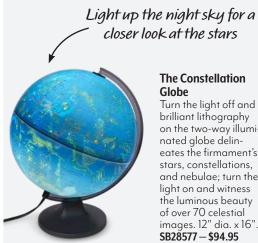
NE30127 - \$104.95



#### Trippensee® Solar System Model

Copernican heliocentric solar system illustrates the motions of the planets, their relative sizes, and their relative distances from one another. All stainless-steel wire arms. Includes 10 orbits (8 planets, moon, and asteroid belt), instruction book with diagrams, and activities.

SB15350 - \$129.95



# closer look at the stars

#### The Constellation Globe Turn the light off and

brilliant lithography on the two-way illuminated globe delineates the firmament's stars, constellations, and nebulae: turn the light on and witness the luminous beauty of over 70 celestial images, 12" dia, x 16". SB28577 - \$94.95



#### Trippensee® Lighted Basic Planetarium Model

Lighted planetarium featuring chain and sprocket drive, sturdy plastic arm with compass for locating North Star, Earth globe with map, and moon globe movable to any position. Base dial marked with seasons, months of the year, and signs of the zodiac. Light illustrates solar and lunar eclipses and the phases of the moon. Instruction book with diagrams. Sun (6" dia.) and Earth (3" dia.) on a 13" arm. 12" x 22"

SB15348 - \$210.00 **\$00562** Unlighted Model - \$185.00







#### Roylco® Constellation Cards

**Gr. PreK+** Teach students how to recognize star patterns in the night sky. Made from durable, tear-resistant material and die-cut with astronomically correct constellations. Includes 54 cards and a full-color poster guide.

NE30376 - \$28.99





#### Earth Sun Planetarium

**Gr. 6–12** Demonstrate the rotational motion of earth on its axis, its orbit around the sun and the revolution of the moon with this high quality model. As the sun casts a beam of light onto earth (via an embedded LED), users can easily manipulate the positions of each body to examine how their dynamics correspond to seasons, eclipses and lunar phases. 18" x 12"

NE30105 - \$70.50

#### Planetarium Construction Kit

Gr. 8+ Assemble and customize an ecofriendly model using this kit. Once assembled, students will have a mechanical simulator of the solar system, showing the sun and eight orbiting planets. Kit includes wood material, candle wax for gears, sand paper, rubber bands, and step-by-step assembly instructions in a storage box.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. NE30196 - \$104.95





Astronomy





EXCLUDED FROM DISCOUNTS

#### Nasco Solar Eclipse Glasses - 10 pack

Specially designed lenses conform to and meet the Transmission Requirements of ISO 12312-2, Filters for Direct Observation of the Sun, as well as the Transmission Requirements of EN1836:2005+A1:2007(E) for an E15 Filter for the Director Observation of the Sun and the Transmission Requirement AS/ NZS 1338.1:2012, Filter for Eye Protectors. Frame includes safety information and instructions for use. Pack of 10. NE30367 - \$11.95



#### The Sunspotter™

Safely track sunspots as they appear, move, and vanish. By using a series of mirrors, a bright 3" solar image is projected onto a white viewing screen by a powerful 62 mm dia. objective lens. Eliminates the need for telescopes, solar filters, and tripods, Wooden. folded-Keplerian telescope provides a much safer and convenient way to view the brilliant light of the sun compared to more common methods. SB46150 - \$525.00



High-quality and water-resistant. Multi-coated optics increase light transmission, resulting in brighter and sharper images with high contrast levels. Rubber-covered aluminum body protects from rough handlina. Ergonomic thumb indents and finger ridges for extra nonslip comfort and ease of use. Includes binocular straps and soft carrying case. Limited lifetime warranty.

7 x 35 Binoculars. 7X magnification. SB52513 - \$43.95



10 x 50 Binoculars. 10X magnification. SB52514 - \$47.95



#### Celestron® Firstscope Telescope

High-quality, Dobsonian-style stand with a 3" (76 mm) aperture reflector optical tube make this scope an ideal entry level astronomical telescope. Portable and lightweight tabletop design makes it easy to store, transport and setup. Easy to use — simply navigate night sky by moving tube in direction of desired object. Comes with two eyepieces (15X and 75X). Highest useful magnification: 180X. Two-year warranty.

SB52508 - \$85.95



#### Celestron® Powerseeker 50AZ Telescope

Refractor-style telescope with 24" optical tube and 2" (50 mm) aperture. Quick and easy setup requires no tools. Slow motion controls for smooth tracking. Erect image optics are ideal for terrestrial and astronomical use. Fully coated glass optical components with high transmission coatings for enhanced image brightness and clarity. Comes with three eyepieces (30X, 50X, and 150X). 3X Barlow lens triples the magnifying power of each eyepiece. Highest useful magnification: 118X. Includes accessory tray, aluminum tripod, and a bonus astronomy software download with a 10,000-object database, printable sky maps, and 75enhanced images. Two-year warranty. SB52509 - \$63.95



#### A. Thames & Kosmos® Telescope

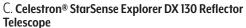
Explore the Earth, Moon, and planets with a refractor telescope that offers 100x magnification. High-quality alass optical lenses, dew shield, finderscope, compass, tripod, mirror, dust covers, and instruction manual.

NE30403 - \$49.95

#### B. Celestron® StarSense Explorer LT 80 Refractor Telescope

**Gr. 9+** StarSense Explorer is the first telescope to use a smartphone to analyze the night sky and calculate its position in real time. Highest useful magnification: 189X. Includes 80 mm refractor optical tube with fully coated glass optics, StarSense smartphone dock, 10 mm and 25 mm eyepieces, 2X Barlow lens, 90° erect image diagonal, ŚtarPointer red dot finderscope, altazimuth mount, and full-height, adjustable tripod. Allow extra delivery time.

NE30437 - \$229.95



**Gr. 9+** StarSense Explorer is the first telescope to use a smartphone to analyze the night sky and calculate its position in real time. Highest useful magnification: 307X. Includes 130 mm reflector optical tube with fully coated glass optics, StarSense smartphone dock, 10 mm and 25 mm eyepieces, StarPointer red dot finderscope, altazimuth mount, and full-height, adjustable tripod. Allow extra delivery time.

NE30438 - \$479.95

#### D. Celestron® PowerSeeker 60AZ Refractor Telescope

Gr. 9+ The PowerSeeker 60AZ is perfect for celestial and terrestrial viewing on the go! Highest useful magnification: 142X. Includes 60 mm refractor optical tube with fully coated glass optics, 20 mm and 4 mm eyepieces, 3X Barlow lens, 1.25" erect image diagonal, finderscope, altazimuth mount, adjustable tripod, and Celestron Starry Night software. Allow extra delivery time. 🖚

NE30439 - \$94.95

## E. Celestron® PowerSeeker 70EQ Refractor Telescope

Gr. 9+ Start observing the night sky in minutes with the PowerSeeker 70EQ! Highest useful magnification: 165X. Includes 70 mm refractor optical tube with fully coated glass optics, 20 mm and 4 mm eyepieces, finderscope, manual equatorial mount, adjustable tripod, and Celestron Starry Night software. Allow extra delivery

NE30440 - \$169.95

#### Celestron® EclipSmart Solar Filters

Turn your Celestron telescope into a solar scope for viewing the sun and eclipses. A solar filter offers the ultimate protection from harmful solar radiation, including IR and UV light, plus 99.999% of visible light

F. **NE30441** For StarSense Explorer LT 80 — **\$31.95** 

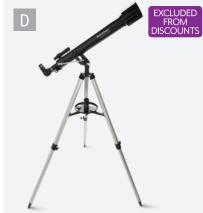
G. **NE30442** For PowerSeeker 60AZ — **\$28.95** 

H. **NE30443** For PowerSeeker 70EQ - \$31.95

















1st Flight Other Maximum Dimensions

# **PHYSICAL SCIENCE**



Physical science encourages your students to ask questions about the basic principles that govern the world around us.

They will find the answers to those questions by exploring gravity, power, and more.

# Quick Index

Forces & Motion 213–224 Alternative Energy 225–229 Liquid & Gas 230 Density & Heat 231–233 **Light & Color** 234–239 **Sound & Energy** 240–242

Magnetism 254–257



#### **Model Rocket Engine Bulk Packs**

Everything needed to prepare rockets for flight: 24 rocket engines, 30 model rocket igniters, 24 reusable igniter plugs, and 75 squares  $(11.4 \text{ cm}/4\frac{1}{2})$  of recovery wadding. Cannot be shipped by air.

Quality-tested, green label, single-stage engines for highperformance flights. They deliver a smoke trail for easy tracking, and supply ejection power for the recovery system for your rocket's safe return. Total impulse is tailored to fit the various NARFAI classes. Designed for specific launch and flight functions; rocket engines are not reusable.



Code designation stamped on the engine gives useful and important information on its performance capabilities.

- · Indicates total impulse or total power produced by the engine
- · Shows the engine's average thrust in Newtons and helps you choose the right engine for your rocket's flight
- · Gives delay in seconds between burnout and ejection charge

		Total Impulse		Time Delay		Max.	Price	
Product No.	Engine No.	Lbsec.	N-sec.	(±15%)	Max. Lift Wt.	Thrust Lb./N	Per Pkg.	
SB22587	A8-3	0.56	2.50	3 sec.	85 g	2.4/10.7	\$79.99	
SB22589	B6-4	1.12	5.00	4 sec.	113 g	2.2/12.1	\$90.95	
SB37350	C6-5	2.25	10.00	5 sec.	113 g	3.4/15.3	\$100.00	



#### Estes® Alpha III® Launch Set

**Gr. 5+** Rockets to 1,100' in the air from launch pad with launch controller. Pre-colored nose cone, fin unit, and body tube. No painting required. Recommended engine: A8-3 (SB22587, above). SB47866 - \$49.99



Get standards-aligned, printable lessons at nascoeducation.com/lesson-plans



#### **Electron Beam® Launch Controller**

Safety key, arming light, and launch button for total launch control. Plastic. 15' of launch wire with pre-soldered micro-clips. 63/4" x 1½" x 1¼"

SB14937 - \$29.99

Size "AA" Batteries. Pkg. of 4.

SB10916 - \$1.75

#### Porta-Pad® II Launch Pad

May be used with any Estes® launch controller to launch any Estes® rocket. Easy to set up; quick to take down. Adjustment for air direction cannot be tilted more than 30° from vertical. Steel blast deflector plate and 36" x 1/8" dia., two-piece launch rod. Black launch rod safety cap. SB17850 - \$24.99









# Reach new heights with rocketry bulk packs

Selecting the right kit for your class is now simpler and more economical. Each bulk pack contains enough parts to build 12 flying rockets. Bulk packs feature:

- Great savings save money since the cost per kit is dramatically reduced
- Kits that are best suited to your needs
- Convenience control in distributing individual parts to your students during construction

	Product No.	Description	Skill Level	Engine		Altitude	H x Dia.	Each
	A. <b>SB22593</b>	Alpha III® Bulk Pack: Great choice for beginners. No painting required.		A8-3	B6-4 C6-5	1,100'	125/16" x <sup>15</sup> /16"	\$145.0
	B. <b>SB23833</b>	Generic E2X® Bulk Pack: Plain white so that each student can decorate their own rocket.		A8-3	B4-4 C6-5	1,110'	15" x <sup>15</sup> /⁄6"	\$130.0
	C. <b>SB22598</b>	<b>Alpha</b> ® Bulk Pack	1 – Easy	A8-3	B6-4 C6-5	1,000'	125/16" x <sup>15</sup> /16"	\$145.0
	D. <b>SB41141</b>	<b>Big Bertha</b> ® Bulk Pack	1 – Easy	B6-2	B4-4 B6-4 C6-5	500'	24" x 15%"	\$300.0
	E. <b>SB39368</b>	Baby Bertha™ Bulk Pack: Miniature version of Big Bertha®.	1 – Easy	A8-3	B6-4 C6-5	575'	12¾" x 1½"	\$165.0
	F. SB38634	<b>Hi-Flier®</b> Bulk Pack	1 – Easy	A8-3	B4-4 B6-4 C6-5 C6-7	1,690'	12" x ¾"	\$130.0
-	G. <b>SB22596</b>	Wizard® Bulk Pack: Laser cut balsa. One of the highest performing rockets, featuring a bright orange streamer recovery system.	1 – Easy	A8-3	B4-4 B6-4 C6-5 C6-7	1,600'	12" x ¾"	\$90.95
	H. SB22597	Viking™ Bulk Pack: Painting of item is required. Great first or second model. Can be built with 3, 4, or 5 die-cut fiber fins.	1 – Easy	A8-3	B4-4 B6-4 C6-5 C6-7	1,470'	12%" x <sup>3</sup> ¼"	\$95.00

All starter sets require "AA" alkaline batteries (SB10916, see p. 210). Engines and flight supplies are not included. They are available on p. 210.



#### Nasco Rocketry Classroom Kit

Gr. 5+ Students design and construct their own model rocket while exploring the following topics: design processes, rocket parts, phases of rocket flight, recovery systems, rocket propulsion, rocket engine operation, engine selections, and rocket stability testing. For 25 students. Launch pad not included.  $\triangle$  CHOKING HAZARD (2). Not for under 8 yrs. SB21470 - \$565.00

**Refill for 25 Students** SB21545 - \$329.95



#### Nasco Clinometers and Water Rockets Unit: **An Integrated STEM Unit**

Students experiment and record data using water rockets and clinometers. Each unit includes enough materials for a class of 30 students working in groups of 3, data sheets, and teacher's guide. The unit requires 10–30 calculators, which are not provided. Calculators and extra water rocket launchers may be purchased separately. TB16224 - \$350.00

TI-30Xa Scientific Calculator TB22048 - \$14.95



Gr. 5+ Build rockets from scratch with the kit contents and a piece of notebook paper. Students roll their own body tube and complete the rocket with Estes® components. Pkg. of 12. Recommended engines: A8-3, B6-4, and C6-5 (not included, see p. 210). SB26227 - \$165.95

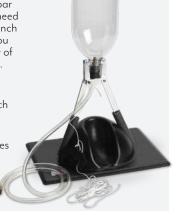
#### **Bottle Rocket Launcher Kit**

Build soda bottle rockets that can soar to heights in excess of 150'. All you need is water. Includes a molded resin launch pad, 2-liter bottle, an altimeter so you can assemble to measure the height of each flight, and an instruction sheet. SB52970 - \$75.00

Launcher. Includes instruction sheet and an altimeter. Bottle rocket launch pad sold separately. SB21429 - \$40.50

**Launch Pad.** Supports launcher stakes on non-soil surfaces. Molded resin. SB51811 - \$38.50

2-Liter Bottle SB53274 - \$1.75



#### Soda Bottle Rocket Launchina Platform

Launch water-powered rockets over 100' in the air. Using water as the liquid fuel, pressurize the bottle with a bicycle pump (Schrader-type connection, bottle not included), then launch remotely via corded release mechanism. Includes bottle rocket launcher attached to sturdy base, stakes, trigger release, vertical launching guide posts, and instructions. SB52954 - \$75.95



#### AltiTrak® — Altitude Finder

Track your rocket to the top of its flight, then instantly lock in its altitude. Displays exact altitude on metric scale. Precision-made of plastic. Easy to assemble Includes conversion table for calculating altitude. SB01216 - \$23.99





#### Thames & Kosmos® SpringBots: 3-in-1 Spring-Powered Machines

Gr. 1+ Learn about potential and kinetic energy and the conversion, storage, and transfer of energy by building a motorized robot, race car, and countdown timer — all powered by a mainspring. 64-page instructions and snap-together assembly.

NE30400 - \$29.95



#### Nasco Hot Air Balloon Kit

Gr. 6+ Students build a hot air balloon from a blueprint to learn about how it lifts, stays afloat, and descends. Later, students will plan, build, and test a new design to complete a challenge. For 30 students. & CHOKING HAZARD (1). Not for

SB51903 - \$335.00

Not for under 3 yrs

Not for under 3 yrs.



Forces & Motion

# а Dемо A DAY

#### A Demo a Day for Physical Science

Gr. 8+ Nearly 200 demonstrations in physical science, each in an easy-to-follow, concise format. 350 pages.

SB28726 - \$48.95





#### Whitewings® Paper Glider Competition Kit

Gr. 4-8 Includes 30 precut gliders (all of the same design), 30 balsa fuselages, 30 sets of 4-page assembly/student instructions, dihedral and camber gauge (precut), and group leader flyer.

SB31179 - \$64.95

For a complete selection of products, visit nascoeducation.com

#### NewPath Learning® **Physical Science Workbook Set** with Digital Access

Gr. 6-10 Colorfully illustrated workbook set for use in the classroom or at home. In-depth, interactive lessons are based on NGSS concepts.

Each printed workbook contains 36+ pages of self-directed readings illustrated explanations, guiding questions, a lab investigation, key vocabulary review, and assessments

The one-year, corresponding digital access includes animated and narrated tutorials, interactive exercises and activities, virtual labs, online glossary, visual resource library, and an inquiry based student activity guide. Even works with classroom presentations on whiteboard.

#### Set includes 10 workbooks:

- Properties & States of Matter
- Atoms & Chemical Bonding
- Elements & the Periodic Table

· Chemical Reactions NE30054 - \$129.95





• Energy: Forms & Changes

· Work, Power & Simple

Forces & Motion

Machines

- · All About Sound
- Light & Optics
- · Electricity & Magnetism

Forces & Motion

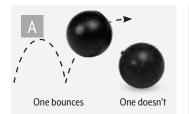
**Internal Combustion Engine Model Gasoline Motor** 

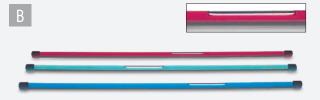
Gr. 7+ Four-stroke operation is demonstrated by the gear-driven timing mechanism, valves, ignition system, and more. DC power input is available to power a lamp, or to represent spark or glow plug ignition. SB37298 – \$44.95



shows how thermal expansion and cold shrinkage can create energy. Uses a closedcycle thermodynamic system in which air is compressed and expanded at different temperatures to create heat energy and power LED lights. SB51130 - \$109.50















#### A. Happy/Sad Ball Kit

Two rubber balls that look, feel, and squeeze the same — but try bouncing them. These intriguing inelastic and elastic collision balls are popularly called "happy and sad." One ball rebounds normally while the other is as bounceless as a piece of clay. Instructions included.  $\triangle$  CHOKING HAZARD (3). Not for under 3 vrs

SB33947 - \$9.95

#### B. Nasco Speed of a Bubble Tube Test

**Gr. 8+** These 3 transparent plastic tubes with colored fluids of 3 viscosities illustrate how a bubble in each tube rises at a constant speed that depends on fluid type, angle of tube inclination, and temperature. Required but not included: metric ruler and clock with sweep second hand.

SB30767 - \$43.95

#### C. Mini Dynamics

**Gr. 5+** Two scaled-down plastic cars have attached bumpers, deep wells for weights, and low friction wheels that snap into place. SB26251 - \$19.60

#### D. Nasco Buoyancy Experiment Kit

**Gr. 5–8** Explore the factors that cause objects to float or sink. Experiment to investigate how shape and weight affect buoyancy. For 24–30 students. A CHOKING HAZARD (1). Not for under 3 yrs. SB30181 - \$104.95

#### E. Seismic Accelerator

Gr. 5+ Watch the law of conservation of energy in action as the red ball skyrockets up to 5 times higher than the height it's dropped from. <u>A</u> CHOKING HAZARD (4). Not for under 3 yrs.

SB51119 - \$14.50

#### F. Stirling Engine

Gr. 7+ Runs by exploiting heat flow generated by difference between room temperature and a cup of hot water or ice. Runs at about 150 rpm when used with hot water. Includes activity guide. SB49166 - \$153.95



#### **Metal Inclined Plane** with Pulley and Roller

**Gr. 6+** Steel inclined plane (23" x 4") includes graduated protractor and adjustable pulley. 14-oz. roller can be used as a vehicle on a plane or as a counterweight. Also includes pan and cord for masses. SB43393 - \$99.95



#### **Inclined Plane with Protractor**

Inclined plane (can be set at any angle between 0° and 45°) with pulley and protractor, Hall's carriage, 50 g weight hanger, and activity guide.

SA05707 - \$44.95



#### Friction on an Inclined Plane

Inclined board can be set at any angle between 0° and 45°. Hanging pan holds desired weight. Three different-sized wooden boards with eye hooks and metal plate. 26" x 15" x 4"

SB43079 - \$49.95















#### G. Three-Wheeled Dynamics Carts

One-piece, injection-molded, high-impact, loaded plastic carts. Aluminum piston and piston housing with push-button type starter for explosion of cart. Set of 2.

SB47690 - \$69.95

#### H. Deluxe Hall's Car

Aluminum wheels; axle mounts in cone bearings for low-friction operation; wide, injection-molded plastic body with low profile for bulk loads; open wheels; and deep well for weights.

SB47661 - \$15.80

#### . Impact Car

Study the momentum changes of varying mass. Has spring scale and slide that is displaced on impact against obstacle.

SB35037 - \$15.50

#### . Dynamic Cart Kit

Aluminum with minimum friction bearings and center pole that accepts weights. One cart edge is a metal hammer for release of spring-loaded trigger, other edge has clip for holding paper. 2 carts and 4 weights (each 250 g). 6" x 13/16" x 3½". A CHOKING HAZARD (1). Not for under 3 yrs.

 $\triangle$  See page 3 for complete Choking Hazard Label Information.

SB48980 - \$108.00

#### K. Hall's Car

Oil-free sleeve bearings, no adjusting. Wide body with low profile for bulk loads. Recession for additional weight. Wheels snap back into place if dropped. Instructions included. SB31086 - \$12.95

#### L. Bumper Cars Pair Set

Cars conceal high-quality plastic-cased magnets (included). SB52221 - \$19.95

**Bumper Car Only** SB51116 - \$8.25

Magnetic Floating Ring Set Only. Set of 4. Plasticcased ring magnets with stand. 17/6" x 5/16" thick. EL12959 - \$12.95

#### M. Fan Cart

Demonstrates Newton's principle of action and reaction. Fan is controlled by a switch. Propeller delivers a thrust of about 88 mN, accelerating the 5%" x 3" x 4%" cart at 0.4 m/s<sup>2</sup>. Attach 4%"  $x\,4\%$  "  $x\,\%$  6" transparent plate to show the effect of reversing airflow. Includes activity guide. Requires 2 "AA" batteries (not included).

SB48233 - \$22.25



#### **United Scientific Inclined** Plane and Lever Kit **Gr. 5+** Explore basic mechanics concepts

with this durable, all metal, apparatus. The plane in this kit is wide enough to accommodate standard friction blocks. Adjust the plane's angle and lock it into place with a single knob, or flatten it for easy storage. Lever features a printed centimeter scale and support holes at the center and ends. Kit includes aluminum plane, aluminum lever, support stand, attachment rod with support clips, and binder clips.

NE30306 - \$54.95



#### **Student Force Table**

**Gr. 9+** The classic table for studying a combination of forces. Steel support tube, cast legs, leveling screws, and laminated table top. Comes with 4 all-metal precision pulleys, 2 large and 8 small force rings, cords, 4 weight hangers (50 g), 8 slotted weights (5 g), 4 slotted weights (10 g), 36 slotted weights (20 g), and instructions. 16½" x 16½" x 5½". Allow extra delivery time.

Z19337 - \$196.50



#### **Nasco Constant Velocity Car**

Holds a uniform speed for conducting kinematic experiments. Car can be set to travel at two different speeds.  $6\frac{3}{4}$ " x  $2\frac{3}{4}$ ". Includes a teacher's guide, batteries, and jumper materials.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB48981 - \$18.75



#### **Constant Speed Battery Powered Vehicle**

Three-position switch to power in either direction, stable platform, towing hook, and blunt ends for pushing, and spacer. SB39353 - \$29.95



#### **Centripetal Force Kit**

**Gr. 7+** Uses the weight of 1 g masses from cord end as a counterweight to the pull of a rubber weight swinging in a circle overhead. ▲ CHOKING HAZARD (1). Not for under 3 yrs.

SB46995 - \$11.95



#### **Bicycle Wheel Gyroscope**

Try to move the rubber wheel's axis of rotation. Suspend wheel from a string with aluminum handle. Hang weights from handle to investigate gyroscopic precession. 20" dia. **SB21409 – \$74.95** 



#### **Converting Gravitational Potential Energy to Kinetic Energy Kit**

**Gr. 6+** Quantitatively test how the variables of mass and height affect the energy carried by a metal cylinder. For 24 students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SB50448 - \$154.00

# **TEST ENGINEERING** AND ACCURACY

with engaging physics projects

#### A. KEVA® Catapult

Build an authentic catapult with planks, a little glue, and easy, step-by-step instructions. No tools required.

SB48339 - \$30.95



**Gr. 8+** Accurate, safe, and easy-to-use device for demonstrating and studying projectile motion. Use launching cable from behind unit to place shots within a 3" circle at 7834". Features cocking lever, 3 position settings, one-piece aluminum construction, and instructions. ▲ CHOKING HAZARD (1). Not for under 3 yrs.

SB49115 - \$112.95

#### C. Trebuchet Kit

Provides hands-on, practical building experience while allowing students to study energy conversion, levers, trajectories, and more. ½" x 4" x 15". SB40766 - \$16.95

Class Kit. 25 Trebuchet kits. SB40767 - \$300.00



Gr. 8+ Launch marbles at 5 speeds. Safety guide printed directly on hardwood marble launcher's surface. Protractor built into launcher. Includes 2 marbles and guide. 16"L x 10"W x 11½"H. △ CHOKING HAZARD (6). Not for under 3 yrs. SB48995 - \$94.95

#### E. Surface Board

Surface board with 4 surface materials, hooks, wooden blocks, and instructions. SB10926 - \$30.95

#### F. Friction Block and Surface Set

Introduce the concept that friction depends on the nature and smoothness of materials. Includes 3 textured wooden blocks (approximately  $3^{15}/_{16}$ "L x  $2^{3}/_{4}$ "W) with hooks, 1 each of a highly polished block, a sandpaper block, and an aluminum block). 14"L x 2<sup>3</sup>/<sub>4</sub>"W polished wooden

SB40933 - \$15.95

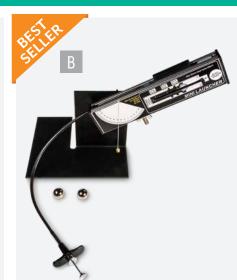
G. Friction Apparatus

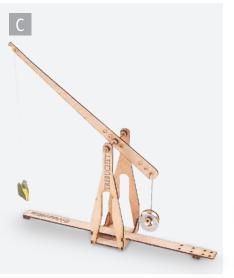
**Gr. 6+** This 20" x 2" friction board has 4" x 1½" x 1" friction block with hook for spring scale and 2 compartments for additional weights. Place face-up or sideways. Made of smoothly finished pine. 3 weights (50 g) and 100 g spring

 $\triangle$  See page 3 for complete Choking Hazard Label Information.

SB30030 - \$22.95













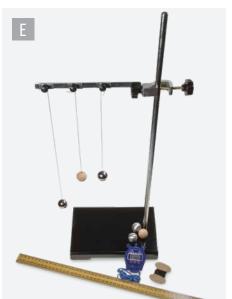
















#### A. Air Track Apparatus

Gr. 6+ Measure uniformly accelerated motion and determine gravitational acceleration. Air is pumped through a hollow track with fine holes all along the track, allowing specially fitted air track cars to glide relatively friction-free.  $\triangle$  CHOK-ING HAZARD (1). Not for under 3 yrs. Allow extra delivery

Z50737 - \$650.00

#### B. Pendulum Wave Demo

Clear acrylic stand with 9 steel ball pendulums (%"). Initiator stick helps to release all the pendulums simultaneously. Teacher's guide. SB51124 - \$114.95

#### C. United Scientific **Advanced Gen Pendulum Set**

Equip your physics lab with a comprehensive set that includes a simple pendulum, a physical pendulum, and a Wilberforce pendulum. With these compact and precise instruments, your students can explore periodic behavior, oscillation modes, and energy.

NE30450 - \$179.95

#### D. **Pendulum Clamp**

Clamps securely to any vertical shaft under 1" dia. Clamp has 3 anchor points that allow 3 pendulums to be studied simultaneously.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SB10764 - \$13.50

#### E. Pendulum Investigation Kit

Everything you need for a full exploration of the basic features of pendulum motion. Students can assess the principle factors of mass, length, and amplitude and venture into a consideration of air resistance. Activity guide included.

SB53263 - \$54.95

#### F. Loop-the-Loop Apparatus

Demonstrates the transformation between kinetic and potential energies when a steel ball runs on the 52" looped aluminum track. 8" dia. loop. 11½" x 4" wood base. Two chrome-plated steel balls. 18" x 14" x 4".

SB40673 - \$29.95

#### G. Loop-the-Loop Triple Track

Set includes 3 tracks — one straight down (28"), one with one loop (54" with 8" dia. loop), and one with two loops (70" with  $3\frac{1}{2}$ " dia. loop and 8" dia. loop.  $15\frac{3}{4}$ " x  $9\frac{1}{2}$ " x  $\frac{5}{8}$ " wooden base. Two steel balls. & CHOKING HAZARD (4). Not for under 3 yrs. SB48324 - \$71.50

For a complete selection of science products, visit nascoeducation.com



#### **Newtonian Demonstrator**

An excellent device for demonstrating Newton's Third Law of Motion and the principle of Conservation of Momentum. 5" x 4½" x 6". SB42056 - \$19.95

#### **Newtonian Demonstrator**

Plastic support with 5 nickel-plated steel balls. 9" x 7" x 8".

SB16568 - \$35.95



**Photogate Timer** 

Economical unit with 7 functions: single photogate mode, dual photogate mode, collision mode, acceleration mode, gravity acceleration mode, period (cycle) mode, and count mode. Functions store up to 20 data points in memory. Measures time to 0.0001 seconds. Two photogates, magnetic ball release, and instructions. Runs on AC adapter or rechargeable batteries (not included).  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SB47664 - \$245.95



#### Inertia Apparatus

Plastic ball rests on card until spring is pulled back. Stiff card then shoots forward, but ball returns to post with cone-shaped depression. SB31087 - \$18.75



#### BeeSpi V Speed Measuring Tool

Unit detects an object passing through two points about 40 mm apart via built-in photo sensors and indicates the object's velocity in digital form. Infrared sensors inside detect the time when the object passes each spot, indicating object's velocity. Measures speed and cumulative lap time. Measures in km/h, m/s, and cm/s. SB47275 - \$86.95



#### **Digital Velocity Speed Gun**

Accurately measures speeds of objects in motion. Just point and shoot. Large LCD screen. Speeds +/- 1.0 mph; measure a baseball at 90'; measure a vehicle up to

SB44701 - \$215.00



Paper tape is pulled through the timer while a spark at a very precise interval is created which burns tiny dots in the paper strip as it passes. Distance between the dots determines how fast object is falling or movina.

SB42032 - \$30.75



#### Acceleration Timer (DC)

Clamp to bench top or ring stand for recording objects of varying speeds. Assembled motorized striker, carbon discs, ticker tape, and instructions.

SB19009 - \$44.95



**Gr. 6+** Contains a variety of custom-made and unique components, including Force Board, Inclined Plane, and Vector Board. Also included is a complete set of accessories needed for 15 activities, lab activities

manual, and CD with slide presentation of all the experiments.

SB43478 - \$255.00

#### **Demonstration Balance Kit** Gr. 7+ Provides support for meterstick demonstration balances and torque experiments. Includes 1 of each item below. Lever Knife-Edge Clamp. Use metal clamp to make a balance out of a meterstick. Wire stirrup can be used for suspen-**Demonstration Balance Support.** SB13912 Cast metal. 7¼". Requires knife-edge clamps, slotted weights and hangers, Senior Meter Stick. Front is calibrated in 0.5 cm and numbered each cm.

1 cm 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 2 SB52796

# NEW

#### United Scientific AdvancedGen Second **Law of Motion Apparatus**

Give students a vivid demonstration of the independence of

horizontal and vertical motions. Table clamp provides stable support, bubble level ensures accurate horizontal orientation, and adjustable stop offers a wide range of spring tensions. NE30449 - \$99.95



SB51311 - \$19.95

sion of weights.

SB13912 - \$2.95

and meterstick.

SB51310 - \$17.95

SB52796 - \$3.95

Includes three different pulleys, stopwatch, Hall's Carriage, weight hanger, assortment of slotted brass masses, 3 spherical masses length of cord, tape measure, and instruction manual. SB52556 - \$67.95

Reverse side is calibrated in mm.



# For vacuum pumps, see p. 141



#### Free Fall Tube

Demonstrate that lighter objects experience the same acceleration as heavier objects by evacuating air from the tube. Plastic tube is closed at each end by a vacuum-tight cap. Bottom cap is fitted with a stopcock for air evacuation

SB23861-\$60.95



#### Collision in Two **Dimensions**

Curved aluminum track and adjustable target support form unit's core. Includes two steel balls, glass ball, hollow wooden ball, plumb bob, and activity guide. 20" x 13" x 10" SB16605 - \$20.95



#### Second Law of Motion Apparatus

Propels one ball horizontally while releasing another simultaneously to fall vertically. Cock spring at two different tensions. 15 cm long platform has attached 1 cm dia. rod to permit support at any desired height. SB10376 - \$27.95



#### **Collision Ball Apparatus**

Gr. 5-8 Demonstrates momentum, conservation of energy, rolling and sliding friction, Newton's Third Law of Motion, and the effects of acceleration and gravity on a moving body. Use on a table, or raise an end to create an incline. Aluminum V-shape track (27"L) and 5 steel balls (¾" dia.). Includes instructions. 

A CHOKING HAZARD (1). Not for under 3 yrs.

SB48979 - \$22.95

#### **Eisco Advanced Pulley Demonstration Set** Gr. 6+ Demonstrate concepts associated with

pulleys and their configurations. Can demonstrate multiple configurations simultaneously. Metal base, steel rods, 8 single pulleys, 2 tripletandem pulleys, 2 quadruple pulleys, 1 heavy composite base (32" x 7%") with 2 sockets, capstan and eye hook, 3 rods (32"), 8 collars with hooks, 3 right-angled clamps, wheel and axle, 4 rolls of cord, and Tommy bar to tighten vertical rod.

#### SB51183 - \$550.00

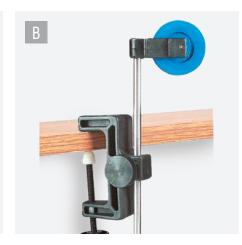
#### Student Pulley Demonstration Set. Gr. 6+

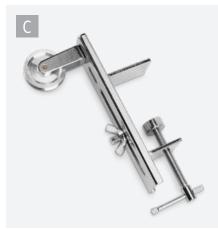
Includes 8 single pulleys, 2 double-sheave ball bearing frictionless pulleys, 7%" x 5%" wooden base with 24" vertical rod and 7%" horizontal rod with clamp, 6 collars with hooks, rightangled clamp, wheel and axle, 2 rolls of cord, Tommy bar to tighten vertical rod, 9 hooked brass weights (10 g, two 20 g, 50 g, 100 g, two 200 g, 500 g, and 1,000 g), and instructions. SB51184 - \$285.00



















#### A. Hooke's Law Apparatus

Heavy base with adjustable mirror millimeter scale, spiral spring with indicator and weight hanger, and four 20 g slotted weights. SB16580 — \$35.95

#### B. **Tabletop Pulley**

Adjusts over a height range of 10 cm, locks in place with a thumbscrew, and rotates 360° Two-piece apparatus consists of glass-filled, nylon-molded clamp and pulley with sheave attached to rod. Clamp fits tables up to 5 cm thick. Rod is 15 cm x 6.4 mm dia. Coefficient of friction: 0.04

SB37209 - \$27.95

# C. Adjustable Bench-Mounting Pulley

All-metal construction. Height can be adjusted vertically and tightened at any point from parallel with clamping surface up to 2" above it. Mount on surface up to 2" thick. 11/8" dia. aluminum pulley.

SB48967 - \$6.70

#### D. Drilled Ball Set

Two balls each of aluminum, brass, copper, iron, lead, zinc, and wood. 1" each.  $\triangle$  CHOKING HAZARD

SB49320 - \$55.95

#### E. Pulley Cord - 30' Roll Tightly braided nylon.

SB15378 - \$6.25

#### F. Slotted Weight Set

Steel set includes 100 g hanger and nine 100 g slotted weights. Total weight: 1,000 g.  $\triangle$  CHOK-ING HAZARD (1). Not for under 3 yrs.

SB46832 - \$39.95

#### G. Copper Slotted Weight Set with Hanger

Nickel-plated copper slotted weights with hanger. Two 5 g, one 10 g, and nine 20 g weights with a 50 g hanger. Total weight: 250 g. Plastic storage case.

SB26385 - \$17.95







#### Nasco Forces, Motion, and Simple Machines Kits

Gr. 4–8 Investigations include force couples involving "action and reactions," sliding and rolling friction, centrifugal and centripetal forces, velocity, simple periodic motion, periodic motion of a pendulum, uniform linear motion, accelerated motion, efficiency of machines, ideal and actual mechanical advantage, pulley systems, the pulley as a modified lever, the inclined plane, and the use of levers to multiply force and speed and change direction. Aligned with NGSS. Teacher's guide.

Forces, Motion, and Simple Machines Multi-Group Kit. For 6 work stations. Allow extra delivery time. • A CHOKING HAZARD (1). Not for under 3 yrs. SB16725 - \$675.00

Forces, Motion, and Simple Machines Demonstration Kit. For 1 work station or a classroom demonstration.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB50706 - \$165.00



#### **Nasco Forces Kits**

Gr. 5–8 Investigations include force couples involving "action and reactions," sliding and rolling friction, and centrifugal and centripetal forces. Aligned with NGSS. Teacher's guide. & CHOKING HAZARD (1). Not

Forces Multi-Group Kit. For 6 work Forces Demonstration Kit. For stations. Allow extra delivery time. 1 work station or a classroom

SB51743 - \$435.00

demonstration.

SB51741 - \$105.00





#### **Nasco Simple Machines Kits**

**Gr. 4–8** Investigate the use of levers to multiply force and speed and change direction, the pulley as a modified lever, the inclined plane, ideal and actual mechanical advantage, and the efficiency of machines. Aligned with NGSS. Teacher's guide.

Simple Machines Multi-Group Kit. For 6 work stations.  $\triangle$  CHOKING SB50709 - \$380.00

**Simple Machines Demonstration Kit.** For 1 work station or a classroom demonstration.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB19237 - \$87.00















#### **Wooden Simple Machines Complete Student Set**

Each model measures 6"-8" and includes a detailed activity guide which details the history of the model, practical applications, and classroom experiments. Includes 1 each of all 8 simple machines below. & CHOKING HAZARD (1). Not for under 3 yrs.

SB40569 - \$285.00

#### **Wooden Simple Machines Set 1**

Includes 1 each of Lever, Pulley, Inclined Plane, and Block and Tackle. SB40567 - \$142.00

#### Wooden Simple Machines Set 2

Includes 1 of each of Wheel and Axle, Gear Train, Pendulum, and Screw. & CHOKING HAZARD (1). Not for under 3 yrs.

SB40568 - \$160.00

#### Thames & Kosmos Forces & Interactions: Middle School **Physics Classroom Kit**

**Gr. 6–8** Bring the fun of handson physics to your middle school classroom with comprehensive lesson planning resources and durable building materials. 116-page teacher guide includes lesson plans, objectives, and assembly instructions for 10 NGSSaligned activities. Includes materials for up to 4 students. Includes 437 pieces, which come in a stackable plastic storage bin with sorting tray and building lid. Requires 2 "AA" batteries △ CHOKING HAZARD (1). Not for under 3 yrs. NE30279 - \$179.95





#### Thames & Kosmos® **Newton's Apple Tightrope-Walking** Gyrobot

Gr. 3+ Explore gravity, motion, Newton's laws, force, speed, rotation, balance, and weight by building a robotic apple that defies gravity and walks a tightrope. Includes a 12-page guide with 5 experiments. NE30397 - \$29.95



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ONLY AT NASCO

Easy-to-use kits are ideal for studying Newton's Laws of Motion. The flexibility and durability of the track allow for simple or complex races that can include loops, curves, hills, ramps, and jumps. Can test a variety of objects.

#### BluTrack® **Adapted Learning Kit**

Includes 18' BluTrack®, 4 ramps, 2 racer cars, and adaptive tape for easy experiment setup. Comes with tape preattached to track and ramps. Online teacher's guide gives instruction in setting up lab and lesson.

SB51254 - \$124.50

#### BluTrack® Intro to **Force and Motion Kit**

Gr. PreK+ Specifically designed for elementary classrooms, this economical kit features two 6' tracks. Kit also includes 4 ramps, structure inserts to aid in setup, 2 variable mass physics cars, 2 racer cars, 2 graduated bottles, and a measuring spoon.

EL15016 - \$160.95

#### BluTrack® Advanced Force and Motion Kit

Gr. K-8 Includes 2 full Intro to Force and Motion Kits, two 18' EP Tracks with hanger system and anchor bar, and 8 additional ramps.

SB52309 - \$565.00

#### **Engineering Coasters** and Motion Kit

**Gr. 6+** Combines the physics of motion with the basics of engineering coaster designs. Includes 12 anchor bars, four 18' tracks, 16 ramps, 4 PVC insert kits, teacher's guide, student's guide, and complete experiment guide. SB52310 - \$475.00







#### Wind Power

Gr. 3+ Assemble a wind turbine complete with an electric generator and adjustable rotor blades. Then conduct experiments to optimize the turbine's performance and discover how the turbine can light up an LED and recharge a battery. Includes manual. SB47040 - \$62.95

# Gravitydefying fun!



# **Hydro-Wind Education Kit** Gr. 5+ Generate hydrogen from wind power. Use angular velocity, drag force, and other physics concepts to design and build a wind turbine. LED Voltmeter/Music Maker Module demonstrates power created from wind energy. Curriculum on wind energy and fuel cells. ⚠ CHOKING HAZARD (1). Not for under 3 yrs. SB46794 - \$301.00

# Horizon Renewable Energy Education Set Unit on clean power generation includes an exploration of the environmental effects of atmospheric carbon dioxide. Hands-on activities center on complementary attributes of renewable energy sources. Up to 10 class periods of activities. For 3–4 students. △ CHOKING HAZARD (1). Not for under 3 yrs. SB46790 - \$405.00

#### A. BluTrack® Junkyard Challenge Kit

Gr. 7+ Whether used on its own or in conjunction with a larger junkyard engineering challenge, this kit is all about exploring the design possibilities. Includes a 50' track with hanger pad, a 50' support aluminum wire, 3 PVC support insert kits, 12 anchor bars, and 10 ramps. Cars sold separately

SB52311 - \$299.95

For a complete selection of BluTrack<sup>®</sup> products, visit nascoeducation.com



**Physics Cars.** Die-cast cars. Includes 8 cars and 50 washers. Each car measures 2½" x 1¼" x 1½" SB51255 - \$49.95



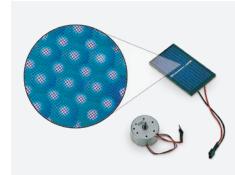
BluTrack® Track. Includes an 18' track with hanger system and anchor bar. SB52312 - \$57.95



Partially evacuated glass bulb contains spinner with 4 vanes, blackened on one side, silvered on the other. Turns 3,000 revolutions a minute in sunlight. Will also turn under an incandescent lamp (100 watts or more).

⚠ See page 3 for complete Choking Hazard Label Information.

S00154 - \$15.95



Solar Science Kit Gr. 5+ PV cell, high-efficiency motor, disc with diffraction foil, and informative solar sheet with ideas for science projects. SB27511 - \$14.95

PowerWheel Kit Gr. 5+ Hook micro hydro generator up to a faucet or a hose, then watch it take energy from flowing water and convert it into mechanical energy, then into electricity. Includes

PowerWheel, LED light strip, bridge rectifier, all the wiring to convert the AC output to DC for powering battery-powered devices, and user's manual.

SB49096 - \$189.95

#### Alternative Energy





#### Nasco Solar Bottle Boat Class Kit

**Gr. 5–12** Everything you need for 6 students or 6 groups, including 6 Solar Bottle Boat Kits (SB40881, above), plastic bottles, paints, and more. △ CHOKING HAZARD (1). Not for under 3 yrs.

SB53392 - \$260.00



#### Solar-Powered Car **Gr. 3+** Operates on sunlight, battery, or strong lamp. $4^{3}\!4''$ x 2<sup>3</sup>/<sub>4</sub>" x 3". Requires 1 "AA" battery, not included.

SB47681 - \$25.50



Photon Solar Racer Kit®

Gr. 4-9 Travels an average of 10 ft. in 3 seconds on smooth, flat surface when exposed to full sunlight. 9" x 2". A CHOKING HAZARD (1). Not for under 3 yrs.

SB23862 - \$25.95

SB52052 - \$349.00



**Electric Mobility Set** 

**Gr. 6+** Measure the superior energy density and power of the super capacitor and compare different types of fuel cell technology. Demonstrate the power of sunlight with a solar panel and generate electricity with the hand crank.



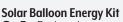
#### Regatta® Inflatable Raceway

Place two 6' tables end-to-end, inflate heavy-duty vinyl raceway, and fill each lane with approximately 4 gallons of water. NA10268 - \$32.95



#### Solar Tube

Fill with air by running, tie off ends, and let the sun heat air inside tube. In about 5 minutes, tube (which must be tethered with string) will rise into sky. 50' x 29" dia. plastic tube holds over 200 cu. ft. of air. SB33233 - \$20.95



**Gr. 5+** Explore the properties of light, define optical design, demonstrate energy conversion, generate thermal energy, understand renewable energy, and teach sustainability, all while delivering a high-quality STEM experience.

SB52005 - \$69.95



#### Horizon Fuel Cell Car Science Kit

Gr. 5+ Investigate reaction yields, reduction and oxidation, and other chemistry concepts by performing electrolysis reactions. Learn about conservation of energy, electric power, and other physics concepts by modifying your fuel cell car. △ CHOKING HAZARD (1). Not for under 3 yrs.

SB46787 - \$135.00





#### D. Energy Beads

Uncover the hidden energy of ultraviolet light as beads change from white to a rainbow of colors when in the sun.  $\triangle$  CHOKING HAZARD (1). Not for under

**SB47413** 100 beads - \$3.95 **SB51138** 250 beads - \$7.00 **SB48486** 1,000 beads — **\$25.00** 

For a complete selection of science products, visit nascoeducation.com

#### Mini Panels **Encapsulated** Solar Cells

Uses safe solar cells similar to those that power satellites in space. Mini panels allow for handling with less breaking and cell damage 6" wires. 3<sup>3</sup>/<sub>4</sub>" x 2<sup>1</sup>/<sub>2</sub>"



400mA.

SB46194 - \$25.95

3.0V Solar Cell. 100mA.

SB16288 - \$18.95

1.5V Solar Cell. 200mA. SB16289 - \$15.95



IV Solar Cell. Best for motors.

# Solar Kit Mini Motor — 1.5V

Low-cost motor for experiments using low starting voltage (½V). 2 mm shaft dia. 4" lead wires. 1" dia. x 1½" L

SB53049 - \$4.95



#### Solar Kit Motor — 1.5V to 3V

Operates ½V-3V and 200 mA start-up/runs at 80 mA to load. Low torque; high rpm. 2 mm shaft dia. 1" dia. x 1½" with 6" lead wires.  $\triangle$  CHOKING HAZARD (1).

SB33479 - \$6.50

#### A. Tin Can Robot

Gr. 5+ Turn a metal soda can into a walking, wobbling, bug-eyed robot, then transform it into a robotic monster. Teaches about recycling and green technology. Requires 2 "AAA" batteries, not included. A CHOKING HAZARD (1). Not for under 3 yrs.

SB47082 - \$19.95

#### B. Solar Experimenter's Kit

Build your own solar demonstrator. Encapsulated solar cell module, DC motor, holographic disc, and an informative solar energy booklet with charts and graphs explaining photovoltaic solar energy. ▲ CHOKING HAZARD (1). Not for under 3 yrs.

SB07000 - \$12.95

#### C. Radiation Kit

Use for experiments dealing with heat absorption of light surfaces vs. dark surfaces. 16-oz. black metal container, 16-oz. shiny metal container, 2 insulating lids, 2 thermometers (-20° to 50° C), 110V AC clamp lamp with reflector, and 150-watt light bulb.

SB02019 - \$64.95

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**Solar-Powered Rovers** 

Gr. 3+ Harness the power of the sun by building five motorized models: three solar cars, a solar fan, and a solar robot. Perform experiments with each model to learn about gear ratios, solar cells, and more. Includes 54 pieces and 16-page illustrated manual NE30117 - \$19.95

# Build unique robots that are powered by





#### 8-in-1 SolarBots

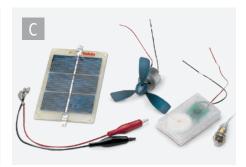
Gr. 1+ Using a compact solar panel, these bots harness energy from the sun to power an electric motor. Build a drummer that marches along, beating a drum; an armadillo robot that does somersaults; a bug that crawls on six legs; and more. Includes 194 pieces and

NE30118 - \$24.95

















#### A. Energy Conversion Kit

**Gr. 7–12** Demonstrate the conversion between different forms of energy. Includes 4 devices for generating electrical energy and 3 devices that use electrical energy. Included set of cables connects devices to each other in various combina-

SB53165 - \$78.95

#### B. Biofuels: Investigating Ethanol **Production and Combustion Lab**

Gr. 6+ The 3 investigations include: a demonstration of corn and cane sugar and the fermented stillage to produce fuel, investigating the energy released by combustion of ethanol and kerosene and comparing the results, and measuring and comparing 2 fuel by-products. For 6 groups of 4 or 5.  $\triangle$  CHOKING HAZARD (1). Not

C29169 - \$276.30

#### C. Photocell Testing Set

Use a simple device to light a mini bulb, sound a buzzer, or rotate a fan by converting light energy into electric energy.  $\triangle$  CHOKING HAZARD (1).

SB23755 - \$77.95

#### D. Individual Student Solar Energy Science Kit

Gr. 6-12 Introduce students to how solar light energy is converted into electrical energy. A photoelectric panel collects sunshine, while 3 "consumers" are included to demonstrate use/ users of the electrical energy (an LED for light energy, a buzzer for sound energy, and a motor for mechanical energy). A mirror allows students to test varying the amount of sunlight collected by the panel to see if more/less light produces more/less electrical energy. Instructions included. NE30023 - \$11.15

#### E. Solar Kit

**Gr. 5–9** Demonstrate the effect of solar power and its ability to be converted to mechanical energy, light energy, battery power, and current. 3½" x 3½" mounted solar cell (with terminals, motor, LED, and mounted battery and ammeter on  $8" \times 4\frac{3}{4}"$  base.

SB43494 - \$35.25

#### F. Solar Science Station

Gr. 5+ Three uses: solar USB charger, power supply for other gadgets, and tool for recording solar data. Designed around a large 5.5V 320mA solar cell on rotating axis for adjusting solar cell's angle. Station front contains several ports, including LED voltmeter, USB port, and 2 simple terminal screws for direct power out. All wires are connected to a central screw terminal hub. Requires screwdriver and wire stripper. No soldering required.

SB50641-\$49.95





NE30277 - \$29.95



awesome bots that move without any batteries or electricity. As students build and experiment, they'll learn about how gears transmit power, torque and wind as a power-generating technology. Includes 133 pieces and a 52-page guide. No batteries or electricity required. A CHOKING HAZARD (1). Not

NE30276 - \$32.95

for under 3 yrs.

**Wind-Powered Machine Kit** 

⚠ See page 3 for complete Choking Hazard Label Information.

**Thames & Kosmos Water Power:** Rocket-Propelled Cars, Boats, and More **Gr. 3–9** Make a splash into physics with 6 air-and-water-powered models. As students build and experiment, they'll learn about the physics of action-reaction forces, rocket propulsion, nature's rockets, compressed air, and pneumatics. Includes 47 pieces and a 32-page guide. No batteries or electricity required.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.





#### Thames & Kosmos® Solar Race Car

Gr. 3+ Convert solar energy from the sun to power a solar race car. Full-color, stepby-step instructions for 22 snap-together pieces, including gear train and adjustable solar panel.

NE30396 - \$15.95

For a complete selection of alternative energy products, visit nascoeducation.com

Liquid & Gas









A. Gas Law Apparatus with Temperature Gauge

Gr. 9+ Twist handles to compress air and read

volume, temperature, and pressure from scales.

Repeat to confirm relationship stays the same.

Investigate elastic properties of gas enclosed in a

calibrated airtight syringe by subjecting confined gas to various loads. Syringe built into wood

base. Wooden top supports arbitrary uniform

weights. Includes activity guide. 9" x 6" x 2".

Requires 1 "AA" battery, not included. SB45488 – \$99.50

B. Boyle's Law Apparatus

SB16604 - \$16.95



#### C. Innovating Science® The Ideal Gas Law Kit

Students perform the reaction between sodium bicarbonate and hydrochloric acid, use the ideal gas law to calculate the amount of carbon dioxide produced, and then use stoichiometry to determine the percent yield. Includes materials for 15 groups of students, teacher's manual, and student guide.  $\triangle$  CHOKING HAZARD (2). Not for under

◆NE30205 — \$50.95

◆Subject to a Hazardous Material Surcharge.



#### D. Fire Syringe

**Gr. 6+** As air compresses, the temperature increases and combustible material bursts into flames.

SB42045 - \$20.95

#### E. "Charles' Law Mechanics of Gas" Can with Lid

Boil water in the can and allow to cool. See the can get "crushed" right before your eyes. Metal can with lid, 1¼" opening.

SB28561 - \$21.95



# Experiment with density with brass, acrylic, pine, and more!

#### **Density Cube Sets**

**Gr. 5+** Cubes for experimenting with mass, volume, density, buoyancy, specific gravity, and flotation. 1-1/4".

**4-Cube Set.** Nylon, acrylic, aluminum, and pine wood. **SB44474** – **\$15.95** 

10-Cube Set. Aluminum, steel, brass, copper, acrylic, maple, nylon, pine, poplar, and PVC. SB31356—\$40.95

**12-Cube Set.** Copper, brass, steel, aluminum, acrylic, oak, nylon, pine, poplar, PVC, lignum vitae, and polypropylene.

SB45884 - \$45.95





Demonstrate the inverse relationship between density and length. Includes 5 cylinders weighing 15 g each: copper, aluminum, nylon, polyvinyl chloride, and polyethylene. All are ½" (12 mm) dia. and range from ½" to 4" (15–100 mm) in length.

SB15356 - \$13.50





 $\frac{1}{2}$ ", T", and  $\frac{11}{2}$ " cubes of 8 materials: acrylic, aluminum, brass, copper, nylon, polypropylene, PVC, and steel. Reference table shows density values of specimens.

NEW

SB53047 - \$152.95



#### Density Identification Set

Identify 12 samples of common materials by determining their density. Each ½" dia. cylinder varies in size and density. Lengths vary between 19%6" and 25%".

SB39210 — \$45.95



#### Set of 18 Density Blocks

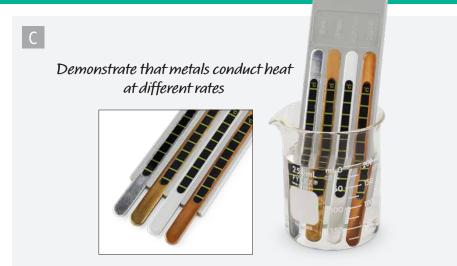
Includes 10 mm cube, 20 mm cube, and 30 mm x 20 mm x 10 mm block each of aluminum, brass, copper, lead, steel, and zinc. \$\triangle CHOKING HAZARD (1). Not for under 3 yrs.

\$\text{SB45749} - \\$50.95\$



Density & Heat







**HOW DOES TEMPERATURE** AFFECT DENSITY?

Find out by experimenting with these tools





#### A. Infrared Thermometer

Hold, press trigger, and aim laser guide at target. Results immediately appear in °C or °F on large backlit LCD and are automatically held for 7 seconds after trigger is released. Range: -4° to 518° F. Accuracy: ±4° F. 8" x 3" x 13/4".

SB40820 - \$50.95

#### B. Hand Boiler

Watch as liquid rises and bubbles from heat of your hand. Color and style may vary. 7". SB50603 - \$6.95



#### C. Conductivity Bars

Gr. 6+ Steel, brass, aluminum, and copper specimens enclosed in plastic housing. Liquid crystal thermometer on each strip.

SB46988 - \$43.95

SA05697 - \$29.95

#### D. Specific Heat Specimen Set

Equally weighted cylinders' relative heat capacities are directly proportional to their specific heat. Set of 4: aluminum, copper, stainless steel, and zinc. 19 mm dia.



Snap metal disc to create a chain reaction, causing solution of water and sodium acetate to crystallize and give off heat. 4" x 4".

SB47058 - \$6.50

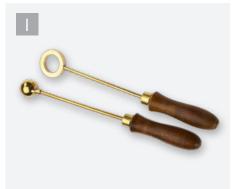
#### F. Clear Acrylic Overflow Can

Gr. 7+ Graduated up to 125 ml. Attached spout. SB52154 - \$8.00

#### G. Overflow Can

Determine the volume of a body to calculate density, specific gravity, or for proving Archimedes' Principle. 3" dia. with flared top edge and angled spout. Aluminum. SB16803 - \$9.75









TURN UP THE HEAT

Conduct experiments in the lab using tools that can withstand high temperatures





#### H. Pulse Glass

Hold one glass bulb in hand to cause evaporation of a portion of the liquid, which forces liquid into other bulb. CAUTION: Only operate using hand heat.

SA09087 - \$11.00



<sup>3</sup>/<sub>4</sub>" dia. brass ball fits into brass ring. Heat ball to prevent passage through ring until cool or unless ring is heated.

SB07985 - \$11.75



6"W x 8¼"H rectangular-shaped borosilicate glass tube with funnel-shaped opening at the top. Partially fill tube with water; add dye, potassium permanganate crystals, sawdust or aluminum powder; and heat at a corner. Movement of colors or particles illustrates formation of convection currents.

SB50319 - \$17.95



#### K. Ice Melting Set

Place an ice cube on each of the 2 black blocks (1 aluminum, 1 plastic foam) and watch as 1 ice cube melts faster.

SB39159 - \$26.95

#### L. Convection Apparatus

Metal box with glass front and 2 mounted acrylic chimneys. Place candle under one chimney and smoke-producing material at mouth of other chimney to create convection currents.

S00185 - \$33.95

#### M. Heat Transfer Kit

Observe heat transfer by measuring temperatures of insulated containers before and after connecting them with metal bar.

SB52555 - \$27.50



#### N. Conductometer

Demonstrates the conductivity of silver nickel. steel, aluminum, copper, and brass. Mounted on plated steel rod with wooden handle.

S00187 - \$12.95

#### O. Double-Walled Calorimeter with Electric Option

Use with or without electricity. Double-walled cover minimizes heat loss. Aluminum inner and outer vessels. Stirrer and support for inner vessel (capacity: 300 ml).

SB13895 - \$14.95

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**Light & Color** 

#### Unmounted **Plane Mirrors**

Flat, silvered acrylic, square mirrors measure 10 cm. Dimensions may vary. Pkg. of 12. SB16721 - \$23.25



**Acrylic Mirrors** Highly reflective, rigid acrylic mirrors.  $4\frac{3}{4}$ " x  $3\frac{3}{4}$ " x  $\frac{1}{8}$ ". Pkg. of 10. SB26049 - \$23.00





#### **Double-Sided Mirrors**

Flexible, plastic, concave/convex mirrors cut easily with scissors. 4" x 4". Pkg. of 10. SB28627 - \$9.95



**Acrylic Prisms** Highly polished acrylic equilateral prisms. Includes one each of 25 mm, 50 mm, and 100 mm prisms, all with 25 mm sides. Set of 3. SB28596 - \$16.95



#### Spherical Mirrors

Glass spherical mirrors with back surface silvering. Includes 3 convex and 3 concave mirrors, each measuring 50 mm dia. and with a different focal length. Set of 6. SB47752 - \$16.95





PVC plastic. Pairs hold long rectangular mirrors. Pkg. of 36. SB28855 - \$11.50



#### **Equilateral Prism**

60° glass prism with 30 mm base and faces.

1" (25 mm) x 2" (50 mm) 1" (25 mm) x 4" (100 mm) SB14090 - \$7.25 SB14088 - \$6.25

1" (25 mm) x 3" (75 mm) SB14089 - \$6.75

**Acrylic Prisms** 

Polished to perfection. Projects a superior spectrum to glass. No sharp edges if accidentally chipped.

Product No.	Description	Each
SB18047	2" Right Angle	\$7.95
SB18048	2½" Equilateral	\$9.99



#### **Acrylic Prisms**

Clear acrylic sheet. All sides polished. Set of 6: rectangular block (75 mm x 50 mm x 15 mm thick), semi-circle (90 mm base x 15 mm thick), equilateral prism (75 mm sides, 15 mm thick), double-convex lens, (90 mm long, 23 mm at center), and 2 double-concave lenses (90 mm long, 10 mm at center). SB28593-\$52.95



#### Mirrors

Flexible, two-sided plastic mirrors. Three assorted sizes: 7½" x 6", 4" x 3", and 3" x 2". Customize with scissors. Pkg. of 12. SB23588 - \$28.95



#### Lens and Prism Set

Large prisms and lenses. One side is frosted to aid in revealing the path of light. Set of 7. SB10977 - \$44.95





#### LED Light Box and Optical Kit

**Gr. 5+** Plastic three-ray, dual-color light box with 3 individual switch controls; 12 clear acrylic prisms and lenses in different shapes and sizes; and 9 activity cards.  $4\frac{5}{16}$ " x  $2\frac{3}{4}$ " x 1¼". Uses 3 "AAA" batteries, not included. SB50013 - \$59.95



#### **Light Box**

Hinged sides with mirrors for mixing colors. Adjustable lens makes divergent, convergent, or parallel rays of light. Grooves for slit plates or color filters. 8 acrylic plastic blocks, 8 mounted color filters, 2 slit plates, 3 mirrors, set of colored cards, and spare bulb. Requires 12V battery or 12V power supply (not included).

SB37306 - \$121.00



Gr. 6+ Double convex lens (glass, 38 mm dia.), double concave lens (glass, 38 mm dia.), plain lens (glass, 38 mm dia.), clear glass screen, 2 acrylic mirrors (square), white plastic screen, 5 cellophane squares in 5 colors, 3 lens/mirror supports, 2 acrylic prisms (equilateral, 25 mm x 50 mm), plastic graduated beaker, flashlight, candle, and activity guide with 20 experiments.

SB31097 - \$47.95

#### **Demonstration Lens Set**

50 mm dia. acrylic lenses. Double convex, double concave, plano convex, plano concave, concavo-convex, and convexo-concave. Set of 6. SB28594 - \$22.95



#### **Lenses Demonstration** Set - 50mm

Plano-concave, convex-concave, double-concave, concaveconvex, double-convex, and plano-convex lens types with ground safety edges. Sets of 6. S00169 - \$11.95





Gr. 7+ Optical elements mounted in protec-

tive frames with mounting rods. Four captive

riders have index mark and set screws to

secure rider and optical elements. Precise

37<sup>3</sup>/<sub>4</sub>" x 4<sup>3</sup>/<sub>4</sub>" x 4<sup>3</sup>/<sub>4</sub>". Prefocused illuminator

with 12V/6 W incandescent lamp, 4 lenses

(2" dia.), 2 mirrors, object diaphragm, 2

parallel bar optical bench with scale is

#### Refraction Block

**Optical Bench Set** 

screens, and manual.

SB43479 - \$132.95

65 mm x 20 mm.

Acrylic. All sides polished. 115 mm x SB28595 - \$7.55



#### Refraction Cell - Rectangular

Clear acrylic refraction cell. Uniform wall thickness eliminates distortions.

SB52168 - \$8.00





#### Disposable Penlight

High-impact molded styrene. Can be clipped on pockets. 4½". SB50689 - \$3.95

SB50689

Flashlight Classroom Pack

Plastic outer casing. Diamond reflector for wide beam of light. No color choice, color may vary. Pack of 12. Each flashlight uses 2 "D" batteries, not included.

SB42623 - \$53.95

Flashlight Only SB13626 - \$5.00

Batteries. Size "D." Pack of 2.

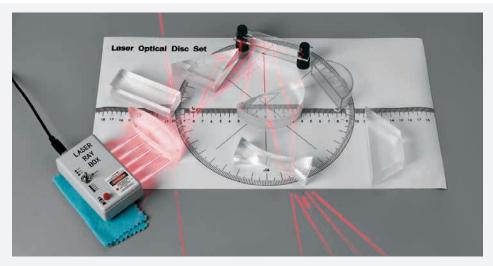
SB10826 - \$4.90

Light & Color



#### **Laser Optical Disc Set**

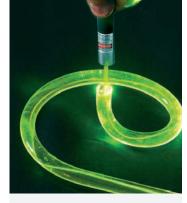
**Gr. 6+** Laser ray box projects 1, 3, or 5 parallel bright beams. Substantial vinyl template with degree circle and linear scale forming optical disc. 7 clear acrylic optical elements. Mirror with adjustable curvature. Acrylic element bottoms are frosted to show ray paths. International AC adapter, 15" x 8¼" magnetic activity mat, user's manual, and plastic case. SB45835 - \$107.95





#### **Concept of Light Kit**

**Gr. 6–8** Safe, hands-on, inquiry-based experimentation into the nature and properties of light. Provides instructions for science fair activities and optional Probeware/Data Logging activities. SB42282 - \$145.00



#### **United Scientific Lumirod Light Pipe**

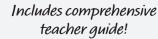
Gr. 5+ Visually demonstrate the principle of fiber optics in the lab with this light pipe. This curled and clear acrylic rod conducts light by internal reflection. Use a flashlight or a green laser pointer when demonstrating.

SB49816 24" L-\$24.95 NE30303 48" L - \$38.25



**Laser Pointer Key Chain** 2½". Colors may vary. ▲ CHOKING HAZARD (1). Not for under 3 yrs.

SB47407 - \$1.95 **"AAA" Batteries.** Pkg. of 4. **SB27438 – \$5.30** 



#### **Nasco Properties of Light Kit**

Gr. 4-8 This kit includes handson experiments that cover basic facts about how light travels including: sources of light, shadows, transmission of light, and more. Includes teacher's guide and materials needed to complete each activity.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

NE30086 — \$99.95



#### **Newton's Color Disc**

Rotate disc to show that white light is composed of the 7 colors of the spectrum. Disc is attached to pulley mounted on metal stand driven by belt and hand-driven wheel. May come with a metal or heavy cardboard disc.

SB45057 - \$37.50



#### **Acrylic Color Filters**

Use with overhead projector to demonstrate that a material's color depends upon the color of the light it is capable of reflecting, and the color of the light incident upon its surface.  $2^{3}/4$ " x  $2^{3}/4$ " SB14384 - \$3.55









#### **Whiteboard Optics Set**

**Gr. 7**+ Set of ray optics and color experiments using magnetic-backed components. Use on any installed steel whiteboard. Double-ended light box with cylindrical lens and slots for mounting 3 slip diaphragms for ray optics on one side. Other end carries 2 adjustable mirrors and an open area for color mixing work using colored filters that fit into slots in ray box. & CHOKING HAZARD (1). Not for under 3 yrs.

SB52172 - \$275.00



#### Seeing the Light Kit

**Gr. 5–8** Explore the behavior of light, including color mixing, reflection, refraction, and the bending of light. For 1–3 students. SB50540 – \$27.50



#### **Color Paddles**

Transparent 6" paddles in 6 colors with 3 textures demonstrate the principles of color mixing. Set of 18. **9712420 – \$8.50 6+ \$7.65** 

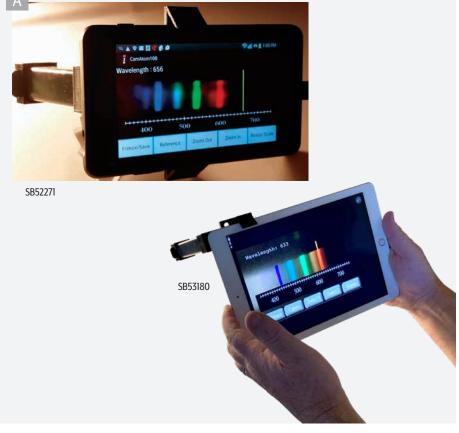


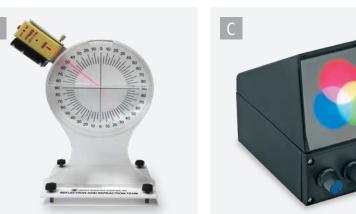
#### **Diffraction Grating Glasses**

13,500 lines per inch, double axis holographic diffraction grating lenses separate light from any source into its spectral components. Set of 6.

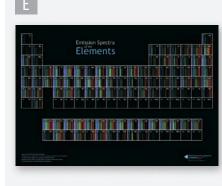
SB49296 - \$4.95

**Light & Color** 









#### A. Spectroscopes

Give your device the ability to identify and characterize substances. Make measurements in real time. Calibrated with adjustable slit and zoom. Adjustable clip and downloadable app.

Smartphone Spectroscope. Works with any smartphone.

SB52271 - \$68.95

iPad® Spectroscope SB53180 - \$88.95

#### B. Reflection and Refraction Demonstrator

**Gr. 7+** This 65/16" dia. acrylic water tank has a 360° scale and movable arm with laser activated by push button. Thumb screws on side of laser harness can be adjusted to finely position laser beam. NOTE: This emits laser light. Max. output power <1mW. Wavelength: 630-680 nm. Class II laser product. Uses 2 "AAA" batteries, not included.

SB52562 - \$87.95

#### C. Color Mixing Demonstration

Demonstrate color mixing with red, blue, and green. Color brightness can be controlled by individual switches. 41/8" x 31/8" x 41/4" with 3' screen. Uses 3 "AA" batteries, not included. △ CHOKING HAZARD (1). Not for under 3 yrs. SB47548 - \$52.95

#### D. Wavelength and Spectrum Demonstrator

**Gr. 7+** Discover how colors affect wavelengths and learn why red is chosen for "stop" in traffic signals. 11 color and wavelength LEDs mounted in  $12" \times 13\%6"$  dia. metal tube with  $3^{15}\%6"$  dia. metal base. Rotary switch on top lights up each LED individually

SB48327 - \$101.95

#### E. Periodic Table of Spectra

**Gr. 8+** High-resolution periodic table poster shows detailed emission of spectra for each element. Laminated. 1.5 mil. 24" x 36".

SB52402 - \$39.95

For a complete selection of light and color products, visit nascoeducation.com

















#### F. Quantitative Spectroscope

Investigates bright line spectra to unveil the atomic origin of light. Measure wavelengths of visible light from 4,000–7,000 Angstroms with the precision of ±50 Angstroms using built-in scale. SB33518 — \$10.95

G. 6" Mini Blacklight Requires 4 "AA" batteries (not included). EL12235 - \$9.95

H. C-Spectra® — An Instant Spectroscope

View light through C-Spectra® and the spectrum will be clearly visible. Every segment produces the same pattern. When cut into 13/4" squares, each 6" x 12" sheet provides approximately 18 pieces. SB23811 – \$24.95

#### . Educational Diffraction Gratinas

Three diffraction gratings mounted on same slide: 100, 300, and 600 lines per mm. Individual gratings: ½" x 3%". Slide: 3" x 1¼". SB45751 - \$35.95

Replica Diffraction Grating Slides

Gratings are mounted in a 2" x 2" slide frame. 13,500 lines per inch. Pkg. of 25. SB26512 - \$10.95

#### K. Digital Lux Meter

Checks luminance level. Range: 0-50,000 or 0–100,000 Lux with 0.4 second sampling time. High accuracy, accurate response, auto zeroing, over-range indication, 11/16" LCD display, data hold, and low battery alert. Operating temperature: 32° to 122° F (0° to 50° C). Estimated battery life: 200 hours. 45%" x 211/16" x 13/16". Requires 1 "9V" battery (not included).

SB50326 - \$46.50

#### L. Project Star Precision Spectrometer

Gr. 9+ With actual wavelength measurements and equivalent energies in electron volts, tool enables students to identify different elements in various light sources. Plastic.

SB26055 - \$36.95



#### **Spectrum Tube Power Supply**

Provides safe and reliable operation for spectrum discharge tubes approximately 10¼". Supplies a voltage that prolongs spectrum tube life. Sockets eliminate electrical shock hazards. Universal plug included. RoHs and CE certified. Unit operates at both 110V-130V and 210V-230V.

SB43813 - \$190.00

**Spectrum Tubes.** Demonstrates spectral lines. 101/4" glass tubes with capillary portion between  $3\frac{1}{2}$ " – 4" and can be varied as required. Electrode sealed in each end and attached to metal end cap with loop for hookup to wire connections.

SB44679 Hydrogen SB44681 Helium SB44682 Nitrogen SB44683 Oxygen SB44684 Water Vapor

SB44685 Air SB44686 Carbon Dioxide

**SB44687** Neon SB49245 Krypton **SB48893** Argon

**SB48894** Xenon SB48896 Mercury SB49251 Chlorine

Each - \$40.95

# PHYSICAL SCIENCE





#### **Aluminum Alloy Tuning Forks**

Smooth, aluminum-turned handles approximately 13/4"L. Nonmagnetic. Requires no plating. Will not rust or corrode. Scale letter and frequency stamped on each fork. Accurately tuned within ±.5% at 20° C. Weighs 1/3 that of steel forks. Class A-3, tuned to Physical Scientific

**Tuning Forks – Student Grade, Set of 4.** 256, C'; 320, E'; 384, G'; and 512. C"

SB16561 - \$10.50

**Tuning Forks – Student Grade, Set of 8.** 1256, C'; 288, D'; 320, E'; 341.3, F'; 384, G'; 426.7, A'; 480, B'; and 512, C". SB16562 - \$19.95

**Set of 8 Tuning Forks with Mallet.** Tuning Forks — Set of 8 (SB16562, above) and mallet (SA01602, below)

SB48580 - \$21.50

Mallet Only. 1" dia. hard rubber ball, ¼" plastic handle, length 8". SA01602-\$2.95

Tuning Forks, Set of 13 — Student Grade

Frequency and scale letter stamped on each fork. Aluminum alloy. SB29986 - \$29.95



lengths and velocity of sound. End of

90 cm graduated plastic resonating tube is

connected to aluminum reservoir that slides

along vertical support rod to raise water

level to any level. Produces resonances for

 $\frac{1}{4}$ ,  $\frac{3}{4}$ , and  $\frac{5}{4}$  wavelengths of a 512 VPS (not

# **Tuning Fork Activator**

Protect tuning forks as well as your desk from nicks and scratches. Solid rubber. 2½"

SB39153 - \$2.95



#### 7-Frequency Adjustable Tuning Fork

Weights adjust to deliver fine tones in C128. D144, E160, F170.7, G192, A213.3, and B240 frequencies. Scale letters on stem. Precision-grade aluminum. 8"

SB14269 - \$12.95



#### **Wave Demonstrator Set**

This 4' Slinky® spring with 3 times the normal length demonstrates several fundamentals of wave motion. Spring extends to 30'. Longer and heavier 6' helical spring demonstrates the effects of greater mass and of greater tension.

SB13636 - \$24.95

3" Dia. Metal Slinky® Spring SB13633 - \$7.95

6' Metal Helical Spring SB13634 - \$15.15



included).

SB16555 - \$102.95

#### Super Slinky® and Stand

Extra long Slinky® spring (stands 13 cm high when compressed) allows students more time to observe wave behavior. SB39354 - \$40.95



#### **Resonant Tuning Forks Set**

Without the weights, forks illustrate sympathetic vibration at distances. With the weights, one fork can be tuned one or more cps different. These 32 mm, chromium-plated steel, 440 Hz tuning forks are mounted on hardwood resonance boxes.

SA01604 - \$70.50



#### Aluminum Wave Model

Eccentric discs support a series of rods joined to a handle that is turned to simulate . longitudinal and transverse wave motion. Mounted on polished wooden base. SB33592 - \$85.95



#### United Scientific AdvancedGen **Acoustic Resonance Apparatus**

Investigate resonance phenomena of many frequencies with this new and improved apparatus. Explores the acoustic resonances of an enclosed air column. Water level can be adjusted with millimeter precision. Includes air pump and Bluetooth speaker.

NE30448 - \$487.95



### Nasco Sound Kit

Gr. 4–8 Specific concepts are investigated to develop ideas about how mechanical energy converts to sound, how the use of resonating tubes and temperature can be used as a direct measurement, and how the characteristics of sound waves, frequency, wavelength, loudness, and the velocity of sound make an impact in discovering the world around us. Aligned with

🗎 Nasco. TEA

**Sound Multi-Group Kit.** For 6 work stations. △ CHOKING HAZARD (I). Not for under 3 yrs. SB17861 - \$280.00

**Sound Demonstration Kit.** For 1 work station or classroom demonstration.  $\triangle$  CHOKING HAZARD (1).

SB19239 - \$79.95





#### **Spring Oscillation Experiment Set**

Gr. 8+ Mount demonstration spring onto vibration generator to learn about oscillation and resonance. Vibration generator produces a low frequency mechanical oscillation with a range of 0.5 to 5,000 Hz and is powered by the audio generator, which generates between 0.1 and 200 kHz. Ring stand and clamp are needed but not included. ▲ CHOKINĠ HAZARD (1). Not for under 3 yrs.

SB47843 - \$330.00

#### Vibration Generator with Spring Only.

Requires additional materials to use: ring stand with clamp, signal generator, and banana plugs. 🛆 CHOKING HAZARD (1). Not for

SB47666 - \$139.95

**Audio Generator Only.** Jack for a 5.5-watt speaker, cord to plug into wall outlet, and BNC to banana plug cord. 110V AC.

A CHOKING HAZARD (1). Not for under 3 yrs.

SB46992 - \$199.95



#### Mini Ripple Tank

Gr. 6+ White light source can be switched between constant illumination and strobe to give either moving or frozen images on the screen. In strobe mode, light source is synchronized to wave generator so that perfectly static patterns are displayed. Wave frequency can be varied to provide wavelengths ranging from several cm to a few mm. SB52404 - \$275.00



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#### Resonance Bowl with Mat

Rub copper handles. Vibrations make water surface ripple. Soon, water droplets shoot up and become continuous fountain streams. Silicone material and mat's honeycomb design stop bowl from slipping and prevent vibrations from transferring to table. 7" mat withstands temperatures up to 480° F (250° C).

SB52596 - \$149.95 Resonance Bowl Only SB51123 - \$154.95

Mat for Resonance Bowl Only SB51122 - \$9.95



#### Ripple Tank for Overhead Projector

**Gr. 5+** Observe propagation, reflection, interference, and diffraction of waves. Plexiglass. Adjustable vibrator, water tank, 2 baffles, and adjustable control knob. 13" x 113/8" x 11/2"

SB42192 - \$137.50



#### **Energy Ball**

Touch two metal strips simultaneously to turn your body into a path to a complete circuit, causing the ball to flash brightly and make an eerie sound.

SB28883-\$6.00



#### **Two-Potato Clock**

Demonstrates the principle of an electro-chemical cell. LCD clock runs on two potatoes, oranges, grapefruits, or cans of soda.

A CHOKING HAZARD (1). Not for under 3 yrs. SB16423 - \$22.95





Gr. 2+ Hold the stick in your hands and see if it lights up and makes noises. SB48146 - \$8.95



**Gr. 6+** Series of activities based on waves, light, and sound, including producing longitudinal and transverse mechanical waves and comparing similarities and differences; observing wavelength and frequency in water; and more. SB47796 - \$137.90





#### **Nasco Electricity** Value Pack

Includes 66 clip leads and 20 each of lamp sockets, 1.5V lamps, "D" cell battery holders, "D" cell batteries, and single-throw switches. For class of 40 students working in pairs. SB42846 - \$189.95

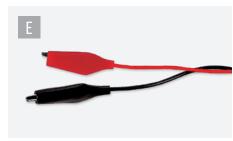


















#### A. Series 2000 Type (PE) Plain Enamel Copper Magnet Wire

Solid bare copper conductor wire with oleoresinous (plain enamel) insulation. Temperature: -30° to +80° C. Characteristics: MIL-W-583 Class 80.

•					
Product No.	Description	Gauge	Length	Each	
SB10515	1-lb. Spool	18	195'	\$32.95	
SB42921	1-lb. Spool	20	79'	\$8.25	
SB10516	1-lb. Spool	20	315'	\$32.95	
SB10517	1-lb. Spool	22	500'	\$32.95	
SB10518	1-lb. Spool	24	790'	\$32.95	
SB10519	1-lb. Spool	26	1,260'	\$32.95	

#### **B. PVC-Covered Copper Connecting Wire**

Use when high conductivity with negligible loss is essential. PVC-coated copper wire.

	5	5 5		1.1
Product No.	Description	Gauge	Length	Each
SB10520	10-oz. Roll, White	22	100'	\$8.15
SB10521	10-oz. Roll, Black	22	100'	\$8.15
SB10522	10-oz. Roll, Blue	22	100'	\$8.15
SB10523	10-oz. Roll, Red	22	100'	\$8.15
SB40515	10-oz. Roll	20	100'	\$12.95

#### C. Insulated Alligator Clips

5 black and 5 red clips with insulated handles. Pkg. of 10. SB23790 - \$7.50

#### D. Fahnestock Clips

For 1 wire. With screw hole. Pkg. of 100; 3/4" x 5/16". SB19192 - \$15.70

#### E. Alligator Connector Cords

Flexible, plastic-covered wire with alligator clips at both ends (3 red and 3 black).Pkgs. of 6.

SB13984 12" - \$7.95

SB13985 24" - \$8.95

#### F. Alligator Lead Set

Alligator leads in 5 colors. 14" cords. Set of 10. SB51195 - \$10.95

#### G. Banana Plug Cords, Stacking Type

Two-way stack plugs are at both ends of flexible coated wires (3 red and 3 black). 24" cords. Pkg. of 6.

SB13988 - \$15.95

#### H. Banana Plug Cords with Alligator Clip

Flexible, plastic-covered with a banana plug at one end and alligator clip with protective vinyl sheath at other. Pkgs. of 6 (3 red and 3 black).

SB13990 12"-\$12.15 SB13991 24" - \$13.15







Wire Stripper Heavy-gauge steel. 5" tool strips 10–24 gauge wire and trims copper wire up to 10 gauge. Permanent black finish with PVC grip handle. 8"L.

SB27693 - \$4.95











#### A. Miniature Lamp Bulb Holders

With 2 Fahnestock clips for connecting wires. No screwdriver required. Mounted on Masonite base. Components can be combined to form circuits of multiple lengths.

Product No.	Description	Each
SB17079	Single Holder	\$1.20
SB18058	Triple Holder	\$3.95

#### B. 5 Mini Lamp Circuit Board

Mounted on 4" x 11" styrene base with 10 connecting posts and 8 connecting links. Buss bars connecting receptacles allow for quick changing from parallel to series circuits and many combinations. 6V lantern battery recommended.

**3-Lamp Circuit Board.** Use with 6V maximum for safety. Mounted on 8" x 5½" x ¾" clear acrylic base for overhead projections. SB31102 - \$25.95

SB13995 - \$20.00

# E. Metal Lamp Holders

C. Miniature Bulb Holders

SB27439 - \$12.95

SB18052 - \$13.50

base. Bulb not included. Pkg. of 10

D. Receptacle for Miniature Lamps

Miniature sockets with 2 terminals fit all miniature screw base lamps. Pkg. of 10.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

Metal components mounted on 13/4" dia. plastic

Plastic base with metal insert. Screw terminals.

SB46999 - \$4.65

Pkg. of 10.

#### F. Brass Knife Switch

Brass poles and knives. Single throw and single pole. Pkg. of 10. SB09736 - \$15.00

#### G. Knife Switches

Bakelite knife switches with easy-to-use spring or screw binding posts. Single throw and single pole.

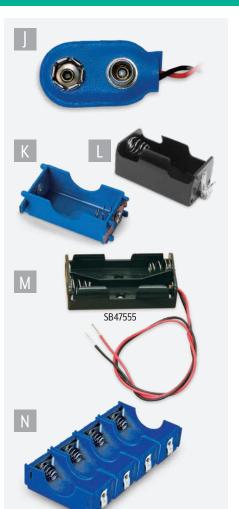
SB27551 - \$1.95 **SB25237** Pack of 20 - \$35.75

# H. Miniature Lamps

Screw base. For miniature lamp holders on this page. Pkgs of 10.

**\$09288** 1.5V - **\$4.00 S09289** 2.5V - \$4.00 **SB52273** 6.3V - \$6.50

I. Miniature LED Lights 3.2V, 25mA. Pkg. of 10. SB51117 - \$25.25





Nasco Bucket O' Batteries Pack of 48 "D" batteries in storage bucket with lid. SB42845 - \$61.95

Size "D" Alkaline Batteries. Pkg. of 2. SB10826 - \$4.90

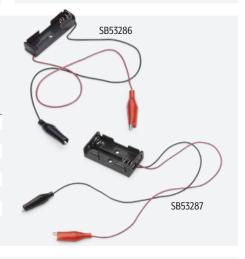


Nasco Bucket O' Batteries with Holders 20 "D" batteries, 15 battery holders, and storage bucket. For 15–30 students. SB42844 - \$42.95

#### **Battery Holders**

Comes with 12" wire and alligator clips

attachea. 20 gauge wire.				
Product. No.	Size	Cells	Each	10+
SB53286	AA	1	\$1.50	\$1.35
SB53287	AA	2	\$1.95	\$1.76
SB53288	C	1	\$1.95	\$1.76
SB53289	C	2	\$2.50	\$2.25
SB53268	D	1	\$2.95	\$2.66
SB53290	D	2	\$2.95	\$2.66
SB53291	9V	1	\$2.95	\$2.66



#### . 9 Volt Battery Connector

5%" (15 cm) red and black leads with insulated snap-in connector.

SB41221 - \$1.65

#### K. Battery Holder/Joiner

Holds a standard "D" size cell battery. Highimpact plastic with male and female button snaps on ends. Extensions on sides allow instant connections in series or in parallel without using leads.

SB19023 - \$2.95

#### L. Battery Holder

Fahnestock clips attached at each end. D-cell snaps into plastic holder, which can be joined for series or parallel circuits.

SB41216 - \$1.55

#### M. Battery Holders

Comes with a 12" wire.

Product. No.	Cell Holder	Cells	Price
SB47555	AA	2	\$1.05
SB47556	AA	2 with Switch	\$1.55
SB47551	D	1	\$1.55

#### N. Plastic "D" Battery Holder

Pack of 4 "D" detachable battery holders that secure 4 batteries in parallel or series.

SB45491 - \$6.50

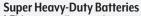
## 6-Volt Heavy-Duty Battery

Magnetic poles. S09285 - \$7.25

#### 1.5-Volt Plus Batteries

A much longer life than conventional carbon-zinc batteries. Batteries maintain a full-rated voltage for life. Battery brands may vary.

Product. No.	Size	Pkg.	Price/Pkg.
SB27438	AAA	4	\$5.30
SB34663	C	4	\$7.65
SB10826	D	2	\$4.90
SB19164	9V	1	\$5.35



1.5V. super cells provide up to twice the life of ordinary general-purpose cells.

Product. No.	Size	Pkg.	Price/Pkg
SB10916	AA	4	\$1.75
SB10915	С	2	\$2.15
SB08606	D	2	\$2.25

#### **Duracell® "AA" Alkaline Batteries** Long shelf life. Meets or exceeds

industry standards. **SB47852** Pack of 24 - \$21.50 **SB47853** Pack of 48 - \$38.00



SB19164



SB47852

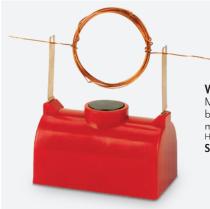
SB08606





#### **United Scientific Wimshurst Generator**

Gr. 5+ Demonstrate high voltage electric charges with this high-quality generator. Features acrylic rotating disks, foil strips and brushes, insulated cylindrical capacitors, and a durable plastic platform. For classroom demonstrations, it will produce large sparks. Allow extra delivery time. NE30304 — \$197.95



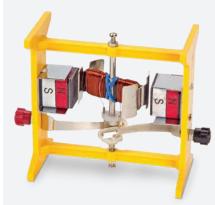
an outside electrical

circuit. Plastic.

**Demo Set** 

SB35036 - \$17.25

**World's Simplest Motor** Motor kit demonstrates the basic principles of electromagnetism.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB26058 - \$8.99



DC Motor Magnet polarity can be reversed. Can also be used with a rheostat to observe the change of speed with the change of current. Can operate on a 1.5V battery. SB30029 - \$14.50



Genecon **Handheld Generator** Generates up to 12V DC. Handle with reinforced thumb grip and longer lead wire that is color coded (red and black). Reinforced internal gears improve longevity of the unit.

\( \Delta \text{CHOKING HAZARD (1)}. \) Not for under 3 vrs

SB48089 - \$67.95



1" Dia. DC Motor

Operates from 1.5V to 3V at .5V with no-load 80 to 90mA. .5 stall 200mA. Low torque; high rpm. 1" dia. x 1½"L. 2 mm shaft. SB18068 - \$4.95



Includes 1 red and 1 black lead (4" each). Works with 1.5V, "AA," "C," or "D" batteries. Buzzer housing includes 2 screw holes for mounting.  $\frac{1}{2}$ " x  $\frac{1}{2}$ ".  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB47558 — \$4.15



**DC Motor with Alligator Leads** Voltage requirements: 4.5 to 6.0 DC volts. Red and black connector cord with insulators. 3"L. SB39321-\$4.95



#### Student Cell Electrode Set of 10

Includes 2 electrodes each of copper, iron, aluminum, and zinc; and 1 each of carbon and nickel.  $4'' \times \frac{3}{4}$ "

SB14273 - \$12.95



Electric Bell Kit

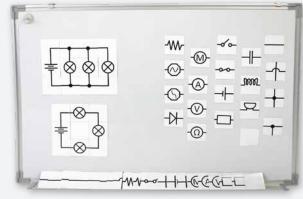
Gr. 6+ Fully exposed bell rings out when an electrical circuit is completed. Wood stand, banana plug jacks, adjustable hammer, and instructions.

SB47006 - \$20.25



Plasma Globe

Touch of the hand causes streams of "electrically" charged particles to leap harmlessly within sealed globe. Responds to music and voice. The globe is 4" dia. and overall 8"H. UL listed. AC adapter included. SB48449 - \$22.95



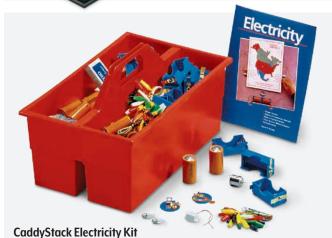
Stick to Science — Circuits

**Gr. 7**+ Teaches common electrical circuit components and how to sort them. 78 magnetic pieces and teacher's guide with example activities. SB53072 - \$19.95

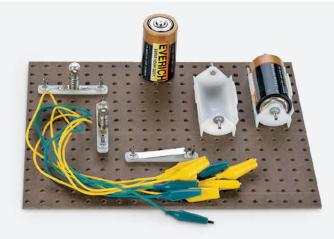


Individualized Science Module – Mini Electricity Kit **Gr. 3–8** Create electrical circuits using energy stored in batteries to light a bulb and ring a doorbell. For 4–8 students.

SB27593 - \$45.95



Includes 16 bulb holders, 16 switches, 16 miniature bulbs, 30 wire connectors, 16 battery holders, 16 "D" cell batteries, 2 motors, 2 buzzers, 32-page teacher's guide, and plastic tote. For 15–30 students. △ CHOKING HAZARD (1). Not for under 3 yrs. SB32922 — \$143.95



Individualized Science Module – Simple Circuits Kit **Gr. 3–8** Construct simple electrical circuits with or without a switch to

learn about the flow of electrical current. For 4–8 students. SB27587 - \$25.95

# PHYSICAL SCIENCE Electricity



#### Snap Circuits® MyHome Kit

**Gr. 3**+ Students can build a house with real functional 3D circuits. just like the ones they use every day, and learn all about how they work. Includes 60 pieces and an illustrated, full-color manual with 25+ projects. 🛆 CHOKING HAZARD (1). Not for under 3 yrs. NE30431 - \$79.95



#### **Snap Circuits® Discover Coding Kit**

**Gr. 3+** Build projects with lights, sounds, and a motor and control them with a smartphone or tablet. Includes over 30 pieces, Bluetoothpowered SC Controller, 5 control outputs, and an illustrated, full-color manual.  $\triangle$  CHOKING HAZ-ARD (1). Not for under 3 vrs. NE30432 - \$94.95









#### Snap Circuits® STEM Kit

Gr. 3+ Dive into STEM concepts with award-winning Snap Circuits! Projects explore magnetic

fields, how the electricity in a home works, how switches control electricity, and more. Includes over 45 pieces and an illustrated, full-color manual with 85+ projects. A CHOKING HAZARD (1). Not for under 3 yrs. NE30434 - \$58.95





#### Snap Circuits® 3D Illumination Kit

Gr. 3+ Build in 3D and explore circuitry with a light tunnel, mirrors, a projector, and more! New Snap Circuits modules allow students to build their circuits horizontally, vertically, and upside down. Includes over 50 pieces and an illustrated, full-color manual with 150+ projects. ▲ CHOKING HAZARD (1). Not for under 3 yrs. NE30433 - \$80.95



#### A. Snap Circuits® Alternative Energy Kit

Build over 125 projects while learning about energy and how electricity in your home works. Full-color, 100-page manual that explains all forms of environmentally friendly energy. Over 40 pieces.

SB46741 - \$102.95

#### B. Snap Circuits® Arcade Kit

Build over 200 projects using a programmable Word Fan, dual LED display, and a pre-programmed microcontroller. 30 pieces.

SB53347 - \$83.95

#### C. Snap Circuits® Bric: Structures Kit

Combine Snap Circuits® with ordinary building bricks to build skyscrapers with working lights, drawbridges with gears that move, and more. Includes 20 Snap Circuits® component parts, 75 Bric-2-Snap adapters, over 140 building bricks, and manual.

SB53348 - \$55.95

#### D. Snaptricity®

Help students learn how electricity and magnetism can be used to make each other, about magnetic fields, how series and parallel circuits affect electricity, and more. Over 40 pieces to build over 75 projects.

SB53349 - \$55.95

#### E. Snap Circuits® Motion Kit

Over 165 projects focus on concepts of motion and physics and include color-changing lighted fan, air "fountain," motion detector, and more. Over 50 pieces.

SB53350 - \$108.95

#### F. Snap Circuits® Light Kit

Connect an iPhone® or other device to play music and watch lights change to the beat. Over 55 pieces to build over 175 projects.

SB53351 - \$108.95

#### G. Snap Circuits® Radio-Controlled Snap Rover®

Build a radio-controlled rover and over 40 other projects. 50 pieces, including a wireless remote control.

SB53352 - \$133.95



#### Snap Circuits® STEM Classroom Activity Kit

**Gr. 3–5** Get an entire circuitry unit in one convenient kit — created by teachers for teachers! The step-by-step curriculum walks through 10 days of open-ended activities. Includes 6 activity kits (support up to 18 students), 1 teacher's quide, 6 student workbooks (additional workbooks sold separately), detailed parts list and explanation, spare parts, traditional (pre/post/summative) and project-based assessments, presentation materials, summary sheet, and carrying case. △ CHOKING HAZARD (1). Not for under 3 yrs. Allow extra delivery time. 🖚

NE30435 Classroom Activity Kit — \$449.95 **NE30436** Additional Workbooks, Set of 6 – \$35.95



All kits include pieces and a manual. Kits with computer interface are the same as regular kits but include extra computer-interfaced projects. Allow extra delivery time.

Snap Circuits® |r. Gr.2+ 100 experiments. 30 pieces.

**SB39452** In hard case — \$70.95 SB37731 In box - \$44.95

Snap Circuits® Classic. Gr. 2+ 300 experiments. 60 pieces.

**SB39453** In hard case — \$163.95 SB37730 In box - \$89.95

Snap Circuits® Pro. 500 experiments. 75 pieces in a box.

SB39162 - \$125.95

Snap Circuits® Extreme. Gr. 2+ High-tech computer interfaced kit for more advanced students. Over 80 parts build over 750 experiments including voice recorder, IC FM radio module, analog meter, and more. Extreme Training Version also includes 138-page student guide and a teacher guide with guizzes. In cardboard box.

SB39455 Snap Circuits® Extreme - \$185.95 SB53355 Snap Circuits® Extreme Training Version - \$268.95

⚠ See page 3 for complete Choking Hazard Label Information.

For a complete selection of Snap Circuits, visit nascoeducation.com





#### **Nasco Current Electricity Kits**

**Gr. 5–8** Detect and investigate the direction of current flow and magnetic fields, batteries and chemical voltaic cells, series and parallel circuits, voltage, amperage, resistance, work done in electrical circuits, electrical heating effects, short circuits, and fuses. Aligned with NGSS.

Multi-Group. For 6 work stations. △ CHOKING HAZARD (1). Not for under 3 yrs. SB50691-\$440.00

**Demonstration.** For 1 work station or classroom demonstration. 🛆 CHOKING HAZARD (1). Not for under 3 yrs.

SB50150 - \$96.95



Includes 10 "D" cell battery holders, 10 bulbs (#41), 10 bulb sockets, 20 electrical clips, 10 knife switches, 100' bare copper wire, 100' insulated wire, and 5 wire strippers, all in plastic carry case. SB27441 - \$79.95

#### Nasco Bucket of Volts

Gr. 7+ Students test the voltage of cells and batteries, build and test different kinds of circuits and an electromagnet, and test the conductivity of common objects. Each of the 7 trays in the storage bucket contains all the components that 2 groups will need to complete the 4 included labs and additional optional experiments. Everything is reusable. Extremely fast construction of circuits using magnetic wire leads (Magleads®). Booklet contains 4 circuit experiments with lab sheets and 6 additional modifications. Instructor's manual. All components are contained in a 7-gallon bucket with lid. For 28 students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB48577 - \$714.95



# Get everything you need to explore circuits, currents, switches, and more

#### **Nasco Student Electricity Assortment**

**Gr. 5+** Includes 10 mini lamp bulbs (1.5V), 10 Fahnestock clips, 3" x 4" plastic bag, 6 battery holders, 100' of black-coated copper wire, 3 alligator connection cords, 3 banana plug cords, 6 bulb holders, 3 knife switches, 1 wire stripper/crimp tool, and flip top storage box. SB45407 - \$39.95



#### **Nasco Electromagnetism and Current Electricity Kits**

Gr. 5-8 Covers fundamental characteristics of current electricity and electromagnetism. Investigations include recognizing complete circuits, experimenting with conductors and insulators, determining direction of current flow and magnetic field in circuits, making an electromagnet and applying the "left-hand rule," and factors that affect the strength of an electromagnet. Aligned with NGSS. A CHOKING HAZARD (1). Not for under 3 yrs.

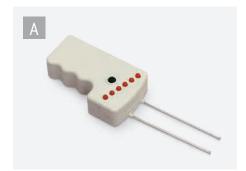
**Multi-Group.** For 6 work stations. **SB15342**—**\$235.00** 

**Demonstration.** For 1 work station or classroom demonstration. SB50690 - \$84.95

**Electrical Board Only.** Wood board designed to use connecting wires to build circuits.

SB14180 - \$18.55





# **Building & Designing Batteries NextGEN STEM Kit**

**Gr. 7**+ Contains 8 investigative activities that teach students how to use a multimeter to measure voltage and amplitude, calculate electrical resistance and electrode potentials, evaluate battery performance, assemble electrical circuits, and construct batteries. Main concepts covered include energy, matter, and electrochemistry. Enough materials for 40 students working in groups of 4, as well as a DVD, teacher and student guides, and digital content. Aligned to NGSS.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

SB51335 - \$260.00

#### **Conductivity Meters**

Compares conductivity of solutions, acids, or salts. Dip probes, press button, and note. LEDs give a quick visual comparison.

A. Conductivity Meter Tester. Compare conductivity in 6 levels. Red LEDs and 3¼" x 1/16" thick stainless steel probes. Total length with probes: 7". Requires 2 "AA" batteries (not included). SB48978 — \$17.50

B. Conductivity Meter. Compare conductivity in 10 levels. Green LEDs and brass probes. 5½" x 11/16"

SB48330 - \$33.95



#### **United Scientific Advanced Electricity** and Magnetism Kit

**Gr. 5–12** Introduce students to the basic principles of electricity and magnetism with this 47-piece kit. NGSSaligned guide includes 25 activities that explore 7 key topics. Components are mounted on sturdy molded bases and connections are made with reliable spring terminals Requires 3 AA batteries (not included).

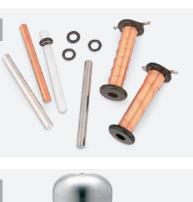
NE30447 - \$79.95













G. Electromagnet Science Set

held, or use on base. 9" x 9" x 25".

SB32806 - \$39.95

H. Discharge Wand

SB40924 - \$80.95

Materials for 6 projects and 40-page activity

guide with instructions and glossary. For 1–4

students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

Gr. K+ Pair with small (SA05680, at left) and

large Van de Graaff Generators (SB40813, at

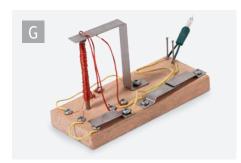
left), then sit back and watch the sparks fly as a

lightning bolt is brought into the classroom. Hand-

For a complete selection

of electricity products,

visit nascoeducation.com



nascoeducation.com

#### A. Hoffman Electrolysis Apparatus

Each graduated glass tube has stopcocks. Tubes are mounted on stand fitted with binding posts. Includes platinum electrodes. Use clamp SB18967 (p. 132) to hold center glass tube. Overall height: 2' (65 cm).

SB11120 - \$139.95

#### B. Electrolysis Apparatus

3" dia. x 2½" plastic container with mounted carbon electrodes. Container bottom has cutouts so leads can be connected to electrodes with ease. Total height: 33/4". 2 alligator clips (1 red, 1 black) and 2 graduated test tubes. Works on 12V DC. Replacement parts are available at nascoeducation.com.

SB52440 - \$25.95

#### C. Tesla Coil

Transmit electricity without wires. Watch light bulbs glow in your hand. Safe, hard-to-find source of high frequency high voltage electricity. Arcs to 3". 50,000V potential. Fully assembled. 110V, 60 cycle AC.

SB28821-\$335.00

#### D. 200 KV Electrostatic Generator

Gr. 5+ Generates 5" sparks. No shock hazard. 200,000V potential in humidities up to 90%. Neoprene belt lasts up to 500 hours (spare included). Plastic molded base and housing, 18 cm aluminum globe, PVC column, ground, and terminal. Already assembled. Uses 110V AC, 60

SA05680 - \$202.95

#### E. Electromagnet Experiment Set

Determine how the strength of an electromagnet is affected by the number of turns in the coil and the nature of the material that occupies the space inside the coil.

SB16533 - \$204.95

#### F. 400 KV Van de Graaff Generator

Gr. K+ Seamless, negatively charged, 125%" dia. stainless steel globe for learning about static charge. 3" dia. column is made of shock-resistant, transparent butyrate. Sparks can reach up to 10". Operates in humidities up to 90%. 400,000V potential. Unit is 29". Allow extra delivery time. 🖚

SB40813 - \$715.00

Replacement Belt. Neoprene. SB41227 - \$43.95

#### Student Meters - DC

Closed-back meters offer reliability, ruggedness, and affordability. 5%6" x 3%6" x 3%8" plastic housing. Large  $3\frac{3}{4}$ " x  $3\frac{3}{16}$ " clear plastic meter face has external zero adjustment. All meter movements are diode protected against overload. Five-way versatile binding posts. Accuracy ±2.5% of full scale on all models.

Product. No.	Meter Type	Scale	Range	Each
SB26365	DC Voltmeter	Single	0-10V	\$10.50
SB26366	DC Voltmeter	Double	0-5/0-15V	\$12.50
SB26374	DC Ammeter	Double	0-1/0-5A	\$12.15
SB26381	DC Milliammeter	Triple	0-5/0-50/0-500mA	\$9.95





#### Individual Student **Electrostatics Science Kit**

NE30022 - \$24.95

Gr. 6-12 Whether students are learning in the classroom or from home, this kit allows them to explore static electricity. Help them create static electricity and the conditions where it appears. Kit includes: 3 rods (hollow glass, half-ground glass and ebonite); 3 balloons; 3 friction pads (flannel, silk, animal fur); and instructions.



#### **Nasco Friction Rod Kit**

Solid plastic rod, hard rubber rod, and hollow glass rod (closed at one end); 3 friction pads (flannel, silk, animal fur); balloons; and instructions.

SB13247 - \$27.95



#### American Scientific Basic Meter

Use this meter to measure the effects of electricity. This two-in-one meter can be used as either a voltmeter to draw minimal current from an electrical source or an ammeter to connect with a circuit. Includes a teacher guide. 100 uA - 5 A and 100 mV - 50 V. NE30273 - \$25.95



#### **United Scientific Digital Multimeter**

Gr. 5+ Measure and verify multiple electric stimuli with this digital multimeter. This versatile and economical tool includes AC voltage, DC voltage, continuity, resistance, transistor, and battery test modes. Features digital LCD display. Complete with two 24" wire leads. 9V battery included.

NE30305 - \$9.95



#### **Digital Multimeter**

3½" digit LCD readout (2,000 count display). Transistor test, audible continuity test, diode test, 50 Hz signal injector (square wave), overload protection, and test leads. DC voltage range: 200mV, 2000mV, 20V, 200V, 1000. DC current range: 200uA, 20mA, 200mA, 10A. AC voltage range: 200V, 750V. Resistance range:  $200\Omega$ ,  $2000\Omega$ , 20 K $\Omega$ , 200K $\Omega$ , 2000Ω. Input impedance:  $1MΩ. 5" \times 234" \times 1"$ SB26578 - \$21.95



#### **Digital Multimeter**

Extra-large 33/4" digit LCD display (4,000 count), low-battery display, floating decimal point, frequency counter (up to 10 MHz), AC and DC current (0-10A, 5 ranges), transistor hFE test, resistance (0-40M $\Omega$ , 6 ranges), low OHM continuity beeper, transistor hFE test socket, recessed input jacks, low power consumption, over range indicator, automatic polarity indicator, AC and DC voltages (600V, 5 ranges), capacitance (up to 200µF, 6 ranges), diode test function, capacitance test sockets, and input impedance  $10M\Omega$  on all ranges of AC and DC voltage measurement. Includes 2 leads with banana-clip ends and 2 probes. Protected three ways against accidental overloads.

SB27462 - \$52.95

Magnetism



















#### A. Magnet Set

Includes steel horseshoe magnet, 2 ceramic bar magnets, 3 ceramic donut magnets, 4 metal squares, iron filings pack, lodestone, 2 magnetic compasses, and activity guide with 17 experiments.

SB31100 - \$38.95

#### B. AC/DC Variable Power Supply

DC output from 0–30V. AC output from 0–40V at up to 5 amps. Voltage adjust knob controls all three outputs. Volt and amp meters display setting.  $734" \times 12" \times 53\%"$ .

SB45640 - \$275.95

#### C. Mighty Magnets

Plastic. Set of 6; 5". SB38803 - \$26.95

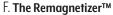
#### D. Dowling Alnico Magnet Set

Includes 1" horseshoe magnet, 2" horseshoe magnet, 2" bar magnet, and tube of iron fillings and steel shapes. <u>A</u> CHOKING HAZARD (1). Not for

SB45563 - \$24.95

#### E. Dowling Horseshoe Magnet

Neodymium magnets embedded in "feet" makes it permanently magnetic. 6". SB45566 - \$9.95



Remagnetizes magnets that have lost their magnetism. Requires no electricity. Aluminum frame, steel base with mounting holes, and 2 permanent neodymium magnets. SB22516 - \$77.95

G. **Dowling Alnico Bar Magnets** Painted red and blue. 3".

SB49700 - \$14.95

#### H. Dowling Ceramic Magnets

Set of 2; 2" x 1" x 3%" each. SB33558 - \$6.95

#### l. Dowling Magnet Bars

Learn about magnetic polarity. Pair of red and blue magnet bars. Ceramic. 3" each. SB39411 - \$7.95

. Dowling Block Set Magnets

Plastic-encased magnets. Set of 12; 2" x 1" x ½" each.

SB45570 - \$15.95

#### K. Dowling Magnet Bars

South pole in blue. North pole in red. Pair; 7" x ¾" x ¼" each. SB26074 - \$19.95

L. Chrome Bar Magnets

Two-plated chrome alloy magnets with marked poles. 6" x 3/4" x 1/4" thick. Pair.

SB15358 - \$22.50

#### M. Pair of Dowling Magnet Bars

South pole in white. North pole in red. Pair; 4½" x½" each.

SB47138 - \$27.95

#### N. Alnico Bar Magnets

Powerful, painted magnets demonstrate magnetic properties and magnetic fields. Poles are marked.

Product No.	Size	Per Pair
SB26083	1/4" x 1/2" x 11/2"	\$7.95
SB14309	¼" x ½" x 2"	\$10.50
SB26084	¼" x ½" x 2½"	\$10.95

#### O. Neodymium Disc Magnets

The strongest magnet material available today. Magnetism guaranteed for life.

8 mm x 3 mm, Pkg. of 10. 5/16" x 1/8" thick. SB38464 - \$9.95

12 mm x 3 mm, Pkg. of 6. ½" x 1/8" thick. SB38463 - \$9.95

18 mm x 3 mm, Pkg. of 3.  $1\frac{1}{16}$ " x  $\frac{1}{8}$ " thick. SB38465-\$9.95

#### P. Polished Alnico 5-Finish Magnet

½" dia. cow magnet. C09784 - \$7.95

#### O. Horseshoe Magnets

Strong steel magnets. North and South poles marked. Includes keeper.

Product No.	Size	Each
SB16070	3" (7.5 cm)	\$4.05
SB16071	6" (15 cm)	\$5.75

#### **Dowling Ceramic Magnets Classroom Packs**

Sets of 12 permanent magnets in 6 colors. & CHOKING HAZARD (1). Not for under 3 yrs.

R. Ring Magnets. 11/8". SB16501 — \$10.95

S. Latch Magnets.  $\frac{3}{4}$ " × 1". SB16502 - \$6.95

T. Block Magnets.  $\frac{1}{4}$ "  $\times$   $\frac{3}{4}$ ". SB16503 - \$4.65

#### U. Magnetic Putty

Moldable putty takes on properties of a magnet when placed in close contact with included magnet. Made with micron-sized iron-based particles distributed throughout. Teacher's guide included. 🛆 CHOKING HAZARD (1). Not for under 3 yrs.

⚠ See page 3 for complete Choking Hazard Label Information.

SB50318 - \$11.75



















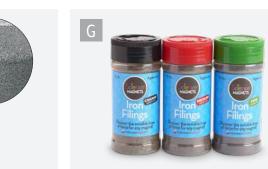
Magnetism















#### A. North/South Magnet Marbles

Color-coding helps show how magnetic attraction and repulsion cause motion. 5%" dia. each. SB52998 Set of 100 - \$34.95

#### B. Neodymium Magnet

Super-strong magnet, made of the most powerful magnet material in the world, can actually attract through your hand. ½" thick x

SB31326 - \$23.95

#### C. Mysterious Magnet Tube

Explore 3-D patterns created by magnetic fields. Steel filings are sealed in a container. Includes alnico cow magnet and activity booklet. SB52997 - \$24.95

#### D. Iron Filings Set

Set of 5 plastic cases (3" x 2") with enclosed iron filings. Works best with alnico or neodymium magnet (not included).

SB46840 - \$12.75

#### E. Coarse Iron Filings

Shaker dispenses filings without waste. 1 lb. S06119 - \$6.25

#### F. Fine Iron Filings 1.2-oz. tube.

SB50151 - \$4.95

#### G. Iron Filinas

Get 3 different results in magnetism experiments. Includes one 12 oz. jar of each: fine, medium, and coarse.

SB53391 - \$14.95

#### H. Magnetic Field Demonstration Plate

Transparent plate is comprised of a matrix of small circular chambers. Each chamber contains an iron rod and functions independently as a plotting compass. 913/16" x 913/16" SB48222 - \$34.95

#### l. Alnico Magnet Set

Includes 2 bar magnets ( $3\frac{1}{8}$ " x  $\frac{9}{16}$ " x  $\frac{3}{8}$ "), small horseshoe magnet ( $\frac{5}{6}$ " W x 1" H), and large horseshoe magnet ( $\frac{9}{6}$ " W x 1 $\frac{3}{8}$ " H). SB44472 - \$40.50

For a complete selection of science products, visit nascoeducation.com



#### **Dowling Classroom Attractions Magnet Sets** Provides all needed tools for an effective and

creative magnetism unit. For 5 students.

Level 1 Magnet Set. 10 magnet wands, button magnets, magnet marbles, ring magnets, magnetic counting chips, colorful paper clips, and pencils. ⚠ CHOKING HAZARD (1, 6). Not for under 3 yrs. SB32808 - \$89.95

**Level 2 Magnet Set**. 5 magnet wands, ring magnets, north/south bar magnets, dominoshaped magnets, ceramic horseshoes magnets, compasses, polished steel shapes, and pencils. △ CHOKING HAZARD (1). Not for under 3 yrs. SB29805 - \$84.95

**Level 3 Magnet Set.** 5 alnico bar and 5 alnico horseshoe magnets, 10 ceramic block magnets, 15 latch magnets, 10 disc magnets, 5 lode-stones, 5 flexible magnets, 5 pieces of magnetic viewing film, 5 sets of iron filings, 5 compasses, 5 corks, 5 dowels, 5 nails, and demo bar magnet. ▲ CHOKING HAZARD (1). Not for under 3 yrs. SB32810 - \$129.95

Magnetic Wand Classroom Pack. Pack of 12 ceramic magnetic wands (2 each of 6 colors). SB16505 - \$25.95





#### **Magnet Levitation Kit**

Experiment with equilibrium, gravity, and magnetic fields while building a levitating train. Builds 5 magnetism experiments and 5 magnet levitation projects. Aligned with NGSS. SB52994 - \$39.95



#### **Magnetic Field Demonstrator** Transparent acrylic case holds

iron filings in a fluid of proper viscosity. Place an alnico or neodymium magnet on the device, and the iron filings will move to form a pattern that shows the magnetic field of that magnet.  $8\frac{1}{2}$ " x  $4\frac{1}{2}$ " x  $\frac{3}{8}$ ". SB30028 - \$15.75





# Consists of two half hexagonal acrylic

containers with metal filings. Both parts can be swung open or closed. Place a strong bar magnet between containers to reveal cross section of a magnetic field.  $5" \times 5" \times 5"$ . **SB39179** – **\$38.50** 



# Quick Index

Coding & Robotics 258–268

Supplemental Curriculum 279



#### Matatalab Hands-On Coding

Gr. PreK-4 Screenless, words-free robot helps students learn how to code. Image recognition technology allows the command tower to recognize tangible coding blocks in front of the device and execute the program.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

Classroom Set. Includes Coding Set, Musician Add-On, Artist Add-On, and 4 curriculum guides.

EL16879 - \$1.499.00

EL13708 - \$59.95

Coding Set Plus Add-Ons. Includes Coding Set, Musician Add-On, and Artist Add-On. EL16832 - \$239.00

Coding Set. Includes robot car, command tower, control board, 37 coding blocks, 8 obstacles, 3 flags, 3 challenge booklets, and nature map. EL16528 - \$169.00



Robot Mouse Set. 16 pieces to create a 20" x 20" maze board.



Thames & Kosmos Gravity Bugs™ Free-Climbing MicroBot

**Gr. 3–9** Build a mighty robotic bug that defies gravity to crawl up, down, and all around windows. This hands-on construction kit shows students the power of air pressure and brings engineering and physics to life. Includes 78 pieces and an 8-page guide. Requires 1 "AAA" battery. A CHOKING HAZARD (1). Not for under 3 yrs.

NE30275 - \$24.95

**DEVELOP A STRONG FOUNDATION** with coding concepts

students can build on

#### Thames & Kosmos Huey: The Line-Tracking, Color-Sensing Robot

**Gr. K–4** Start students off on their coding journey with Huey, a fun, color-sensing robot pal. This kit offers a hands-on, screen-free introduction to the world of robotics and coding. Includes 115 pieces, instruction manual, and challenge book. Requires 3 "AAA" batteries. No computer, tablet, or smartphone needed to operate.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. NE30278 - \$59.95



Botley<sup>™</sup> the Coding Robot

Gr. K+ Introduce coding fundamentals without the need for a screen. Pairs hands-on coding challenges with advanced collision detection, looping commands, and If/Then programming logic. Program up to 80 steps, or turn on black-line-following mode and draw a path for the robot to travel. No smartphone or tablet required. Features object detection sensor, enhanced wheels for multisurface use, robo-gear for moving blocks and objects, and LEDs to show direction of each step. Includes remote programmer for easy coding input. 77-piece set includes programmable robot, mats, interactive obstacles, blocks, and more.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

EL16206 - \$74.95







# **Dash Tech Center Curriculum Pack**

#### Gr. K-5 Pack includes 6 Dash robots with charging cables, 12 building brick connectors, and the following software subscriptions: Class Connect accounts for 1 teacher and 35 students, Wonder Workshop's cross-curricular lesson library for 1 teacher, enrollment in professional development mini-course, "Getting Started with Dash & Dot" for 1 teacher, and full access for 35 students to the Wonder League Robotics Competition missions and resources. $\triangle$ CHOKING HAZARD (1). Not for under 3 yrs. Allow extra delivery time.

**NE30379** w/1-Year Subscription — \$1,250.00 NE30380 w/2-Year Subscription - \$1,465.00 **NE30381** w/3-Year Subscription — \$1,665.00

**Dash Classroom Curriculum Pack** 

#### **Wonder Classroom Curriculum Pack**

**Gr. K–5** Pack includes 6 Dash robots with charging cables, 2 Sketch Kits, 2 Gripper Building Kits, 2 launcher accessories, 12 building brick connectors, and the following software subscriptions: Class Connect accounts for 1 teacher and 35 students, Wonder Workshop's cross-curricular lesson library for 1 teacher, enrollment in PD mini-course "Getting Started with Dash & Dot" for 1 teacher, and full access for 35 students to the Wonder League Robotics Competition missions and resources.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs. Allow extra delivery time.

**NE30382** w/1-Year Subscription — **\$1,450.00** NE30383 w/2-Year Subscription - \$1,665.00 **NE30384** w/3-Year Subscription — \$1,865.00

Gr. K-5 Pack includes 6 Dash robots with charging cables, 12 building brick connectors, and the following software subscriptions: Class Connect accounts for 1 teacher and all students in your school, Wonder Workshop's cross-curricular lesson library for 1 teacher, enrollment in PD mini-course "Getting Started with Dash & Dot" for I teacher, 1:1 onboarding and implementation support, and full access for all students in your school to the Wonder League Robotics Competition missions and

resources. 🛆 CHOKING HAZARD (1). Not for under 3 yrs. Allow extra delivery time. 🖚

**NE30385** w/1-Year Subscription — \$2,195.00 NE30386 w/2-Year Subscription - \$3,000.00

# NE30387 w/3-Year Subscription — \$3,785.00 **Wonder Tech Center Curriculum Pack**

Gr. K-5 Pack includes 10 Dash robots with charging cables, 4 Sketch Kits, 4 Gripper Building Kits, 4 launcher accessories, 20 building brick connectors, and the following software subscriptions: Class Connect accounts for 1 teacher and all students in your school, Wonder Workshop's cross-curricular lesson library for 1 teacher, enrollment in PD mini-course "Getting Started with Dash & Dot" for 1 teacher, and full access for all students in your school to the Wonder League Robotics Competition missions and resources.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. Allow extra delivery time.

NE30388 w/1-Year Subscription - \$2,995.00 **NE30389** w/2-Year Subscription — \$3,800.00 NE30390 w/3-Year Subscription - \$4,585.00



# **Beginning Coding Kit**

**Gr. PreK-3** There are so many screen-free ways to introduce coding concepts to students and this convenient bundle has them all! You'll get a 64-gt. clear storage tote to hold the following five coding activity sets (details for each below):

- 1 Botley the Coding Robot Activity Set (p. 259)
  3 Coding Critters Play Sets (Ranger and Zip,
- Scamper and Sneaker, and Rumble and Bumble),

· 1 Let's Go Code! Activity Set △ CHOKING HAZARD (1, 4). Not for under 3 yrs.

NE30326 - \$274.95

ing adventures, 2 lively characters, and 2 interactive modes filled with sound, motion, and

music. 15 pieces each. & CHOKING HAZARD (1, 4). Not for under 3 yrs.





**EL16728** Ranger and Zip

Each -\$42.95



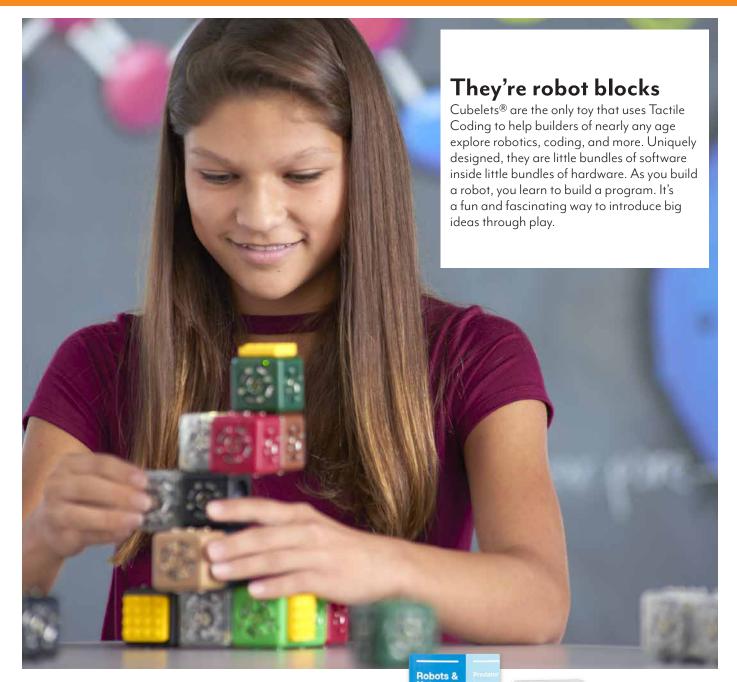
EL16728

Let's Go Code!™ Activity Set **Gr. K+** Includes 20 foam maze mats (9½" x 9½"), 20 doublesided coding cards, 10 die-cut pieces, and guide. 🛆 CHOKING

EL15376 - \$39.95

**EL16729** Scamper and Sneaker **EL16730** Rumble and Bumble

# Coding & Robotics



belets

Introduce robotics, coding, and design thinking as they create simple, mobile, and reactive robots by combining sense, action, and think blocks. Blocks automatically route power and data where needed.

Cubelets® Motivated Makers Pack. Includes 52 cubes, 24 brick adapters, 5-port charger, 5 charging cables, and 1 storage tub. For 6 groups. SB52239 - \$2,029.00

Cubelets® Boundless Builder Pack. Includes 19 Cubelets®, 4 brick adapters, charging cable, and storage tub. SB53142 - \$699.00

Cubelets® Classroom Bundles. Includes Lessons & Resources book with standards-aligned lessons, best practices, classroom management tips, and blackline masters. Also includes Cubelets® activity card set, sheet of Cubelets® magnets, and 18" x 24" poster.

SB53304 Gr. 1-3 SB53305 Gr. 4-6 SB53306 Gr. 7-12 Each - \$199.00

#### Makeblock mBot

Gr. 6+ Hands-on experience in programming, electronics, and robotics. Block-based programming software enables students to drag and drop command blocks to control their mBot. Students can use 3 preset controls or write new code through the mBlock app. Connects to smartphones, tablets, and computers via Bluetooth®. Compatible with other Makeblock platforms and LEGO® blocks. Add-on packs require an mBot (not included).

**mBot Ranger Robot Kit.** Students can use 3 preset forms or build their own robotic designs. 10 extension interfaces, 12 electronic modules, and 6 sensors. △ CHOKING HAZARD (1). Not for under 3 yrs.

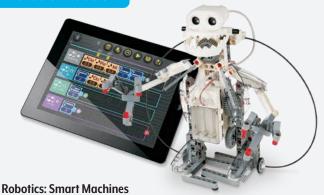
NA10356 - \$205.00

mBot-S Explorer Kit. Includes mBot and LED matrix. ▲ CHOKING HAZARD (1). Not for under 3 yrs.

NA10350 - \$90.00



#### **Builds 8 models**



**Gr. 5+** Code programs using an easy, visual programming app on a tablet or smartphone. Requires a tablet or smartphone running iOS® or Android™. iOS® devices must support Bluetooth® 4.0 and must be running iOS® 8.0 or later. Android™ devices must support Bluetooth® 4.0 and be running Android™ 4.4 or later.

EL14864 - \$134.95



#### Makeblock Ultimate 2.0 10-in-1 Robot

Gr. 6+ Learn about mechanical design, electronics, and programming. Block-based programming software enables students to drag and drop function blocks to control their robot. Also supports Arduino IDE, Node|S, and Python programming languages. Compatible with Arduino and Raspberry Pi. Over 160 mechanical parts and 80 types of electronic modules. Assembly guides for 10 designs serve as springboards for new creations.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. NA10357 - \$400.00



Gr. K-12 Complete STEM teaching resource for coding and robotics education. With built-in sensors, lights, sounds, and autonomous behavior capabilities, true robotics education is accessible to students of all ages. Not just a remote-controlled robot, also responds to light and sound, follows lines and avoids obstacles, communicates with other Edison robots, connects to other Edison robots and LEGO® bricks, and more. Robotics capabilities can be unlocked with ease through simple barcode programs. Students can then progress their robotics, coding, and STEM education journeys using 3 progressive programming languages. Can also be used to build and invent as the programmable base for an incredible range of engineering and STEM projects thanks to expandable robotics system that works with LEGO® bricks. A CHOKING HAZARD (1). Not for

SB52949 - \$49.95

SB53304



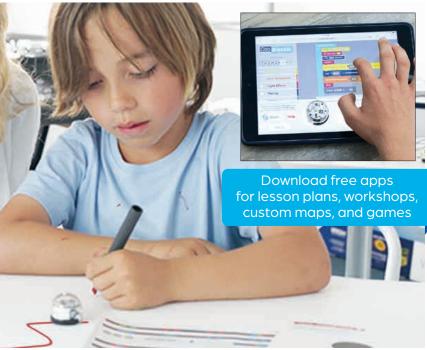
**Boe-Bot Robot Kit** 

Gr. 9+ Build your own rolling robot with a BASIC Stamp 2 microcontroller brain. No programming experience needed. Assembles in 1–2 hours. Allows you to learn and create your own electronic circuits; solderfree connections; easy-to-learn PBASIC programming language; touch, light, and infrared sensors that let the bot navigate on its own; and LEDs and a piezo speaker for audio and visual feedback. Mounting holes for servos and accessories. 13" x 9½" x 3½". Requires 4 "AA" batteries (not included). SB51418 - \$249.95

Coding & Robotics

# Ozobots — Tiny robots, big learning

These award-winning robots engage students of all ages. Introduce them to coding with screen-free color-coded programming and then graduate to simple block programming with color-coded apps. Free online curriculum offers limitless crosscurricular projects and extensions.







#### Ozobot Evo Robot Classroom Kits

Gr. K+ Students can code Evo two different ways: screen-free with Color Code markers and online with OzoBlockly visual programming. Features including proximity sensors, expressive sounds, LED lights, and Bluetooth® LE. Kits include Ozobot Evo robots, marker sets, a charging and storage base, a storage bin, and an instructional poster. You'll also get an Ozobot Classroom license code for access to teacher training, hundreds of STEAM lessons, and real-time information about your students' online and offline activity.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

NA10449 12 Pack - \$2,050.00 NA10450 18 Pack - \$2,990.00





#### **Ozobot Evo Educator Entry Kit**

Gr. K+ Pocket-sized robot can see colors, follow lines and mazes, detect intersections on paper and screens and be programmed to move. Scalable platform supports simple to complete coding. Lessons teach how to code online with Ozoblockly and screen-free with Color Codes. Includes Ozobot Evo robot, 4 Color Code markers, Get Started Activities protective case, and charging cable.  $\triangle$  CHOKING HAZARD (1). Not for under 3 vrs

NE30106 - \$175.00

## DISCOVER NEW OZOBOT STEAM KITS

Ready-to-go NGSS-aligned activities encourage problem-solving, critical thinking, and collaboration through real-world applications









#### A. Ozobot STEAM Kit: OzoGoes to the Solar System

Gr. 3+ Explore the wonders of the solar system! Designed to supplement classroom learning, this ready-to-go kit engages an individual learner or a group of up to 4 students in a hands-on project. Included NGSS-aligned activities support learning with and without an Ozobot Evo robot (not included).

NE30370 - \$40.00

#### B. Ozobot STEAM Kit: OzoGoes to the Sun, Earth & Moon

Gr. 3+ Learn how the sun and moon affect phenomena on Earth. Designed to supplement classroom learning, this ready-to-go kit engages an individual learner or a group of up to 4 students in a hands-on project. Included NGSS-aligned activities support learning with and without an Ozobot Evo robot (not included).

NE30371 - \$30.00

#### C. Ozobot STEAM Kit: OzoGoes Around a Sundial

Gr. 3+ Tell time using the sun and much more! Designed to supplement classroom learning, this ready-to-go kit engages an individual learner or a group of up to 4 students in a hands-on project. Included NGSS-aligned activities support learning with and without an Ozobot Evo robot (not included).

NE30372 - \$30.00

#### D. Ozobot STEAM Kit: OzoGoes on a Seesaw

**Gr. 3+** Teach students about leverage and simple machines. Designed to supplement classroom learning, this ready-to-go kit engages an individual learner or a group of up to 4 students in a hands-on project. Included NGSS-aligned activities support learning with and without an Ozobot Evo robot (not included).

NE30373 - \$30.00



## CRACK THE CODE

with robots students can learn to program and control

#### Thames & Kosmos® KAI: The Artificial Intelligence Robot

Gr. 5+ Build and program an intelligent, sixlegged, app-enabled robot that "learns" from your physical gestures and sounds. KAI can also be controlled remotely through the app and show different expressions and scrolling messages. Full-color, 64-page manual provides step-by-step illustrated assembly and programming instructions and teaches lessons in Al and robotics. App requires iOS or Android device. NE30399 – \$99.95



#### Thames & Kosmos Robotics: Smart Machines - Tracks & Treads

Gr. 3–9 Students will have everything needed to build 8 robots that use continuous tracks, also known as tank treads, to move. In addition to constructing the models, they'll learn how to use the included visual programming app to code. Includes 197 pieces and 60-page guide. Models require 3 "AA" batteries. Tablet or smartphone required to use programming app (available for iOS and Android). A CHOKING HAZARD (1). Not for

NE30280 — \$139.95



#### **Thames & Kosmos Robotics:** Smart Machines – Sidekick

**Gr. 3–9** Give students an amazing robotic buddy to build and control. Sidekick has two modes: 4-wheeled rover or 2-wheeled robot. It can be programmed from a built-in keypad or included app. Includes 129 pieces and 36-page guide. Requires 4 "AA" batteries. Tablet or smartphone required to use Sidekick app (available for iOS and Android). Not for sale in Canada. △ CHOKING HAZARD (1). Not for under 3 yrs. NE30283 - \$69.95





#### **ID** Humanoid

Gr. 6-12 A fully functional humanoid robot kit featuring 16° of freedom and metal gear servo motors, meaning it has 16 motorized joints for walking, dancing, or anything you teach it. Eyes contain 18 RGB LEDs (9 per eye) that can be easily programmed and animated for unlimited expressions of up to 1 million colors. Compact grippers powered by strong, metal-geared servo motors for interacting with soft, light objects. A camera is contained in the robot's head. SB52298 - \$599.99

⚠ See page 3 for complete Choking Hazard Label Information.



#### Roli Rover

Gr. 5–12 Planetary rover-style robot kit travels long distances through difficult territory. Body contains a storage tray for carrying objects and a removable drink holder. SB52297 - \$549.99



#### EZ-B v4 Developer Kit

**Gr. 6+** Build a robot or IoT project from scratch. Powerful EZ-B v4 Wi-Fi® robot controller (brain), vision camera, servos, battery holder, and more. SB52299 - \$269.99







#### A. TI-Innovator™ Hub Kit

Extends the functionality of Texas Instruments® graphing calculators to enable students to learn basic coding and design. Supports TI-84 Plus CE graphing calculator. Built-in TI LaunchPad $^{\mathsf{TM}}$ Technology gives students exposure to professional applications. Write code to program working solutions that actuate in-built LEDs, sensor, and speaker.

NA10315 - \$80.50

B. **Breadboard Pack.** For exploring electronics principles. Components for the Path to STEM Projects activities.

NA10317 - \$42.50

C. Rover. Robotic vehicle with multiple built-in sensors. Compatible with graphing calculators. NA10326 - \$166.95



# Snap Circuits®

Snap Circuits make learning electronics easy, fun, and safe. Just follow the colorful pictures in the manual and build exciting projects such as radios, digital voice recorders, alarms, doorbells, and more. All parts are mounted on plastic modules and snap together with ease. No tools required.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.







NE30224

#### TI-84 CE Graphing Calculator

Give students the power of portable programming for math class and other applications. This lightweight and durable calculator features a color screen, an easy-to-read display, and a rechargeable battery. It has eight different graph styles and can save up to 10 graphing functions. Real and complex numbers can be calculated to 14-digit accuracy and displayed with 10 digits plus a two-digit exponent. USB cable and protective case included.

#### NE30224 - \$175.00

TI-84 Plus CE EZ Spot Teacher Pack. 10 EZ Spot units and rechargeable batteries, 5 USB cables, 5 unit-to-unit cables, TI charging station CE, and poster.

NA10409 - \$2,000.00



Gr. 4-6 Use sensors, motors, a core controller, and hundreds of snap-together pieces to construct 12 different robots. Control creations wirelessly with an app on tablets and smartphones. Includes 96-page manual.



# **Mechanical Engineering: Robotic Arms**

Gr. 2-9 Build 6 mechanical models of the types of arms, grabber claws, and legs found on robotic machines. Models are operated by a pneumatic system which uses air pressure. Construct a pivoting robotic arm with a gripper claw, an extra long grabber claw, a compact grabber claw, a vertical threefingered claw, and more. Learn how pneumatic and hydraulic systems are used in industrial robots to enable robots to manipulate heavy objects. Includes 201 pieces and 32-page instruction book. EL15806 - \$59.95



**Snap Circuits® MyHome Kit** 

Gr. 3+ Students can build a house with real functional 3D circuits, just like the ones they use every day, and learn all about how they work. Includes 60 pieces and an illustrated, full-color manual with 25+ projects.

NE30431 - \$79.95



Snap Circuits® Discover Coding Kit

**Gr. 3+** Build projects with lights, sounds, and a motor and control them with a smartphone or tablet. Includes over 30 pieces, Bluetoothpowered SC Controller 5 control outputs, and an illustrated, full-color manual.

NE30432 - \$94.95





#### **Snap Circuits® STEM Kit**

Gr. 3+ Dive into STEM concepts with award-winning Snap Circuits! Projects explore magnetic fields, how the electricity in a home works, how switches control electricity, and more. Includes over 45 pieces and an illustrated, full-color manual with 85+ projects.

NE30434 - \$58.95

#### Snap Circuits® STEM Classroom Activity Kit

Gr. 3-5 Get an entire circuitry unit in one convenient kit — created by teachers for teachers! The step-by-step curriculum walks through 10 days of openended activities. Includes 6 activity kits (support up to 18 students), 1 teacher's guide, 6 student workbooks (additional workbooks sold separately), detailed parts list and explanation, spare parts, traditional (pre/post/summative) and project-based assessments, presentation materials, summary sheet, and carrying case.

NE30435 - \$449.95





#### E-Blox® Lite Blox Student Set

Gr. PreK+ Give students the blocks for building early learning and motor skills through fun and play. Plug the LED Blox into the included power board and see them light up and change colors. Set includes a battery module, power board, 30 LED Blox, and an online animated curriculum with teacher guides and lesson plans.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs.



#### E-Blox® Eco Fidget Lights Student Set

Gr. 1–3 Light up STEM lessons with these colorful building blocks. Contains 7 pieces and an online animated curriculum with teacher guides, lesson plans, guizzes, and guiz answer sheets that cover electricity and circuitry, generators, parallel connections, and more.  $\triangle$  CHOKING HAZARD (1). Not for under

NE30234 - \$24.99

# E-Blox® Building Brick Sets

**Gr. 3+** E-Blox® are not your ordinary building bricks. Sure you can use them like you would any building brick, but the built-in technology helps you create electrical circuits with no wires to worry about. Using either tin-plated blocks or copper pins and sockets, the bricks connect to a battery pack allowing budding engineers to bring their creations to life with lights, sounds, or spinning. △ CHOKING HAZARD (1). Not for under 3 yrs. Allow extra delivery time.

#### Power Blox™ Deluxe Classroom Set.

Entry level classroom kit that allows you to build whatever you want. Instructions for building two

versions of a color robot and a color light tower available online. Set includes online instruction, 400 total parts, and carrying case.

**Z52174 - \$444.95** 

Circuit Blox™ 800 Classroom Set. Make more than 800 different projects with this engaging kit while learning about electricity, current and voltage. Lights, sounds, even a motor and fan will help builders design pieces that light up, make noise, move, and more. Set includes various switches, lamps, heart and star LEDs, speakers, audio blocks, buzzers, inductors, windmills, motors, resistors, photoresistors, variable resistors, capacitors, transistors, and more; 312 overall parts; color-changing lamp module, and carrying case.

Z52176 - \$519.95



#### E-Blox® Sound Activated **Dancing Lights Student Set**

Gr. K-2 Introduce students to STEM concepts with sound activated building blocks. Includes 32 pieces and an online animated curriculum with teacher guides, lesson plans, quizzes, and quiz answer sheets that cover shapes, building fundamentals, using light to communicate, and more.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. NE30232 - \$39.99



#### E-Blox® Flying Saucer Student Set **Gr. 1–3** These LED building blocks contain

electronic components such as a battery module, switches, LEDs, and a motor. Contains 10 pieces and an online animated curriculum with teacher guides, lesson plans, quizzes, and quiz answer sheets that cover electricity and circuitry, light, switches, telecommunications, and more. A CHOKING HAZARD (1). Not for under 3 yrs.

NE30233 - \$24.99



#### E-Blox® Fan Launch **Light Show Student Set**

NE30235 - \$39.99

Gr. 2-4 The colorful building blocks in this set contain 25 pieces and an online animated curriculum with teacher guides, lesson plans, quizzes, and quiz answer sheets. Electricity and circuitry, light, sound, switches, telecommunications, Morse Code, and more are all covered.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs.

Z52174



#### E-Blox® Sound **Machine and Radio Student Set**

Gr. 3-5 Use these building blocks for STEM lessons. Includes 49 pieces and an online animated curriculum with teacher guides, lesson plans, quizzes, and quiz answer sheets that cover electricity and circuitry, motors and flying saucers, light, sound, switches, telecommunications and FM radio, and more.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. NE30236 - \$74.99



#### E-Blox® Glowing **LED FM Radio Student Set**

Gr. 4-6 Cover lessons on electricity and circuitry, motors and flying saucers, light, sound, switches, telecommunications and FM radio, RC circuits, and more with this set of LED blocks. The set contains 66 pieces and an online animated curriculum with teacher guides, lesson plans, guizzes, and quiz answer sheets.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

NE30237 - \$99.99



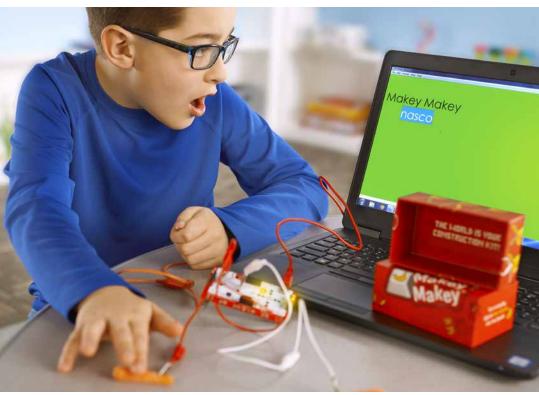
#### Makey Makey®

**Gr. 3+** Connect device to a USB port in lieu of a keyboard or mouse and use included alligator clips and connector wires to connect everyday objects to the device to turn them into touch pads.

EL13903 - \$60.95

STEM Pack — Invention Literacy Kit. Includes 12 Makey Makey® boards, components, and 12 Makey Makey® optimized conductive 6B pencils. Allow extra delivery time. 🖚

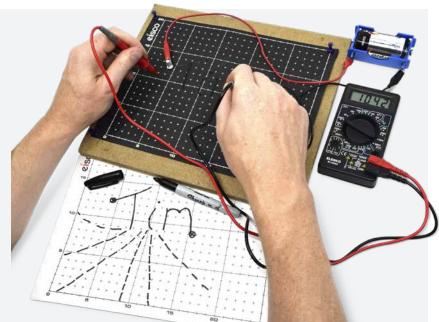
NZ10370 - \$750.00 \*EXCLUDED FROM DISCOUNTS



#### **Dry Field Mapping Kit**

Gr. 3+ Help students draw electrical fields of their own design with this kit. They can simply draw electrodes, hook up a battery to generate the electric fields, use a multimeter to map out the equipotential surfaces, and connect equipotential field lines to generate electric fields. No calculation is required. Kit includes conductive paint, conductive graph paper, non-conductive graph paper, push pins, battery holder, protractor, leads with alligator clips. Battery and digital multimeter are not included. NE30201 - \$128.95

Pre-Printed Conductive Paper. For students drawing electrical fields of their own design. Features a grid for plotting. Use with conductive ink pens and other field mapping supplies. Pad of 25 sheets; 8½" x 11". NE30202 - \$44.95



#### **Crazy Circuits Starter Kit**

Gr. 4–12 Create fun STEM and STEAM projects with this electronic learning platform. This non-soldering starter kit works perfectly with conductive tapes for paper crafts, conductive threads for e-textile sewing, conductive inks and paints for artwork, and even alligator clips or paper clips. Compatible with Lego® and other popular brick building systems. Easily add effects, lights, and switches to your next electronics project. Includes 18 parts and a plastic organizer. SB52497 - \$54.95

 $\triangle$  See page 3 for complete Choking Hazard Label Information.







**270** 1.800.558.9595 | nascoeducation.com

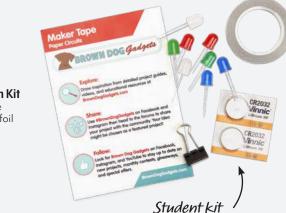
Circuitry



#### **Paper Circuits Classroom Kit**

Make LED art and science projects using conductive foil tape. No wires needed. SB51143 — \$110.00 Individual Student Kit

NE30039 - \$10.95







#### **Individual Student Large Circuitry Kit**

**Gr. 3–12** Three weeks of projects and lessons that work either in the classroom or can be sent home for virtual learning. Each kit contains enough materials to create a Bristlebot, Solar Bug (NE30035), LED name badge (NA10419), and several paper circuit projects with additional batteries, roll of Maker Tape<sup>™</sup>, LEDs, binder clips, self-sticking motor, and online directions in English and Spanish. **NE30040 – \$30.95** 



#### **Origami Circuit STEM/STEAM Project Kits**

Gr. 3–12 Combine the ancient Japanese paper art of origami with the creation of simple electronic circuits to create a hands-on STEM/STEAM lesson. Final projects will move, light up, and blink, combining art design, engineering and basic electronics. Choose from a set of 4 (for individual student or pod learning situations) or 25 (for a whole classroom). Build uses solderless, flexible, durable and conductive pathways with nylon-based Maker Tape™. Kits include origami paper, blinking LEDs, colored LEDs, binder clips, coin batteries, vibrating motors, Maker Tape™ and a robot template. All final projects are powered at 3V. Online directions in both English and Spanish

**NE30037** Set of 4 – \$25.95

NE30038 Set of 25 - \$125.00



#### **Solar Bug STEM Project Kits**

**G. 3–12** Help students explore solar energy, motion, and engineering as sunlight directly powers a vibrating motor to scoot critters along. Use as a stand-alone STEM activity or as part of a larger solar energy lesson. Choose from sets of 4 (for individual student or pod learning situations) or 25 (for a whole classroom). Two options for building: Use the included Maker Tape™ to connect the vibrating motor to the solar cell, or use a soldering iron to quickly attach the motor to the solar cell. Hot glue gun and a wire cutter require to complete the 10-to 20-minute project. Online directions in both English and Spanish available

**NE30035** Bug Set of 4 – **\$25.95** 

**NE30036** Bug Set of 25 — \$100.00



#### **Bristlebot STEM Project Kits**

**Gr. 3–12** Students will build a small robot using a toothbrush head and googly eyes that will scurry along a flat surface. Adjust the balance and placement of attachable pipe cleaners to change the way they move and behave with an easy-to-add vibrating motor.

NE30031 Set of 4 - \$20.95 SB50347 Set of 10 - \$54.95 NE30032 Set of 25 - \$100.00

#### **Crazy Circuits Coding Kit**

**Gr. 4+** Explore programming and automation by building and coding with this kit's Arduino-powered Robotics Board and over 20 other sensors and parts, including LEDs, push buttons, a Piezo speaker, and more. Everything is ready to use out of the box — no breadboard or soldering required. Crazy Circuits parts are compatible with LEGO® and other popular brick building systems. Includes instruction cards and access to online curriculums. & CHOKING HAZARD (1). Not for under 3 yrs. **NE30151 — \$110.00** 



#### Crazy Circuits Classroom Sets

Each set includes self-contained project boxes for students, as well as a dedicated teacher supply box. Free online access to curriculum, lesson plans, and student activity packets aligned to state and national standards are included. Each set includes 4 student kits and 1 teacher kit.  $\triangle$  CHOKING HAZARD (I). Not for under 3 yrs.

**Crazy Circuits 101.** Covers simple circuit design, including switches, diodes, batteries, resistors, transistors, and integrated circuits.

SB53074 - \$650.00

Crazy Circuits Programming 101. Uses Arduino programming to read sensor values (distance, temperature, humidity, light), output data through a display, manipulate sound and light outputs, and drive servos. SB53078 —\$1,200.00



#### Crazy Circuits Makerspace Pack

Create STEM and STEAM projects with this electronic learning platform. Students will learn how to add motion and programming actions to projects, circuits, and Arduino sketches. Build new projects or use pre-programmed sketches with the Crazy-Touch and Crazy-Duino boards. Create your own light-up project, programming projects, robotics projects, touch-sensitive synthesizers, and more. This non-soldering pack works well with conductive tapes for paper crafts, conductive threads for e-textile sewing, conductive inks and conductive paints for artwork, alligator clips, and paper clips. Also compatible with most electrical components and brick building systems. Also creates programming projects, robotics projects, and more. Includes 186 parts.

SB52499 — \$1.100.00



#### Conductive Nylon Tape

Conductive tape that is much stronger and easier to use than copper foil tape.

Product No.	Length	Width	Each
SB52504	65.6' (20 m)	1/4"	\$11.95
SB52505	16.4' (5 m)	1/8"	\$5.95

# Conductive Thread

**Gr. 5+** Pre-wound bobbin gives 16% of conductive thread for light-up bracelets, T-shirts, stuffed animals, and more. **SB52859 – \$3.95** 





#### Strawbees® Robotic Inventions for micro:bit

Gr. 3–9 This add-on kit allows students to snap a micro:bit onto their Strawbees® creations and turn them into robotic, programmable mechanical structures. Kit does not include the micro:bit, USB cable, batteries, straws, or straw connectors △ CHOKING HAZARD (1). Not for under 3 yrs. NE30332 - \$52.50



#### STEAM Starter Kit With micro:bit

Gr. 3-9 Give students more possibilities when exploring robotics in the classroom. This bundle includes supplies that students can add to their robotics toolbox so they have more capabilities to build, program and play. Includes Strawbees® STEAM Starter Kit, Robotic Inventions for the micro:bit, and BBC micro:bit. △ CHOKING HAZARD (1). Not for under 3 yrs.

NE30207 - \$113.00



#### **Circuit Stickers Educator Packs**

For 30 students; 90 stickers and 90' of copper tape.

SB52023 White Circuit Stickers - \$124.95 SB53167 Red, Yellow, and Blue Circuit Stickers - \$124.95

**Starter Kit.** 12 stickers and everything needed to get started with circuit stickers. SB51200 - \$34.95









# A. Pre-Mounted Chibi Chip and Clip

Makes LED stickers blink and fade. Includes chip, clip, and cable.

SB53170 - \$38.95

B. **Chibi Scope.** Tiny screen with text, volt, and wave modes for use with chip above. SB53171 - \$34.95

# C. Copper Tape

SB53173 - \$10.95

#### D. LED Circuit Stickers Packs

LED circuits on peel-and-stick stickers — no soldering, plugging wires, or clips required. Learn to build circuits while making interactive artwork. Contains 10 each of red, yellow, and blue LED circuit stickers.

SB53176 - \$34.95





#### **Crazy Circuits Bit Board Kits for micro:bit** Handheld Computer

**Gr. 2–12** Now students can combine the micro:bit computer (SB53386, at right) and building bricks together to create all sorts of amazing projects. The Bit Board snaps onto any building brick-compatible component and students can connect other Crazy Circuits brand components with the included Maker Tape. Use a ribbon cable to connect sensors, or directly plug a servo into the Bit Board. Use the built-in relay to control DC motors and devices.

You and your students will appreciate the graphic way of working and programming with microcontrollers that the micro:bit

Two options available. Choose the Complete Kit to get push buttons, speakers, potentiometer, slide switch and more. Or order the Basic Kit for board, connector, USB cable, and Maker Tape.

#### Complete Kit includes:

- · Crazy Circuits Bit Board
- · Right-angled micro USB cable
- 16'L x ½"W roll of Maker Tape
  2 "AAA" battery holder with JST
- · 2 Crazy Circuits jumbo push buttons
- 4 Crazy Circuits jumbo LEDs
- · Crazy Circuits NeoPixel
- Crazy Circuits Potentiometer
- Crazy Circuits Piezo speaker · Crazy Circuits slide switch
- · LEGÓ®-compatible servo with connector
- LEGO® base plate
- 5 alligator clips
- Guide cards
- · Plastic organizer

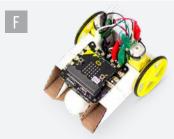
#### NE30101 - \$110.00

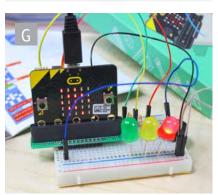
# Basic Kit includes:

- · Crazy Circuits Bit Board
- · Right-angled micro USB cable • 16'L x 1/8"W roll of Maker Tape
- · 2 "AAA" battery holder with IST connector

NE30102 - \$30.95













⚠ See page 3 for complete Choking Hazard Label Information

### **BBC** micro:bit

Gr. 2+ A powerful handheld, fully programmable computer. Students write code using one of the easyto-use editors on microbit.org, connect micro:bit to a computer via USB, then press the compile button in the editor to drop the downloaded file directly onto the device. Features on-board accelerometer and compass sensors, Bluetooth® Low Energy and ÚSB connectivity, 25-LED display, 21 pin edge connector, and 2 programmable buttons. Also has an app for Android™ devices. △ CHOKING HAZARD (1). Not for under

#### E. BBC micro:bit

Four assorted colors (no color choice). SB53386 - \$30.00

#### **BBC** micro:bit Starter Kit

Contains everything needed to connect BBC micro:bit to a computer and to power it once disconnected from the computer. Includes BBC micro:bit, 393/8" USB cable, battery cage, and 2 "AAA" batteries.

SB53378 - \$40.00

#### F. Simple Robotics Kit for BBC micro:bit

Gr. 6-10 Students will build an entry level, easy build robot that requires no soldering. From its customizable, one-piece cardboard chassis to its clip lead connections, everything goes together easily to build a robot. Kit includes a motor driver for BBC micro:bit, wheels and tires, clip leads, right angle geared hobby motor, solderless TT motor adapter board, ping pong ball, rubber band, cardboard chassis, and instructions. The BBC micro:bit (SB53386, above) is not included. △ CHOKING HAZ-ARD (1). Not for under 3 yrs.

NE30213 - \$47.00

#### G. Discovery Kit for BBC micro:bit

Gr. 6-8 Get students started with coding and electronics. This kit has five experiments and everything needed to complete them. Each experiment has a complete code walk-through, a circuit diagram and a top-down breadboard view, full explanations, and descriptions of how the electronics work. Kit includes a breadboard breakout, small prototype breadboard, LED lights, resistors, buzzer, jumper wires, and a tutorial booklet. The BBC micro:bit (SB53386. above) is not included.  $\triangle$  CHOKING HAZARD (1). Not for under 3 vrs.

NE30215 — \$17.00

#### H. LAB:bit Educational Platform for BBC micro:bit

**Gr. 2–5** The LAB:bit is an all-in-one educational platform that introduces coding in the classroom. It's packed full of devices, LEDs, switches, sensors, and other programmable features. It has an edge connector for the micro:bit to slot into. Includes a wheel and a tire along with a battery holder that holds 3 "AA" batteries. The BBC micro:bit (SB53386, above) is not included. Minimal mechanical assembly is required. A CHOKING HAZARD (1). Not for under 3 yrs. NÉ30214 - \$67.00

#### . Smart Greenhouse Kit for BBC micro:bit

Gr. 6-10 Grow plants with the smart greenhouse that can be coded to monitor and automatically water plants. Kit includes a twopart plastic greenhouse, environmental control board, water pump, ZIP stick and extension cable, mini prong moisture sensor, 5 crocodile clips, screwdriver, and instruction booklet. The BBC micro:bit (SB53386, at left) is not included. ⚠ CHOKING HAZARD (1). Not for under 3 yrs.

NE30212 - \$68.00

#### .:KLEF Piano BBC micro:bit Kit

Gr. 2+ Compose a musical masterpiece for the BBC micro:bit. Blend of coding and music composition makes this kit perfect for any coding lesson. Features 15 capacitive touch pads, an onboard amplifier circuit, an oboard speaker, and an onboard edge connector for slotting in the micro:bit. BBC micro:bit (SB53386, at left) and micro USB cable (SB53385) are sold separately.

SB53384 - \$26.00



#### Inventor's Kit for BBC micro:bit

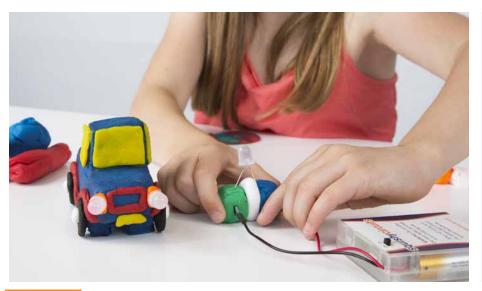
Offers an introduction to the world of physical computing. Experiments showcase how code and electronics can combine to create practical solutions to situations and problems. Contains everything needed to complete 10 experiments. Required but not included: BBC micro:bit (SB53386, above), Phillips screwdriver, terminal block screwdriver, and micro USB cable (SB53385).

SB53372 - \$32.50



#### Lesson in a Box<sup>™</sup> Simple Robotics Curriculum A complete set of electronics and teaching

resources to enable successful STEM lessons incorporating robotics, coding, and physics with minimal teacher effort. Students learn to code robots that utilize BBC micro:bit and a clippable motor driver board. Includes 10 student sets and one teacher set of electronics, as well as a USB stick drive with lessons and instructions. Required but not included: BBC micro:bit (SB53386, above) and 3 "AA" batteries per robot. SB53369 - \$605.00





#### Dough Kit

Includes 7 containers of conductive dough (7 oz. each) and 7-oz. container of white insulating dough. Conductive dough will dry out if left out of container. Insulating dough does not dry out (below). Contains gluten. Safe and nontoxic. SB52805 - \$20.00











#### Squishy Circuits®

Gr. 3+ Use conductive and insulating play dough to teach the basics of electrical circuits in a fun, hands-on way. No need for breadboards or soldering. Just add batteries and pre-made dough (or make your own dough with recipes provided). Creations come to life as you light them up with LEDs, make noises with buzzers, and spin with the motor.

A. **Group Kit.** 10 battery holders (each holds 4 "AA" batteries, not included), 10 piezoelectric buzzers, 10 switches, 10 motors with propellers, 80 LED (10 each of 8 colors), and carrying case. Purchasing 2 dough kits is recommended. & CHOKING HAZARD (1). Not for under 3 yrs. SB52852 - \$275.00

B. Lite Kit. Battery holder (holds 4 "AA" batteries; not included), container of conductive dough (5-oz.), 15 LEDs (10 mm — 5 each of 3 colors), recipe card, and quick start quide.

△ CHOKING HAZARD (1). Not for under 3 yrs.

SB52817 - \$15.95

C. **Deluxe Kit.** Battery holder (holds 4 "AA" batteries, not included), piezoelectric buzzer, mechanical buzzer, motor with fan blades, switch, 40 LEDs (10 mm — 5 each of 8 colors), 5 sculpting tools, rolling pin, 7-oz. container of white insulating dough, 7 containers of conductive dough in 7 colors (each 7 oz.), recipe card, and quick start guide. A CHOKING HAZARD (1). Not for under 3 yrs. SB52815 — \$75.95

D. **Standard Kit.** Battery holder (holds 4 "AA" batteries, not included), piezoelectric buzzer, 25 LEDs (10 mm — 5 each of 5 colors), recipe card, and quick start guide. (1). Not for under 3 yrs. SB52816 - \$35.00

E. White Insulating Dough Won't dry out if left in open air. 7 oz. SB52806 - \$6.00

> For more Squishy Circuits<sup>®</sup>, visit nascoeducation.com



#### **Circuit Scribe Circuit Drawing Kits**

Now students can turn their doodles into real prototypes. The conductive pens included in this kit can be used on regular printer paper to create connections between power sources and other magnetic modules. Students place the paper on the included steel sheets and attach different modules to make blinking lights, beeping buzzers, and whirling motors.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs. Allow extra delivery time. 🖚

Components	NZ10371 Intro Classroom Kit	NZ10372 Everything Classroom Kit	
Conductive Ink Pens	30	30	
9V Battery Adapters with 9V Battery	25	25	
USB Adapters	-	5	A TOTAL TO
EDs	25	50	
Switches	25	25	4 50 0000
Buzzers	5	25	
Multicolored LEDs	5	25	
Oouble Switches	2	25	
lotors & Foam Wheels	2	25	أمهندون بتحويد
ials	2	25	
linkers	2	10	
immers	_	-	
OlY Connectors	_	10	
IPN Transistors	2	10	
ight Sensors	_	10	
teel Canvases	25	25	
tencils	25	25	
Vorkbook	1	1	NZ10372
umper Sticker Set	1	1	Everything Classroom Kit
Connector Cables	20 (2 packs of 10)	40 (4 packs of 10)	
Each	\$1,000.00	\$2,000.00	



Create circuits without wires or metal soldering!



#### Circuit Scribe Conductive Ink Pen

This conductive pen can be used on any surface you can use a rollerball pen on to create connections between power sources and other components. The smooth flowing ink produces wide, skip-free lines that are highly conductive. Each pen features nontoxic and quick-drying ink and can draw 66–219 yds., depending on the writing surface and speed (66 yds. on absorbent surface's and 200+ yds. on photo paper). Photo paper will provide the highest conductivity (<2 ohms/cm) and allow you to scratch a trace away.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs.

SB53196 - \$5.55

CYB=R.ORG

#### PocketLab Sensors

Explore the world like a true scientist, with curiosity and a thirst for discovery. Utilizes a platform that enables hands-on science investigations through easy-to-use, inexpensive wireless sensors and apps. Wireless multisensors explore the impact of climate change, the flight data of a drone, how to program a robot, and more. Ideal for maker projects and science experiments. Open access to over 35 online experiments and demos. Wireless range: 250' (76 m) line-of-sight. Onboard memory: 32,000 data readings. Rechargeable battery provides over 40 hours of use per charge during wireless operation. Bluetooth® 4.0 wireless connection. PocketLab app is compatible with iOS, Android<sup>TM</sup>, Windows® 10, Mac OS®, and Chromebook<sup>TM</sup>. 1½" x 1½" x 5%".  $\triangle$  CHOKING HAZARD (1). Not

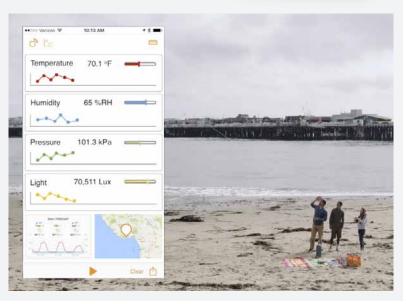
A. **Voyager.** All-in-one science lab that is capable enough for a professional engineer and simple enough for a fourth-grade student. Voyager can measure motion, light, magnetic fields, and weather, and can connect to an external temperature probe. Attach PocketLab Voyager to a drone to measure the altitude and vibrations during a flight, put it inside a football to measure the rotation of a spiral throw, and design and build rubber band cars to measure their speed during a race.

#### NA10342 - \$198.00

B. Weather. A rugged weather center that can measure temperature, humidity, light, barometric pressure, heat index, dew point, and can connect to an external temperature probe. Build a weather balloon and use PocketLab Weather to gather climate data as it travels through the sky and discover why lightning strikes by observing changes in atmospheric data during a storm. NA10341 - \$128.00









#### PocketLab Maker Kit

Gr. 4-12 Make more than a dozen science projects, including a car that runs on air pressure and measures position, velocity, and acceleration. Other projects include recreating Galileo's classic pendulum experiments, making a seismometer, designing a magnetic field minesweeper game, and more. Also includes a wireless Voyager Sensor that measures motion, acceleration, force, angular velocity, magnetic field, pressure, altitude, and temperature. Sensor connects with a single button to a smartphone, tablet, or Chromebook and instantly streams data that you can see and record. Use the PocketLab app to easily analyze data, create graphs, and integrate data with other software. 🛆 CHOKING HAZARD (2). Not for under 8 yrs. NA10473 - \$230.00

PocketLab Maker Kit Without Sensor. Includes everything except for the PocketLab Voyager Sensor (above). & CHOKING HAZARD (2). Not for under 8 yrs. EL15211 - \$33.95

#### Elementary School





# CYBER.ORG™ SCIENCE & CURRICULUM KITS

Engaging, phenomenon-based curriculum combines with easy-tounderstand activities to help students explore the world and learn how to seek answers to their questions. Kits include everything necessary for 8 students groups with a count of about 30 total students. Components of each kit may vary.

#### CYBER.ORG™ Grade 3 Science+ Materials Kit

Gr. 3 Help your students work through modules to reach the Next Generation Science Standards Topic bundles for Organism Traits, Advantages in Survival, Environmental Changes Over Time, and Forces and Interactions of Objects. A CHOKING HAZARD (1, 2). Not for under 3 yrs.

#### KI04971 - \$295.00

#### CYBER.ORG™ Grade 4 Science+ Materials Kit

Gr. 4 Help your students work through modules to reach the Next Generation Science Standards topic bundles for Structures and Functions of Organisms, Energy Transfer, Collisions, Waves and Erosion, and Reducing Impacts. 

CHOKING HAZARD (1). Not for under 3 yrs.

#### KI04972 - \$630.00

#### CYBER.ORG™ Grade 5 Science+ Materials Kit

Gr. 5 Help your students work through modules to reach the Next Generation Science Standards topic bundles for Physical and Chemical Changes, Matter and Ecosystems, Earth's Major Systems, Stars and the Solar System. A CHOKING HAZARD (2), Not for under 3 yrs.

#### KI04973 - \$730.00

Visit nascoeducation.com and search "CYBER" to view the complete collection of CYBER.ORG Kits



# STEM EDA CURRICULUM KITS

STEM EDA is an engineering design based, project-driven, multi-subject integrated curriculum. Each unit is small-group based and student driven with robust, immediately applicable content that reinforces cooperative problem-solving, decision making, and communication skills. The modular design allows teachers to customize the content to fit their classroom schedule and implementation needs. Kits contain enough materials for 10

#### CYBER.ORG™ Explore Electricity Materials Kit

**Gr. 6** Students are given a scenario where a cyber attack has shut down the nations electrical grid. To provide light during the blackout, students work in teams to create a flashlight. Using the engineering design process as a guide, students research concepts related to electricity, brainstorm flashlight designs, build, and test their own flashlight. Students explore concepts of atoms, electrons, conductors, insulators, power sources, chemical energy, electrical energy, electrochemical cells, anodes, cathodes, ions, anions, cations, voltaic pile, voltage, and circuitry. 🛆 CHOKING HAZARD (1). Not for under 3 yrs.

#### KI04555 - \$450.00

Middle School

#### CYBER.ORG™ Discover Cars Materials Kit

Gr. 7 Students will create a miniature parade float powered by rubber bands with a theme of Rainforests Around the World. During the module, students will research components of rainforests which will influence the exterior float design. Additionally, each team will investigate elastic, potential, and kinetic energies, impact of wheel size on travel distance, and other key factors that are important to the float design.  $\Delta$  CHOKING HAZARD (1). Not for under 3 yrs.

#### KI04596 - \$160.00

#### CYBER.ORG™ Apply Earthquakes Materials Kit

**Gr. 8** As members of a humanitarian organization, students "travel" to a third world country to help with the reconstruction of homes after a devastating earthquake. As global engineers, not only must the students design new buildings that are earthquake resistant, but they must also address the needs of the community they are serving. Throughout the module, the students will use the engineering design process to build a structure that will be tested on a homemade shake table.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

KI04574 - \$290.00

STEM Engineering





Nasco Design, Engineering, and **Circuitry Classroom Kit** 

Gr. K-12 With this highly adaptable unit, students will work in small groups to combine their architectural engineering and circuitry skills with creativity to design a home or storefront that lights up. Includes 70-page teacher's guide with reproducibles and everything you need for 30 students to complete the unit. ⚠ CHOKING HAZARD (1). Not for under 3 yrs. NE30254 - \$219.95



Video alert! Visit nascoeducation.com to see how it works (search NE30254)



#### **Model Bridge Classroom STEM Pack**

Design and construct wooden bridges, enjoy the thrill of destructive testing, then calculate each bridge's efficiency to determine the best design. Build bridges from either strong 3/52" x 3/52" x 24" basswood with consistent density or light, easy-to-cut 1/8" x 1/8" x 24" balsa wood. For 24 students. SB23608 Basswood SB23609 Balsa

Each - \$99.95



#### **KEVA® Structures Kit**

**Gr. K+** Stack pine wood planks to create ornate buildings, monuments, and geometric forms. No glue or connectors required. For 1 or more students. SB49047 - \$59.95



#### **KEVA®** Contraptions™ Kits

Gr. 2+ No glue or connectors needed. Get things rolling with 2 balls, pine planks, and instruction book detailing how to build a "shooting gallery," "turbine," "step curve," and more. For 1 or more students.  $\triangle$  CHOKING HAZARD 4). Not for under 3 yrs.

**SB49050** 50-Piece Set — **\$22.95 SB49049** 200-Piece Set — \$59.95



#### **KEVA® Maple Structures**

Children can build bridges, sculptures, houses, and towers taller than themselves with these high precision maple construction blocks that stack with surprising stability without any connectors. Every plank is the same size (4½" x ¾" x ¼" thick)

**200-Piece Set.** Includes 2 plastic storage bins and instruction/game book. SB46106 - \$124.95

**400-Piece Set.** Includes 2 plastic storage bins and instruction/game book. SB46105 - \$199.95



#### Mr. Playwood Alexandria Lighthouse Eco-Light Kit

Gr. 8+ Explore the ancient Lighthouse of Alexandria. Hand-crank electric generator lights up a small LED lamp at the top of the structure — no batteries! Laser-cut plywood. No glue needed. Includes step-by-step instructions. 280 pieces. △ CHOKING HAZARD (1). Not for under 3 yrs.

NE30469 - \$81.95



#### Mr. Playwood Eiffel Tower Eco-Light Kit

Gr. 8+ Get a close-up view of the Eiffel Tower. Hand-crank electric generator lights up a small LED lamp at the top of the structure — no batteries! Laser-cut plywood. No glue needed. Includes step-by-step instructions. 163 pieces. A CHOKING HAZARD (1). Not for under 3 yrs. NE30468 - \$81.95

Roller Coaster Engineering Gr. K+ Introduce students to the ups and downs of designing and building dozens of working roller coaster models. As they complete challenges they'll experiment with variables such as car weight, slope, and length. Give them a practical and fun introduction to physics principles, including gravitation,

potential energy, kinetic energy, projectile

motion, friction, centripetal force, velocity,

and acceleration. Includes 330 pieces and a 32-page guide. ⚠ CHOKING HAZARD (1). Not for

NE30147 - \$49.95



#### Kemtec™ Structures & Bridges Kit

Gr. 7+ Students will gain knowledge of structural engineering and how it is used to support or resist loads. Study different types of bridges and the STEM principles that support them. Construct 6 working models including a house, suspension bridge, cable-stayed bridge, arch bridge, and 2 different truss bridges. Students will also be challenged to build the largest free-standing tower in the class using the kit components. Finally, the students will need to apply all they have learned to build a bridge that spans 70 cm and will support a minimum distributed static load of 2 kg using only 100 plastic straws and a limited amount of masking tape. For 24 students working in 6 groups of 4. Kit contains 6 sets Engino® structures and bridges parts, 6 Engino® 36-page activity books, 6 Engino® 26-page building instructions, dowel rod, 6 rulers, spring scale, string roll, masking tape, 600 straws, 6 scissors, 24 student worksheets, and teacher's manual with lesson plans. ⚠ CHOKING HAZARD (1). Not for under 3 yrs.

SB49883 - \$699.95

 $\triangle$  See page 3 for complete Choking Hazard Label Information.



Gr. 3+ Set includes 2,100 high-quality interlocking building blocks, beams, pegs, gears, and other parts in convenient packaging. Supported by a complete set of free educational resources, which help all learners go on an investigative learning journey to make sense of key hands-on physical science and engineering topics. NE30226 - \$195.00





#### **Polydron STEM Set**

**Gr. 5+** Build STEM learning to a higher level with this comprehensive set. With the use of detailed, double-sided work cards and activities, introduce STEM principles to students so they can take what they've learned and construct a variety of intermediate and advanced engineering projects. Set includes a detailed teacher guide, 22 work cards, and a variety of pieces for students to use when constructing projects.  $\triangle$  CHOKING HAZARD (I). Not for under 3 yrs. NE30206 - \$399.95

# **INSPIRE YOUR STUDENTS**

with team problem-solving and model building

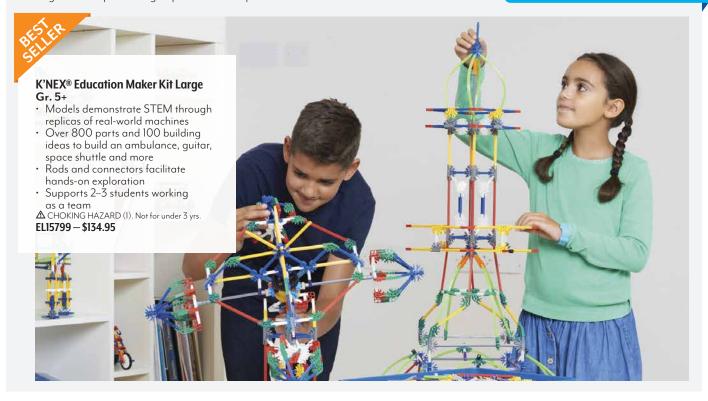
The K'NEX® building system is an endless flexible tool you can use to get students engaged in hands-on exploration and help them understand and remember important science concepts. Sets are available for a wide range of skill levels and each is designed for small groups to explore and build multiple models throughout the year.

#### Science sets include:

- · A teacher's quide or illustrated manual filled with activities that align with state and national education standards
- Enough K'NEX® pieces for groups to build multiple models



Look online for free sample lessons and key concepts addressed in each set

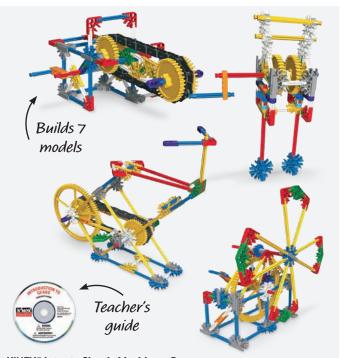


#### **K'NEX®** Introduction to Bridges Gr. 5-8

- · Models demonstrate 7 key bridge types (arch, beam, bascule, cantilever, cablestayed, truss, and suspension)
- 207 pieces to build 13 bridge models
  Supports 2–3 students working as a team
- · Teacher's guide on CD

TB20794 - \$46.95

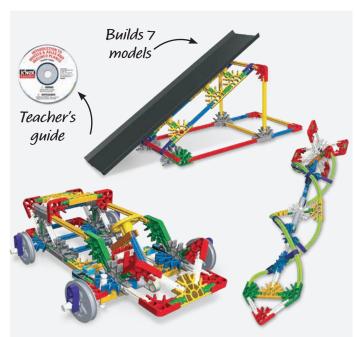




#### **K'NEX®** Intro to Simple Machines: Gears Gr. 5-8

- Demonstrates spur, crown, chain, and sprocket gear assemblies
- 198 pieces to build 7 models, all replicas of real-world machines
- · Supports 2–3 students working as a team
- Teacher's guide on CD

SB36649 - \$46.95



#### K'NEX® Intro to Simple Machines: Wheels/Axles and Inclined Planes Gr. 5-8

- Demonstrates wheel and axles and inclined planes including a wedge and screw
- · 221 pieces to build 7 models (all replicas of real-world machines)
- Supports 2–3 students working as a team

Teacher's guide on CD
 CHOKING HAZARD (1). Not for under 3 yrs.

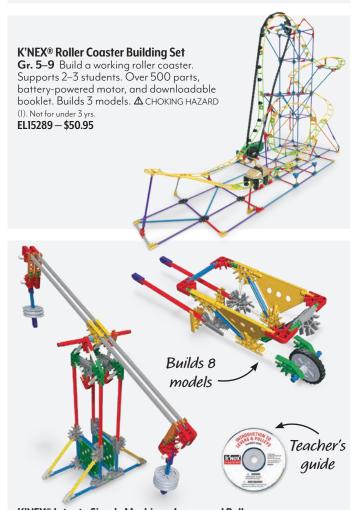
SB36638 - \$46.95



#### **K'NEX® Imagine Classic Constructions Building Set**

Create working vehicles, animals, moving structures, buildings, and more — the possibilities are endless. Plastic rods and connectors join up with a satisfying "click." Includes over 700 pieces with storage chest and illustrated manual with over 70 building ideas.

EL16198 - \$47.95



# K'NEX® Intro to Simple Machines: Levers and Pulleys

- Demonstrates 3 lever classes and fixed, movable, and combination pulley systems
  • 178 pieces to build 8 replicas of real-world machines, one model
- Supports 2–3 students working as a team
- · Teacher's guide on CD

SB36650 - \$46.95



Nasco Classroom Olympiad Part 1

**Gr. 3–8** Each event encourages cooperative learning and fosters an understanding of the scientific method. Events include aerodynamics, car race, Cartesian divers, domino event, egg drop crate, regatta, rubber band catapult, suspension bridge, sky's the limit structures, and slow roller. A CHOKING HAZARD (1). Not for under 3 yrs. SB31527 - \$162.00



#### Nasco Classroom Olympiad Part 2

**Gr. 3–8** Keep the spirit of Olympic competition alive as your students learn the scientific method and cooperative learning skills. The 9 events include sailing, fettuccine physics, estimation guesstimation, shadow box, air cannon, marble trampoline, balloon bomber, pencil pendulum, and battery-powered car.  $\triangle$  CHOKING HAZARD (1, 2). Not for under





#### Science Car Kit

**Gr. 5+** Make a car while exploring topics such as circuits, switches, and pulley/gear ratios. Finished dimensions: 6" x 3". Size "D" batteries required (not included).  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. SB27491 - \$12.95



#### **Mousetrap Dragster Kit** Students experience excit-

ing involvement with technology problem solving, the physics of energy transference, aerodynamics, thrust, vector, and friction. Glue required (not included). Set of 5 kits.

SB26052 - \$37.95

#### **Heavy-Duty Alkaline Batteries**

Size "D" batteries ideal for general lab work. Super cells provide up to twice the life of ordinary general-purpose cells. Pkg. of 2.

#### **Thames & Kosmos**

#### **Remote Control Machines Experiment Kit**

Gr. 3–8 Build motorized vehicles and machines and control them with a wireless remote control unit. A unique six-button infrared remote allows you to control three different motors simultaneously, moving each of them forward or in reverse, with easy-to-activate touch sensors. The three motors can be combined to make complex vehicles and machines in numerous configurations limited only by your imagination. Assemble 10 models demonstrating different ways in which the motors can be used including a bulldozer, car, three-wheeler, crane, antique car, plow, folding car, formula one racer, three-blade dozer, and robotic arm. Kit comes with three motors, remote control unit, battery holder, and building blocks. The 48-page color instruction book gives illustrated step-by-step instructions to help develop mechanical understanding, creative thinking skills, and hand-eye coordination. 182 pieces. SB49206 - \$105.95





#### fischertechnik® Construction Kits

This flexible construction system is built around the fischertechnik® building block, which allows attachment to all 6 sides. Each kit includes access to a library of downloadable teaching and tutorial materials. Recommended for 2-4 students per set.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

STEM Pneumatics. Gr. 6+ Students will build 8 different models and conduct 29 experiments that teach and

demonstrate the basic

principles of pneumat-NE30144 - \$190.00

#### **STEM Renewable**

Energies. Gr. 6+ Building 9 functional models and conducting 28 experiments teaches students about generating, storing, and using different types of renewable energy. NE30145 — \$345.00





#### **Rubber Band Racers**

Gr. 2+ Build 5 vehicles using ultralight plastic and bamboo parts. Learn how rubber bands store energy and release it to move the models.

EL15549 - \$21.95

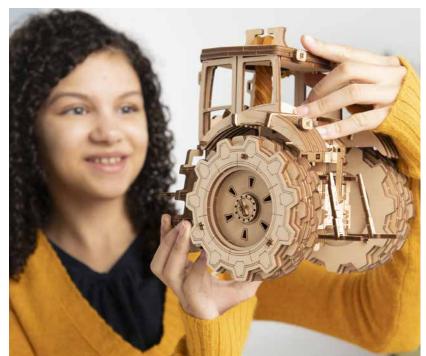




For a complete selection of engineering products, visit nascoeducation.com

**Gr. 2+** Kit explores different areas of physics and engineering design by having students build 22 functional models and conduct tests with them. Explore submersibles, rotation, statics, and more. Includes 267 pieces and a 128-page manual with step-by-step instructions.  $\triangle$  CHOK-

SB53344 - \$99.95



#### Product No. Description Each NE30176 Cruiser Construction Kit \$31.95 NE30177 Mini Belaz Construction Kit \$26.95 NE30178 Retro Car Construction Kit \$63.95 NE30179 Da Vinci Tank Construction Kit \$49.95 NE30181 Small Truck Construction Kit \$49.95 NE30182 Maz 6440RR Construction Kit \$49.95 NE30183 Large Truck Construction Kit \$63.95 NE30184 Belaz 75600 Construction Kit \$73.95 NE30186 Tank T-34-85 Construction Kit \$73.95 NE30187 Tractor Construction Kit \$73.95 NE30188 \$49.95 Locomotive Construction Kit NE30190 Trebuchet Construction Kit \$37.95 NE30191 \$23.95 Goggles Construction Kit NE30192 Kinetic Globe Construction Kit \$41.95 NE30193 Game Set Construction Kit \$56.95 NE30194 Gramophone Construction Kit \$99.95 \$94.95 NE30195 Globe Blue Construction Kit \$104.95 NE30196 Planetarium Construction Kit NE30197 Planetary Gear Construction Kit \$47.95 NE30198 Table Football Construction Kit \$41.95 NE30199 Puppy Construction Kit \$47.95 NE30200 Spider Construction Kit \$47.95

# **Eco-Wood-Art Construction Kits**

This eco-friendly sustainable material is made of FSC-certified, laser-cut plywood with amazing details. The plywood can be painted with thin water-based paints. Self-assembly is required. There's no need for glue or batteries. Kits includes wood material, candle wax for gears, sand paper, rubber bands, and step-by-step assembly instructions inside of an all-inclusive box. ⚠ CHOKING HAZ-ARD (1). Not for under 3 yrs.







NE30198

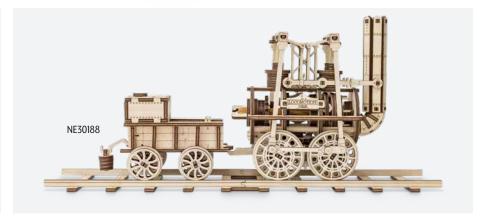














#### The Hoberman Sphere™

Polymer links expand and contract almost effortlessly, changing in volume 30 times. Expands from 9½" to 30".

TB18334 - \$36.50



#### Magformers® STEAM Basic 200-Piece Set

**Gr. PreK**+ Perfect for developing children's scientific thinking, curiosity for building, and mathematical thinking. Click and connect STEAM engine blocks to create walking robots and space stations. Follow instructions to build walking animals, moving vehicles, and spinning towers. Students will learn about gear systems, kinetic motion, and pistons, taking their STEM education to the next level. Easy-to-use magnetic pieces always attract, never repel, and are compatible with all Magformers® shapes and accessories (excluding XL shapes). Pieces are made of high-quality ABS plastic and contain 1/3" rare-earth neodymium magnets on the sides. Includes 22 geometric shapes, 36 accessories, and S.T.E.A.M. idea booklet and play sheet. A CHOKING

EL13774 - \$409.95



This 300-gear set offers 40-, 30-, and 20-tooth gears (with a 3/16" bore to accommodate dowel) and a 12-tooth gear with a push into 2 mm motor shafts

SB26469 - \$55.95





#### **Story Engineering Books:**

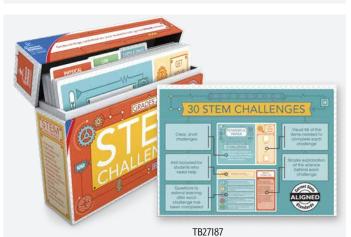
**Problem-Solving Short Stories Using STEM** 

Approach STEM problem-solving skills with literacy to get the most out of limited class time. Students read fictional passages, then solve the problems using STEM/engineering design process and everyday materials. Each book contains 11-12 units, each on focusing on one problem and one challenge, with additional problems for future challenges. Use for individual or group work. Includes teacher overview, lesson plan, and activity sheets.

NE30098 Gr. 1-2 Each - \$14.95

NE30099 Gr. 3-4

**NE30100** Gr. 5-6



#### **STEM Challenge Cards**

**Gr. 1–6** Dive into STEM with simple challenges that can be completed using everyday items. Perfect for individual or whole-group STEM activities. Éach card includes tips, a simple explanation of the science concept involved, and an extension question for each area of STEAM. Online resource available for more in-depth experiments. 3 tabbed dividers and 30 coated, write-on/wipe-off cards (each  $7\frac{3}{4}$ " x  $5\frac{1}{2}$ "). TB27187 STEM Challenge Cards

TB27188 Seasonal STEM Challenge Cards

Box - \$18.00





#### Lux Blox™ STEAM Primer

Set of 111 total pieces: 75 squares (red, yellow, blue); 20 white trigons; 5 multi-wheels; 4 square multi-wheels; 5 axles; and 2 giant 7" rubber bands. Comes in a 10"H clear tube with lid.

NE30009 - \$41.99



#### **Lux Blox™ STEAM Inventor**

Set of 223 total pieces: 40 red squares; 130 white squares; 35 white trigons; 2 trigon multi-wheels; 4 square multi-wheels; 10 axles; and 2 giant 7" rubber bands. Comes in a 14"H clear tube with lid.

NE30010 - \$66.99



#### Lux Blox™ Build Anything Bin

1,000 total pieces with 100 squares of each color: neon orange, teal blue, neon green, purple, royal blue, neon pink, yellow, red, white, and black. Includes a durable storage

NE30011 - \$204.99



Includes 800 squares; 300 trigons; 40 each of large and small multiwheels; 40 each of large, medium, and small axles; 40 giant 7" rubber bands; laminated starter guide; extensive teacher's primer, and plastic storage unit.

TB27602 - \$459.99



#### **Lux STEAM Accelerator Small Group Set**

Set includes 400 squares; 200 trigons; 20 each of large and small multi-wheels; 20 each of large, medium, and small axles; 20 giant 7" rubber bands; laminated starter guide; extensive teacher's primer, and plastic storage unit.

TB27603(B) - \$299.99



#### 3Dux GO-Pack Maker Kits — Set of 8

Gr. K+ Perfect for the makerspace, classroom and distance learning. Each kit includes a 3DuxDesign backpack, over 50 geometric cardboard shapes, 45 assorted connectors, string, straws, copper fasteners, pom poms, pipe cleaners, graph paper, ruler and animal figurine. Also includes downloadable ideas.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. NE30104 - \$224.95



#### 3DuxDesign Architectural Modeling Kits

Cardboard construction system integrates art, design, and open-ended creative play with STEM fundamentals. Building sets provide everything students need to create a featured structure, as well as additional pieces to expand the set or to build their own creations. Can be used for architecture, urban planning, engineering, 3-D modeling, and prototyping. Connectors work with most single-ply cardboard.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

GOBOX Pro Classroom Kit. Gr. 2+ Learn about circuits, renewable energy sources, and more by adding electricity to cardboard creations. Enough materials for 30 students working in groups. Includes links to downloadable curriculum.

83 pieces.

SB53285 - \$279.95

Rocket Ship. Gr. 2+. Includes 90 pieces. SB53282 - \$26.95

Fire Station. Gr. 1+ Includes 84 pieces. SB53279 - \$24.95

GOBOX Classroom Kit. Gr. K+ Enough materials for 30 students working in groups. Includes links to downloadable curriculum.

SB53283 - \$219.95







Mega Cyborg Hand

Gr. 1+ Use the plastic pieces and piston tubes to build a mechanical hand that uses hydraulic power to simulate the movements of the human hand – no motors or electricity required. Once assembled, the cyborg hand slips onto your hand like a glove, with mechanical fingers that you operate with your own fingers. The hand can be configured left-handed, right-handed or claw-like. Includes 203 pieces and 40-page guide.

NE30116 - \$39.95



#### Strawbees® STEAM Starter Kit With micro:bit

Gr. 3-9 Give students more possibilities when exploring robotics in the classroom. This bundle includes supplies that students can add to their robotics toolbox so they have more capabilities to build, program, and play. Includes Strawbees® STEAM Starter Kit, Robotic Inventions for the micro:bit, and BBC micro:bit. 🛆 CHOKING HAZARD (1). Not for under 3 yrs. NE30207 - \$113.00



model of the classic claw machine. This STEM challenge will help students develop their motor skills and teach them about hydraulics, levers, gears, belts, end effectors, and more. When the included candy is gone, refill with your own small treats or toys. Includes 113 pieces and a 16-page guide. △ CHOKING HAZARD (1). Not for under 3 yrs NE30146 - \$39.95



#### Strawbees® STEAM Starter Kit

 $\triangle$  See page 3 for complete Choking Hazard Label Information.

**Gr. K+** Building set with 230 pieces to build create towers, moving mechanical cranes and arms. Set comes with five different precut straw sizes and four color-coded connectors. All materials are durable and reusable. Includes activity quide.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. NE30125 - \$29.00



#### Strawbees® STEAM School Kit

**Gr. K+** Let students build anything they can imagine with the largest Strawbees kit available. Includes 4,000+ pieces and 100+ challenges. Comes with teacher and admin access to Strawbees Classroom — an online library of lessons, professional development, and student materials. For up to 30 students.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. NE30327 - \$699.00



#### Nasco Beginner Makerspace Kit

All the materials you need to create your first makerspace place and encourage students to explore and be innovative.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs

9742353 - \$452.65

Nasco Individual Student Makerspace Kit NE20103 - \$45.65



#### Nasco All About Fish Kits and Lesson Plans

Great STEAM lessons include multiple activities with kits curated by age group, using the ancient Japanese art of Gyotaku Fish Printmaking. Each contains enough materials for class of 24, lesson plan, rulers, paints/glazes/ink, brushes/rollers, drawing paper, gyotaku fish rubber stamps, and book.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

All About Fish: Learn, Print, & Build Lesson Plan Materials Kit Vol. 1.

SB53388 - \$325.00

All About Fish: Structure, Print, & Build Lesson Plan Materials Kit Vol. 2. Gr. 3-5 SB53389 - \$430.00

Research, Print and Present Lesson Plan Materials Kit Vol. 3. Gr. 6-8 SB53390 - \$430.00



#### Cool Art with Math and Science Kit

Complete materials for the 6 book series Cool Art with Math and Science. Enough materials for 24 students. Kit includes the book set and a large variety of supplies.

SB53387 - \$955.00



#### TeacherGeek Maker Space/STEAM/STEM Activity Cart

Gr. 3–12 Roll it into your classroom, lab, or library for the ultimate Maker/STEAM/STEM solution. With over 40 STEAM/STEM projects and almost every component, this cart can support hundreds of students. The cart includes a pallet of replacement supplies and tools to create almost any project. Choose from three different dry erase sign headers (Maker Space, STEAM or STEM) and four drawer colors (grape, strawberry, kiwi or blueberry). Students will learn science and engineering concepts through experimentation, grow their understanding, and evolve projects through the design and engineering process. NGSS aligned. Allow extra delivery time.

Activity Cart, "Maker Space" Header **NZ10450** Grape NZ10451 Strawberry NZ10452 Kiwi NZ10453 Blueberry Each - \$8.000.00

Activity Cart, "STEAM" Header **NZ10456** Kiwi NZ10457 Blueberry Each - \$8,000.00

Activity Cart, "STEM" Header **NZ10458** Grape NZ10460 Kiwi Each - \$8,000.00





#### FlashForge Adventurer 4 Pro 3D Printer

Excellent first-layer printing quality with 1-second model cooling and removal. Features 30-point auto leveling sensor, PEI build plate, up to 300mm/s print speed. 0.4-265 hardened nozzle, extruder fan structure, HEPA 13 air filter, and built-in camera. Allow extra delivery

NE30471-\$960.00



#### FlashForge Creator 3 Pro Independent Dual Extruder 3D Printer

Superior heat-up speed at 60 seconds, suitable for printing carbon fiber composite materials. Dual-fan configuration for better printing quality and high success print rate, multiple printing modes, flexible magnetic steel plate platform, built-in HD camera, and more. Allow extra delivery time.

NE30473 — \$2,700.00



#### FlashForge Adventurer 3 Pro 2 3D Printer

⚠ See page 3 for complete Choking Hazard Label Information.

Excellent first-layer printing quality with 1-second model cooling and removal. Features speed of 200mm/s, a 9-point leveling sensor on extruder, PEI build plate, 3 fans on extruder, 265°C hardened nozzle kit, faster speed, Wi-Fi connection, and HEPA 13 air filter. Allow extra delivery time.

NE30472 - \$550.00



#### FlashForge Artemis 3D Printer

Artemis is a cost-effective 3D printer that offers high-quality performance and reliability. Quiet printing is perfect for classrooms. Features include a removable glass platform, removable PEI magnetic steel plate platform, heatable build bed, filament detection sensor, and HD full-color touch screen. Print volume: 190 x 195 x 200 mm. Overall dimensions: 16" x 16½" x 18½". OS compatibility: Windows 7/10, Mac OS. See detailed specs at nascoeducation.com. Allow extra delivery

NE30329 - \$710.00

#### (A) Black (K) Natural (B) Brown (L) Neon Blue (C) Dark Blue (M) Neon Orange (N) Neon Yellow (D) Dark Green (P) Red (F) Gold (Q) Silver (F) Grape (G) Light Blue (R) White (H) Light Green (T) Yellow (I) Magenta Indicate color by letter code: 9735825(A)

#### **PLA Filament**

Created from plant products (corn, potatoes, or sugar beets), PLA is considered more earth-friendly compared to the petroleum-based ABS plastics. It's biodegradable and can be composted at most commercial facilities. Stronger and more rigid than ABS plastic. Printed objects will look and feel glossier than ABS. Can be sanded and machined. Do not leave in high temperatures (such as hot cars) since objects may deform and droop. When PLA is properly cooled, it has higher maximum printing speeds, lower layer heights, and sharper printed corners. Filament comes on a 2.2-lb. spool

**9735825** 1.75 mm

Spool - \$34.95 Mix 10+ \$33.32

9736458 2.88 mm

#### 3Doodler® Create+

Put the power of a 3D printer in the palm of your hand. Create real 3-D objects by extruding heated plastic through a nozzle that cools almost instantly into a solid, stable structure. Dual speed control — two extruding speeds make it easy to draw in 3-D, freehand, or over stencils. Intuitive controls make using the pens as easy as, "click to start, click to stop, and double click to reverse." Compact and easy to use. Ideal for STEAM subjects, whether engineering, math, or design. Free app for download.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

Create+ Pen Set. Pen, 3 packs of plastic strands in 15 colors, Ultimate Guide to Doodling book with 5 projects, user manual, power adapter with 6' cord, and set of tools. 9742256 - \$89.95

Create+ Learning Pack 12-Pen Set. Each pack contains |etPack®, teacher's checklist, activity and troubleshooting guides, 1 Create+ manual, EDU booklet, 2 lesson plans, and more. For 24 students. 1,200 plastic strands, 12 each of Create+ pens, 12 . DoodlePads™, 12 adapters, 4 nozzle sets.

NA10368 - \$1,205.00 \*EXCLUDED FROM DISCOUNTS



#### 3Doodler® Create+ PLA Plastic Packs

Gr. 9+ Use with 3Doodler Create+ Pen. Sturdy, plant-based PLA has a glossy finish and can stick to paper, glass, cloth, and metal surfaces.

**Polar Ice 75-Pack.** Includes 25 strands each of clearly blue, clearly clear, and clearly white

NE30321 - \$18.95

**RGB 75-Pack.** Includes 25 strands each of red, green, and blue. NE30322 - \$18.95

Tie Dye 75-Pack. Includes 25 strands each of blue, yellow, and purple. NE30323 - \$18.95

Clearly Glacier 250-Pack. Includes 50 strands each of black, white, clearly blue, clearly clear, and gray. NE30324 - \$49.95

Bud & Bloom 250-Pack. Includes 50 strands each of yellow, blue, purple, red, and green. NE30325 - \$49.95





3Doodler® EDU Start Learning Packs

3Doodler® Start has no hot parts and is perfect for use with elementary students. Use to teach design, building, construction, spatial understanding, and a variety of other skills. Drives student engagement, confidence, and focus with hands-on learning. Each pack contains DoodlePads, DoodleBlocks<sup>TM</sup>, USB cables, teacher's checklist, cheat sheet, manual, 3Doodler® poster, 2 lesson plans, 2 unblocking tools, EDU booklet, activity guide, DoodleBlock<sup>TM</sup> guide, troubleshooting guide, and free app.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

6-Pen Set. Contains 600 plastics (75 each of 8 colors) and 6 each of Start pens. DoodleBlock™ guide, and troubleshooting guide. NA10336 – \$355.00

**12-Pen Set.** Contains 1,200 plastics (150 each of 8 colors) and 12 each of Start pens.

NA10337 - \$605.00



#### 3Doodler® Essentials Start Set

Gr. 2+ Use 3D printing pen while plugged in or charge it and doodle wirelessly for up to 1 hour. Teach design, building, construction, spatial understanding, and a variety of other skills in a fun, engaging way. No hot parts. Includes pen, 2 plastic packs, activity guide, micro USB charging cable, and free app.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs. EL15551 - \$51.95

#### 3Doodler Start+ Eco-Plastic Filament Packs

Gr. 1–8 Bring ideas to life by doodling 3D shapes and designs. With strands of colorful plastic and the compatible 3Doodler Start+ Pen, students can add dimension to any project with the low-heat, BPA-free and nontoxic plastics in each of these packs. One 6" strand will give over 35" of doodling as it melts.  $\triangle$  CHOKING HAZARD (1). Not for under 3 yrs.

75 Strands

NE30218 Pack 1: Red, White, and Blue NE30219 Pack 2: Orange, Yellow, and Green NE30220 Pack 3: Black, Pink, and Gray Pack - \$14.50

#### 250 Strands

**NE30221** Fire and Ice Pack (Orange, Yellow, Pink, Light Blue, White) NE30222 Primary Pow Pack (Red, Green, Blue, Black, Gray) Pack - \$36.00



# NE30218 NE30221

# TAKE VIDEOS TO THE NEXT LEVEL

Turn any space into a top-notch multimedia studio





Optimized for chroma keying, the green screen allows you to drop any background in and change it as often as you like for more interesting and engaging online classroom environments. 58¼"W x 70¾"H.

NA10463 - \$165.00

#### **Key Light Air**

Premium LEDs with 1400-lumen output, adjustable swivel head. Connects wirelessly from your PC, Mac®, Android® device or iPhone® so you can adjust brightness and color with ease. NA10464 - \$135.00

Stream Deck Mini Enhance your onscreen activity with GIFs, images, videos and soundbites. You can even apply lower thirds and bookend your content with signature intro and outro graphics.

NA10465 - \$105.00

# Multi Mount Modular Rigging System

Position your camera, light or phone at any angle, while keeping your workspace tidy. Effortless adjustability, great for overhead shots of tabletop, for instance.

EXCLUDED FROM DISCOUNTS

Watch a great how-to video on

our YouTube channel! Visit

voutube.com/nascoeducation.

NA10467 - \$55.00

#### Cam Link 4K

Connect your DSLR, camcorder, or action cam to your PC or Mac®, and use it as a webcam in your favorite apps to make online classes more engaging. Superb quality at 1080p60 or even up to 4K at 30 frames

NA10466 - \$135.00

Streaming Bundles	For full product descriptions visit nascoeducation.com		
	Basic (NA10468)	Intermediate (NA10469)	Advanced (NA10470)
Green Screen	$\checkmark$	$\checkmark$	$\checkmark$
Key Light Air	$\checkmark$	$\checkmark$	√
Stream Deck Mini	$\checkmark$	$\checkmark$	
Stream Deck			$\checkmark$
Cam Link 4K		$\checkmark$	<b>√</b>
Multi Mount		$\checkmark$	√
Each	\$390.00	\$575.00	\$625.00

# Retractable Green Screen













#### **Green Screen Production Kit**

Gr. K-12 Includes 360° rotating camera head, 10X digital zoom, 5 MP bendable gooseneck webcam, nonslip base, and built-in gooseneck microphone. Editing software with teleprompter, split screen, picture-inpicture, scroll text features, chromakeying, and more. Import images, slides, or PDFs; add background, scripts and scroll copy; add date and time symbols; and show a news ticker. 9' x 60" green screen backdrop cloth. EL15925 - \$225.00





**294** 1.800.558.9595 | nascoeducation.com



Before your students start exploring through hands-on classroom to have the furniture and storage needed for experiments, demonstrations, safety, and more.

# Quick Index

**Tables & Carts** 296–297

Hann Manufacturing 299

**Diversified Woodcrafts** 300–302

**Shelving & Carts** 303



#### **Gratnells Makerspace Cart**

Side and back panels offer industry-standard holes and slots for a wide range of accessories. Runners allow easy and safe access to components. Steel frame. Heavy-duty lockable casters. Includes 12 shallow trays (1613/16" x 125/16" x 3"), 3 deep trays (16<sup>13</sup>/<sub>16</sub>" x 12<sup>5</sup>/<sub>16</sub>" x 5%"), 12 green mini bins, roll holder, 5 single hooks, and 5 double hooks. Allow extra delivery time. **T Z51766(K)** – **\$1,332.00** 



#### **Gratnells Callero Plus Treble Carts**

Premium, ultra heavy-duty carts transport your classroom equipment from place to place easily and securely. Adjustable StopSafe runner system ensures trays cannot be pulled fully out of the cart by accident, preventing spills. Tough, powder-coated metal frame offers wear and knock resistance. Features durable 3" casters and rounded ergonomic handles for easy movement. Includes 12 deep trays ( $16^{13}$ /6" x  $12^{5}$ /6" x 5%"). 16%" x  $40^{3}$ /6" x  $41^{1}$ /2". Allow extra delivery

(D) Royal Blue (E) Flame Red Indicate color by letter code: Z51762(D) Z51762 - \$925.00



#### **Gratnells Callero Plus Treble Carts**

Runner system ensures trays can't be pulled fully out of the cart by accident. Adjustable runners accommodate various tray sizes. Rounded ergonomic handles. Powdercoated frame. Silver metal trim. 3" casters. Trays: 16<sup>13</sup>/<sub>16</sub>" x 12<sup>5</sup>/<sub>16</sub>". Includes 16 shallow (3") and 4 deep (5%") trays. 16%" x 403/16" x 41½". Allow extra delivery time.

- (D) Royal Blue
- (E) Flame Red

(G) Jolly Lime

Indicate color by letter code: Z51764(D)

Z51764 - \$999.00





#### Intermix Clover Leaf Mobile Table

Finished with a chemical-resistant, earth-friendly UV finish Almond clover leaf top is made of high-pressure laminate. 4" locking casters. 60"L x 60"W x 30"H. Allow extra delivery time.

**Double-Sided Table with Double Door Cabinet.** Two locking door cabinets are back to back. Each measures 15"D x 30"W x 25"H with an adjustable shelf.

**Z51707** Solid Oak — **\$1,653.15 Z51708** Maple Veneers — **\$1,653.15** 

**Table with Lazy Susan.** Open cabinet measures 30"D x 30"W x 25"H. **Z51718** Solid Oak — \$1,297.80

**Z51719** Maple Veneers - \$1,297.80



**Solid Phenolic Top** Solid oak coated bases with 2 fixed casters and 2 steel guides. Remains stable at rest. The 12 cubbies (3 on each side) are 12" x 11" x 6". Table is 30" with a 48" dia.

solid phenolic resin top (no particle board core). Impact, scratch, water, and chemical resistant. Allow extra delivery time. Z42356 - \$1,349.99



#### Interion® Steel Shop Stools with Backrest

Heavy-duty stools will stand up to years of use in busy classrooms. Gray 18-gauge steel tubing frame with 14" dia. seat. Masonite seat won't warp, chip, or crack. 25"-33" seat height range. Features height-adjustable legs, footrest, and selfleveling steel glides. 300 lb. weight capacity. Set of 2. Allow extra delivery time. NE40407 - \$274.54





#### Hardwood Stools™

Eco-friendly parawood stools with rounded edges and horizontal connector struts. Seat: 13%" dia. x 3/4" thick. 24"H. Allow extra delivery time. **T46970** – \$135.00



#### **Steel Stationary Stool**

Large, heavy-gauge steel seat with tempered Masonite panel. All-welded, tubular-steel frame, channeled footrest, and no bolts. Gray color. 14" seat dia. Allow extra delivery time. **9715463** Seat height 18", without back - \$95.90 **0900743** Seat height 24", without back — **\$92.70 0900745** Seat height 30", without back - \$104.99

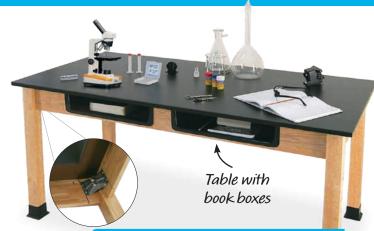


#### NPS® Heavy-Duty Stool with Backrest

Ideal for busy school settings like art rooms, science labs, and FCS classrooms. Gray 18-gauge steel tubing frame with 24"H x 14" dia. seat. Masonite seat won't warp, chip, or crack. Features adjustable backrest, footrest, and self-leveling steel glides. 300 lb. weight capacity. Allow extra delivery time. NE40406 - \$139.48

#### Allied





Check nascoeducation.com for epoxy- and phenolic-topped tables

#### ${\bf Hardwood\ Chemsurf^{TM}}\hbox{-}{\bf Topped\ Science\ Tables}$

Gr. 5+ Solid parawood hardwood construction with 21/4" square solid legs, 3/4" x 5" solid hardwood aprons, and protective black vinyl leg boots. Wilsonart Chemsurf<sup>TM</sup> chemical-resistant laminated tops are 1¼" thick. Limited resistance to high temperatures and severe chemicals. Tops are finished with vinyl T-molding. 30"H. Allow extra delivery time.

Tables Only. Tables without adjustable glides or Tables with Adjustable Glides. Allows for book boxes.

**Z46783** 24" x 48" **- \$445.00 Z46786** 24" x 54" - \$495.00 **Z46801** 24" × 60" **- \$515.00** 

**Z46792** 30" × 60" - \$545.00 **Z46795** 30" x 72" - \$560.00

accurate leveling of the table.

**Z46785** 24" × 48" — **\$455.00 Z46788** 24" × 54" — \$510.00 **Z46794** 30" × 60" - \$560.00

Tables with Book Boxes. Boxes are 17<sup>3</sup>/<sub>4</sub>"D x 2½"W x 4½"H. Made of ABS plastic. Attached to top with screws. **Z46796** 30" × 72" – \$674.25



#### Classic Allied MarkerBoard™ Tables

Write and erase directly on laminate surface with gloss white, dryerase finish. 45-lb. density, 11/8" thick particleboard top sealed with laminate backer sheet. Black vinyl T-molding finishes table edges. Tubular steel legs with wire bracing. Tables adjust in height from 201/2" to 29½". Allow extra delivery time.

	,		
Product No.	Shape	Size	Each
Z48004	Circle	48"	\$270.15
Z48005	Kidney	36" x 72"	\$365.00
Z48006	Kidney	48" x 72"	\$412.00
Z48007	Rectangle	24" x 48"	\$236.90
Z48008	Rectangle	24" x 60"	\$226.00
Z48009	Rectangle	30" x 60"	\$269.25
Z48010	Rectangle	36" x 60"	\$300.00



Great to use with MarkerBoard Tables at left

**EXPO® Low-Odor Dry-Erase Marker Set** Erases easily and completely. Bullet tip. Set of 4. 6100285 - \$7.05 12+ \$6.21

#### Mini Eraser

For dry-erase boards and tables. 21/4" x 3' TB18824 - \$ 0.80 10+ \$ 0.75



#### Mobile Demo Cart with Shelf with Chemsurf™ Surface

Top consists of 45-lb. density, 11/8" thick particleboard, sealed with laminate backer sheet. Stain- and scratch-resistant high-pressure laminate surface with vinyl safety T-molding. Legs are made of eco-friendly parawood (hardwood), coated



# **PROVIDES LARGE** STORAGE CAPACITY, MOBILITY, AND **DURABILITY**

while supporting the ever-changing assortment of projects in STEAM and makerspace environments

#### **Mobile Project Collaboration Tables**

Solid hard maple using thru-bolt reinforced mortise and tenon joints. 3" casters. Front casters are total-locking so the wheel will not turn and the caster itself will not rotate. Overall height: 36". Constructed with magnets so tables can be connected or disconnected without tools. Allow extra delivery time.

Product No.	Size	lop	Each
Z51231	30" x 60"	HPL	\$900.00
Z51232	30" x 60"	Epoxy Resin with Maple Base	\$1,700.00



#### **Large Capacity Project Storage Cabinet**

Extra depth and reinforced shelving to hold large tubs (up to 24"D). Shelves are supported on sides and at rear. Front edge is reinforced by solid hard maple nosing. Thick solid hard maple face and hard maple panels. Locking doors mounted on institutional hinges. 26"D x 48"W x 84"H. Allow extra delivery time.

**Cabinet with Lower Garage Area.** Center fixed shelf and 3 adjustable shelves in upper section. Lower section is intended to house a Project Support Cart (Z51235, below) or any mobile cabinet smaller than 40"W x 23"D x 31"H. Z50643 - \$1,996.14

Cabinet Without Garage Area. Full height shelving storage. Center fixed shelf and 4 adjustable shelves

Z51236 - \$1,996.14





#### Mobile Project Support Cart with Lockable Doors

Features storage for tools and other project components and provides a great staging area for tubs and supplies so the amount of worktable surface available for project work is maximized. Made of a thick solid hard maple face frame and hard maple panels. The maple grain patterned HPL top measures 1¼" x 23" x 36" and has 3 mm PVC edge banding. Includes 12<sup>3</sup>/<sub>4</sub>"W x 19"D x 3<sup>1</sup>/<sub>4</sub>"H (I.D.) lockable storage drawers. Lower section includes two adjustable shelves and six tote trays. Moves on lockable 4 casters. 36"W x 23"D x 30"H. Cart fits into garage area of Large Capacity Project Storage Cabinet (Z50643, above). Allow extra delivery time.

Z51235 - \$1,583.87

# **FURNITURE Diversified Woodcrafts**

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#### Choose the type of surface that fits your needs: 1¼" Chemquard

## 1¼" Plastic Laminate

A popular economical top for beginning level, non-severe situations

#### Resists common acids NOT suitable for open flames, molten metals, or excess heat

#### 1" Epoxy Resin

Premium-grade laboratory surface Impervious to normal laboratory chemicals and heat

#### **Science Tables**

Apron-style wood science tables with solid oak frames and legs, 13-gauge steel corner braces, and rubber leg boots. Choose from 3 top choices: 1¼" plastic laminate, 1¼" Chemquard, and 1" epoxy resin. 30"H. Allow extra delivery time.

or abrasives

Product No.	Size	Surface Type	Each
Z10258	24" x 48"	Plastic Laminate	\$618.00
Z13916	24" x 48"	Chemquard	\$680.00
Z15510 Z15587	24" x 48"	Epoxy Resin	\$999.99
Z10266	24" x 54"	Plastic Laminate	\$648.90 <b>F</b>
			40.10.50
Z13917	24" x 54"	Chemguard	4.00.00
Z15586	24" x 54"	Epoxy Resin	\$1,030.00
Z15865	24" x 60"	Plastic Laminate	\$618.00
Z15867	24" x 60"	Chemguard	\$725.00
Z15871	24" x 60"	Epoxy Resin	\$999.99
Z10274	24" x 72"	Plastic Laminate	\$669.50
Z13918	24" x 72"	Chemguard	\$749.99
Z15585	24" x 72"	Epoxy Resin	\$1,199.99 \overline{F}
Z10282	42" x 72"	Plastic Laminate	\$1,133.00
Z13919	42" x 72"	Chemguard	\$1,300.00
Z15584	42" x 72"	Epoxy Resin	\$1,899.99

#### Options for Student Science Tables (Allow 6–8 weeks for delivery)

**Z10313** Add \$29.99 for leg braces to fit 24" x 48", 24" x 54", 24" x 60", and 24" x 72" tables. Recommended for any table 42" wide or greater, or when tables are moved frequently. Fit between legs at ends of table.

**Z10314** Add \$32.90 for leg braces to fit 42" x 72" tables. Fit between legs at ends of table. **Z10315** Add \$89.10 for 36"H tables (standard tables are 30"H). Must be shipped truck. **Z10316** Add \$55.15 for AC duplex electrical receptacle.

For drawer options, contact Nasco Customer Care.

#### **Ordering Instructions**

1. Order tables by making the following choices: Table Size and Surface Type. 2. To order additional table options, see Table Options listing above.

**EXAMPLE:** To order a 24" x 48" table with plastic laminate top, leg braces, and duplex electrical receptacle, you'll need to order Z10258, Z10313, and



#### **Mobile Microscope Cabinet**

Solid oak with clear UV finish and oak veneered swinging doors that lock. Removable wire dividers provide individual space for each microscope. Holds 24 standard classroom microscopes in  $6\frac{3}{4}$ " x 10" x  $15\frac{1}{2}$ " allotted spaces. 11/4" HP laminated top. 4" ball-bearing, locking, swivel casters. 48"W x 24"D x 40"H. Allow extra delivery time. Z10256 - \$1.750.00



Safe, convenient way to store your various balances. Constructed of solid oak and oak-veneered plywood, with a clear finish. Supplied with four adjustable shelves to allow you to configure storage arrangement to maximize available space. Heavy-duty casters that swivel and have brakes. 48"L x 24"W x 40" H. Allow extra delivery time. Z15103 - \$1.574.99

# Can't find what you're looking for?

More styles, as well as 8- and 12-student work centers and tables, are available. Tell us what you need and we'll work to find options for your classroom.









#### Combination Mirror/Markerboard

Solid oak frames and shatter-resistant acrylic mirror mounts easily on upright sets. 20<sup>3</sup>/<sub>4</sub>" x 27<sup>3</sup>/<sub>4</sub>". Allow extra delivery time. Z11219 — \$173.04

Mirror/Markerboard add-on

#### A. ADA Mobile Lab Station

Chemical-resistant laminate. Stainless steel sink equipped with electric water pump and 2 water bottles. Water pump is operated with a toggle. 72"L x 24"D x 33"H. Allow extra delivery time. Z15102 — \$3,120.00

#### B. Economy Mobile Lab Table

Storage for water bottles and 2 adjustable shelves behind sliding doors. Top is black  $1\frac{1}{4}$ " plastic laminate. Sink: 13"L x 15"W x 5"D. Table: 24"D x 48"W x 36" H. Oak with natural finish. Allow extra delivery time. Z18488 — \$1.980.00

#### C. Mobile Tote Tray Storage Cabinet

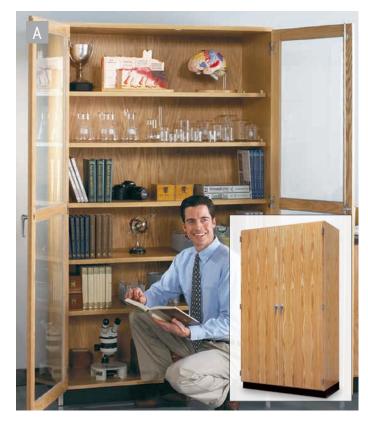
Oak veneers and solid oak. 4" locking swivel casters. Two lockable doors swing 270° and conceal 21 trays (19"L x 14¼"W x 3½"H each). Plastic laminate top. 48"W x 24"D x 41½"H. Allow extra delivery time. Z40520 — \$2,224.26

#### D. Mobile Demo Table

Chemical-resistant, earth-friendly maple demo table with 500-lb. capacity. Unbreakable aluminum sliding door glides and lock, laminated top, inlet and duplex outlet, and 2 adjustable shelves. Top: 72"W x 24"D. Allow extra delivery time.

Z50293 — \$1,800.00

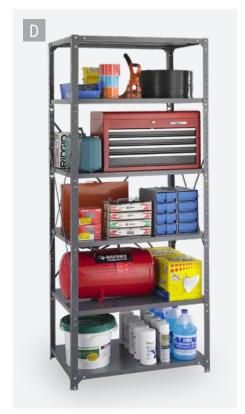
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# **OPENING OR RENOVATING** A SCIENCE LAB?

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#### A. Wall Storage Case

Solid hardwood, solid oak, and oak veneers, using dowel construction, with natural, chemical-resistant, earth-friendly UV finish. With 1 fixed shelf, 4 adjustable shelves, and three-point locking handle. Secure to wall for safety. Mounting hardware not included. Allow extra delivery time.

Product No.	Doors	Size	Price	
Z15095	Hinged Oak	24"W x 22"D x 84"H	\$1,236.00	
Z15096	Hinged Oak	36"W x 22"D x 84"H	\$1,622.25	
Z15097	Hinged Oak	48"W x 22"D x 84"H	\$1,763.36	F
Z15098	Oak-Framed Glazed	24"W x 22"D x 84"H	\$1,648.00	
Z15099	Oak-Framed Glazed	36"W x 22"D x 84"H	\$2,199.99	F
Z15100	Oak-Framed Glazed	48"W x 22"D x 84"H	\$2,399,99	

#### B. Mobile Lab Cabinet

Solid oak and oak-veneered plywood. Adjustable shelf. Four heavy-duty swivel casters with brakes. Top is  $1\frac{1}{4}$ " black plastic laminate.  $36\text{"W} \times 24\text{"D}$ x 36"H. Allow extra delivery time.

Z16304 - \$950.00 🍞

#### C. Wall-Mounted Storage Cabinets

Solid oak and oak veneer. Clear, chemical-resistant UV finish. Two adjustable shelves and lockable, hinged doors mounted with institutional hinges. Allow extra delivery time.

Product No.	Doors	Size	Price
Z48014	Solid Oak	36" x 12" x 30"	\$648.90
Z48015	Oak-Framed Glazed	36" x 12" x 30"	\$881.68





#### D. Safco® Industrial Steel Shelving

These industrial shelving systems feature a box beam design with double-sided compression clips. The 6 steel shelves adjust in 1" increments. Built with corner bracket and hat channel elements. Includes shelves only. Post Pack Kit (Z20054) required and sold separately below. Assembly required. Allow extra delivery time.

36" x 24" Shelf Pack. Rated up to 1,250 lbs. per shelf Z20052 - \$329.60

per shelf. Z20053 - \$432.60

48" x 24" Shelf Pack.

Rated up to 900 lbs.

Industrial Shelving Post Pack Only. Industrial strength steel shelving post kit includes four 85"H posts.

Z20054 - \$164.80



#### E. Global Industrial™ **Clear View Storage Cabinet**

Rugged construction will stand up to classroom use. Features impact-resistant acrylic windows and a pry-resistant 3-point key-locking system. Five adjustable, sag-resistant shelves hold up to 300 lbs each. 36" x 18" x 78". Allow extra delivery time.

NE40319 - \$924.32

#### F. 10-Drawer Organizer

Molded stops on drawers prevent drawer from pushing through cart back. Each drawer holds up to 3 lbs. Includes 4 casters (2 locking). Silver frame measures 15¼"L x 13"W x 37½"H. Drawer size: 141/4"L x 101/2"W x 23/4"H.

WA22879 - \$93.95



#### G. 3-Shelf Tuffv Cart™

Use indoors and out. Injection-molded thermoplastic will not warp or crack. Shelves have a nonslip pebbled surface and protective lip around edge. Large 4" ball-bearing swivel casters (2 locking). 18"D x 24"W x 34"H.

WA04058 - \$133.90

H. Heavy-Duty Utility Cart. Rounded corners protect walls and furniture. Nonmarring casters. Beige. Overall dimensions: 45¼" x 257%" x 33¼". 9722594 - \$547.65

#### l. Stainless Steel Lab Cart

Shelves are electronically welded to legs. Padding under cart shelves deadens vibration and noise. Protective bumpers on legs and handles. 300-lb. capacity. Overall size: 16¼" x 27½" x 32½". Shelf size: 15½" x 24". 3½" swivel casters. Allow extra delivery time.

Z09515-\$397.24

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