

Life Sciences

2024 Product Catalog



Featured Suppliers

























Visit **fisheredu.com/featuredsuppliers** to learn more about these suppliers and their products.

Helpful Icons



New product



Must be shipped by truck for regulatory reasons



Meets Americans with Disabilities Act requirements



Protects against splashes from hazardous chemicals or potentially infectious materials



Applicable for remote learning



Defined as a medical device by the FDA

Guarantee

If you're not 100% satisfied with your purchase, contact our customer service team within 30 days of your invoice date and we'll either exchange, repair, or replace the product, or give you a credit for the full purchase price. Call us toll-free for a return authorization number.

Special order items, furniture, and closeouts cannot be exchanged or credited.

Phone: **1-800-955-1177** • 7 a.m. to 5:30 p.m.

Central Time, Monday through Friday

Fax: 1-800-955-0740 • 24 hours a day, 7 days a week

Email: fse.custserv@thermofisher.com

Website: fisheredu.com

Address: Fisher Science Education

4500 Turnberry Drive Hanover Park, IL 60133

For international orders, see page 110.

Products featured in this catalog may have limited availability and extended lead times. Prices are subject to change.

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Life Sciences

Preparing today's students to be the innovators of tomorrow isn't always easy, but finding the right teaching tools can be. From basic lab supplies to state-of-the-art classroom technology, the Fisher Science Education team has everything you need to create a 21st century STEM learning environment.

Visit **fisheredu.com** to get started.

Want to customize aspects of your curriculum?

Explore custom kits to meet the unique demands of your classroom. Visit **fisheredu.com/customkitting** to learn more.

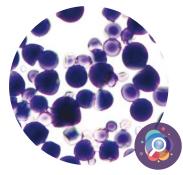
Concerned about shipping and handling fees?

We offer \$12 flat-rate shipping on most orders and our hazardous material fee is just \$15 — the lowest in the country.

Looking for Something Else?

Check out our other 2024 catalogs:

- Chemicals
- Lab furniture and equipment
- Lab supplies and consumables
- Physical science
- Safety
- STEM

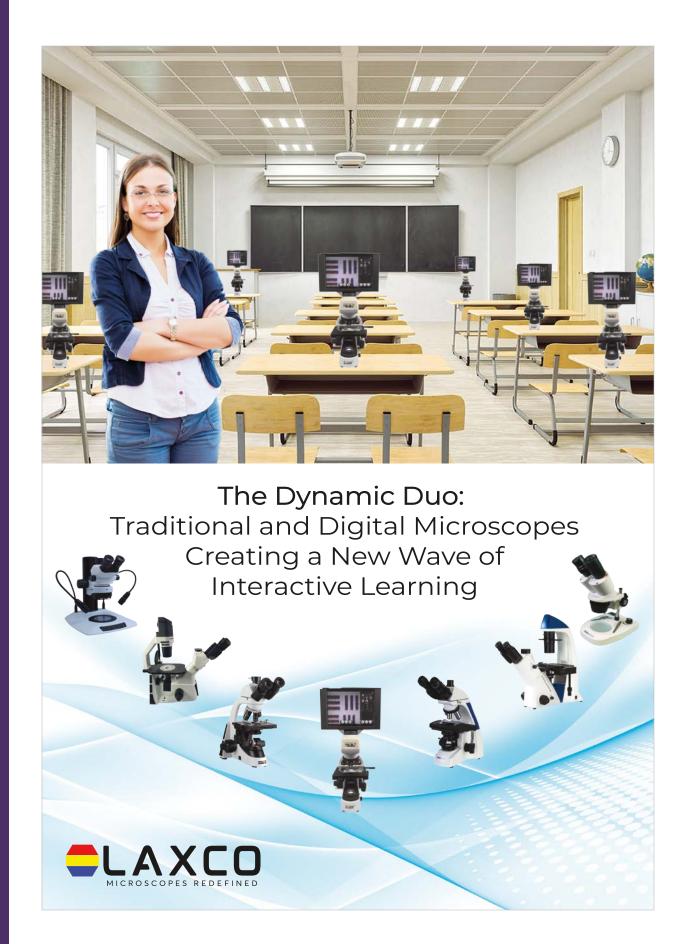


Staining cells with iodine makes slides easier to see under a microscope and helps demonstrate the presence of nuclei, cell membranes, and glycogen.

Visit **fisheredu.com/headlinediscoveries** for more articles and information for your classroom.

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Visit fisheredu.com to view our full offering of products.



NEW Featured Products





Enable Microorganism Detection

Test to determine the number of bacteria on both sides of a slide using nutrient agar that incorporates red spot dye to help interpret results.

Description	Cat. No.	Price
Scientific BT2 Dip Slide	S99496	\$52.00
Scientific BTM2 Dip Slide	S99497	\$52.00





Convenient Vial Storage

Safely store cryogenic vials in strong, polycarbonate boxes with transparent lids that include a frosted surface area for labeling.

Description	Cat. No.	Price
United Scientific™ Cryo Rack, 81 x 2 mL Tubes Pack of 4	S01153	\$40.50
United Scientific Cryo Rack, 81 x 5 mL Tubes Pack of 4	S01154	\$53.00
United Scientific Cryo Rack, 100 x 2 mL Tubes Pack of 4	S01155	\$44.25





Interactive Instruction

Dynamically teach DNA replication and cell signaling with printable paper models that help students learn about important biological processes.

Description	Cat. No.	Price
Origami Organelles DNA Replication Model	S05726	\$7.00
Origami Organelles Cell Signaling Model	S05739	\$7.00





Illustrate Anatomical Details

Use monocotyledon and dicotyledon models to help students visualize the cellular structure of corn and the layers of a plant stem.

Description	Cat. No.	Price
Stem (Monocotyledon) Model	S139171	\$79.00
Walter Product Stem (Dicotyledon) Column Model	S139172	\$79.00





Fuel Bacterial Growth

Facilitate fungal testing with nutrient agar that you can heat right in the bottle and pour into your petri dishes.

Description	Cat. No.	Price
Heat and Pour Nutrient Agar, 225 mL	S01269	\$27.00

Need Help Choosing Supplies?

Use this curated list of products to restock your biology classroom, and visit **fisheredu.com** to find even more science education products.









Description	Quantity	Cat. No.
Dissection Supplies		
Formalin Preserved Sheep Brain, Dura Mater Removed	Each	S28069
Formalin Preserved Sheep Heart, Plain	Each	S28067
Fetal Pig Dissection 3D Model Making Kit	Each	S436047
United Scientific Supplies Large Dissecting Tray with Wax	Each	S80769
Dissection Pan	Each	S81136
Classroom Dissection Set	Each	S07040
General Biology Dissecting Kit	Each	S06841
Fisher Science Education™ Bio-Fresh™ Concentrate	1 gal.	S6011S
Glass and Plasticware		
Class A Volumetric Flasks, 500 mL	6/Pack	S00132
Eisco™ Microscope Glass Slide, Plain	50/Pack	S13943
United Scientific™ Culture Tubes with Screw-Cap Finish	500/Case	S89594
Fisherbrand™ Disposable Cover Slips	1,000/Pack	S17525C
Fisherbrand Disposable Cover Slips	100/Pack	S17525B
United Scientific Plastic Graduated Cylinders, 10, 25, 50, 100, 250, 500, 1,000 mL	Each	S01973
Eisco Class B Acrylic Burette, 50 mL	Each	S95180A
Fisher Science Education™ Polypropylene Beaker Set, 50, 100, 250, 500, 1,000 mL	1/Pack	S400563B
Liquid Handling		
Variable Micropipets, 0.5 to 10 µL	Each	S90243B
Fisherbrand Disposable Graduated Transfer Pipettes, 5.8 mL	500/Pack	S05014
PPE		
Purple Nitrile™ Gloves, Medium	100/Pack	S78944
United Scientific Lab Coat, Men's Large	Each	S04778
Fisher Scientific PVC Apron, Medium	Each	S47382A
Fisherbrand 200 Series Safety Glasses	12/Pack	S01822
Cleaning Supplies		
Eisco Goggle Sanitizing Cabinet	Each	S07817
Eisco Lens Cleaning Tissue Paper	25/Pack	S24530
Fisherbrand [™] Sparkleen [™] 1 Detergent	3.25 lb.	S701101
Pipet/Buret Washer	Each	S31880



CAR@LINA®

Living Material

The Fisher Science Education team is proud to offer Carolina™ Biological Supply Company's living specimens. This partnership provides you with:

Extensive Variety | Expert Support | Superior Quality

Ordering Information

To order live specimens, please call customer service at 1-800-955-1177.

When you place your order, be prepared to provide a specified delivery date and contact information for the faculty member using the product.

Living organisms are shipped Monday through Wednesday using two-day shipping.

Shipping on Monday for Tuesday delivery is possible but will require expedited, overnight shipping.

Your living materials are guaranteed to arrive on time and in a healthy condition or we will replace them with 100% satisfaction guaranteed.

Releasing Organisms

Living organisms are offered for educational purposes only. We do not advocate the release of any organism into the environment. In some states, it is illegal to release organisms, even indigenous species, without a permit.

Restrictions

- State Shipping Restrictions: Some living specimens are restricted in certain states. Please see the individual product listing for this information. Some items have substitution recommendations and/or replacement items that can be provided. This will be determined upon receipt of an order.
- Seasonal Restrictions: Some living specimens are seasonal and are only available at certain times during the year. Please see the individual product listings for seasonal availability.
- Hawaii Restriction Notice: Shipment of living materials (bacteria, algae, plants, protozoa, insects, and other animals) into Hawaii is restricted.

Prepaid Coupons

You can order living organisms in advance using a prepaid coupon option that allows you to arrange delivery when you are ready.

Pay one flat price that includes the cost of the organism and the shipping fees.

Coupons will not expire and can be redeemed at any time.

Redeem coupons by phone, fax, online, or mail.

To ensure prompt arrival of materials, redeem coupons at least two weeks prior to your requested delivery date.

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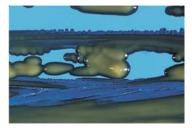
Living Organisms

Bacteria

Individual Bacterial Cultures

Bacteria cultures have wide applications in the food and chemical industries because of their highly diverse metabolic activities.

Bacteria are involved in many of the events that make life possible for other organisms, including humans. Fossils of prokaryotes similar to today's bacteria have



been found in 3.5 billion-year-old rocks. A mastery of bacteria is the key to understanding life on earth in the past, present, and future.

- Labeled by genus and species name, and media on which they are cultured
- All Gram staining based on 24 hr. cultures
- Pure and high-quality
- For every level of study
- Easy-to-use media

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Scientific Name	Media Type	Packaging	Price
S07423ND	Alcaligenes faecalis	Nutrient Agar	Vial	\$22.75/Ea
S07183ND	Bacillus megaterium Culture	Nutrient Agar	Tube	\$14.75/Ea
S07424ND	Bacillus subtilis MicroKwik Culture™	Nutrient Agar	Vial	\$22.75/Ea
S07184ND	Bacillus subtilis Culture	Nutrient Agar	Tube	\$14.75/Ea
S07189ND	E.coli Culture	Nutrient Agar	Tube	\$15.00/Ea
S07417ND	E.coli Culture	Nutrient Agar	Tube	\$15.00/Ea
S07408ND	Enterococcus faecalis	Dextrose Starch Agar or Brain Heart Infusion Agar	Vial	\$23.25/Ea
S07196ND	Proteus vulgaris	Nutrient Agar	Vial	\$23.25/Ea
S07195ND	Pseudomonas aeruginosa	Nutrient Agar	Vial	\$23.25/Ea
S07203ND	Staphylococcus aureus (Coagulase positive)	Brain Heart Infusion Agar	Vial	\$23.25/Ea
S07405ND	Staphylococcus epidermidis	Nutrient Agar	Vial	\$23.25/Ea
S07400ND	Streptococcus pyogenes	Tryptic Soy Agar with 5% Sheep Blood	Vial	\$23.25/Ea
S07426ND	Serratia marcescens	Nutrient Agar	Vial	\$23.25/Ea
S07403ND	E.coli MicroKwik Culture™	Nutrient Agar	Vial	\$23.25/Ea
S07192ND	Micrococcus luteus Culture	Brain Heart Infusion Agar/Broth	Tube	\$15.00/Ea
S07201ND	Serratia marcescens	Nutrient Agar	Tube	\$14.75/Ea





Gram Stain Comparison Set

A selection of five bacterial tube cultures representing Gram-negative and Gram-positive bacteria. This characteristic of bacteria is determined by the make-up of the cell wall and tested by using the Gram-stain method, which is the first step in identifying a bacterium.



• Sold in packs of 5

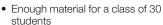
⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S07420ND	\$73.75/Pk

Cyanobacteria Cultures

Cyanobacteria, also known as blue-green bacteria, blue-green algae and Cyanophyta, is a phylum of bacteria that obtain their energy through photosynthesis.

Low light is 50 to 100 ft. candles of fluorescent light or fluorescent light from the ceiling; High light level is 200 to 400 ft. candles of fluorescent light 18 to 24 in. from the culture.



⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Product Type	Media Type	Scientific Name	Price
S07461ND	Anabaena	Alga-Gro [™] freshwater	Anabaena	\$10.75/Ea
S07474ND	Gloeocapsa	Allen's	Gloeocapsa	\$10.75/Ea
S07481ND	Oscillatoria	Alga-Gro [™] freshwater	Oscillatoria	\$10.75/Ea

Protists

Basic Protozoa Set

Watch amoeba capturing food, paramecia undergoing conjugation and euglena doing backflips.



⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S07446ND	\$31.50/Pk

Individual Flagellate Cultures

A flagellate is an organism with one or more whip-like organelles called flagella.

Note: To ensure you order enough living materials for the number of students in your class, order 1 culture for up to 30 students, 2 cultures for 31 to 60 students, 3 cultures for 61 to 90 students, etc.



⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Product Type	Media Type	Scientific Name	Price
S07216ND	Volvox	Alga-Gro [™] freshwater or soil water	Volvox	\$10.75/Ea
S07222ND	Euglena	Euglena Medium	Euglena	\$10.75/Ea

Slime Mold Cultures

Slime mold is a broad term describing some organisms that use spores to reproduce.

Myxomycetes

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Description	Price
S07213ND	Physarum polycephalum Plasmodium; Plate	\$18.75/Ea

Amoeba, Paramecium and Euglena Review Set

The protozoan body consists of a single cell, but it is a mistake to think of these organisms as simple.



ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Description	Price
S07444ND	Amoeba, Paramecium, and Euglena Review Set	\$57.00/Pk





Individual **Sarcodine Cultures**

Sarcodines are single-celled life-forms characterized by an irregular shape.

Note: To ensure you order enough living materials for the number of students in your class, order 1 culture for up to 30 students, 2 cultures for 31 to 60 students, 3 cultures for 61 to 90 students, etc.



 \triangle ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Description	Price
S07217ND	Amoeba proteus	\$10.75/Ea

Individual Ciliate Cultures

Most ciliates are heterotrophs, that feed on smaller organisms, such as bacteria and algae.

Note: To ensure you order enough living materials for the number of students in your class, order 1 culture for up to 30 students, 2 cultures for 31 to 60 students, 3 cultures for 61 to 90 students, etc.



ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Product Type	Media Type	Packaging	Price
Paramecium	Carolina™ Springwater and Wheat Seed	Jar	\$10.75/Ea
Paramecium caudatum	Carolina™ Springwater and Wheat Seed	Jar	\$10.75/Ea
Stentor coeruleus	Chilomonas and Wheat Seed	Jar	\$10.75/Ea
Vorticella	Not recommended for culturing	Jar	\$12.50/Ea
	Paramecium Paramecium caudatum Stentor coeruleus	Paramecium Carolina™ Springwater and Wheat Seed Paramecium Carolina™ Carolina™ Carolina™ Springwater and Wheat Seed Stentor coeruleus Chilomonas and Wheat Seed Vorticella Not recommended	Paramecium Carolina™ Springwater and Wheat Seed Paramecium Carolina™ Springwater and Wheat Seed Stentor coeruleus Chilomonas and Wheat Seed Vorticella Not recommended Jar

Green Algae Mixture

The green algae include unicellular and colonial flagellates, most with two flagella per cell, as well as various colonial, coccoid and filamentous forms,

and macroscopic seaweeds.

• Five representatives of green algae: chlorella, scenedesmus, selenastrum, ulothrix, and volvox







Protozoan species vary greatly in size.

· Six species of protozoa in a single 2 oz. jar

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S07227ND	\$18.00/Ea

Protozoa Survey Set

Study protists, cell structure and diversity.

- · Six individually labeled cultures
- · Each culture can be used for a class

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S07228ND	\$59.75/Fa

Ciliate Mixture

Ciliates are one of the most important groups of protists; they are common almost everywhere there is water eg. lakes, ponds, oceans, rivers, and soils.

- A single culture containing a mixture of five forms
- · Materials for a class of 30 students
- · Each mixture contains three or more genera in a single 2 oz. jar

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S07450ND	\$18.25/Ea

Pond Mixture

Great for demonstrating how ecosystems thrive.

• Four species in a single 2 oz. jar

ALERTS: There is a SHIPPING ALERT for this product group, see box below.





SHIPPING ALERT: Because these items are living or perishable materials a specified delivery date is required. Orders must be placed through Customer Service at 1-800-766-7000.



CAROLINA

ACOROLINA"

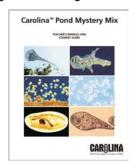
Pond Mystery Mix

Investigate the diversity of pond microorganisms with this unique dried mixture; just add springwater to bring it to life!

The mixture contains a variety of materials and nutrients to support microorganism growth and food chains. Your students can observe bacteria and other single-celled organisms within 24 hours after adding water; larger microinvertebrates will appear within a week.

 Safely stores for years in dried form, without special handling

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Price
S07453ND	\$16.50/Ea

Protozoa Survey Mixture

The protozoan body consists of a single cell, but it is a mistake to think of these organisms as simple.



• Shipped in a single 2 oz. jar

 $ilde{\mathbb{A}}$ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

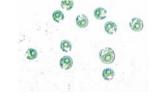
Cat. No.	Price
S07455ND	\$19.25/Ea

Individual Green Algae Cultures

Green algae are eukaryotic organisms that follow a reproduction cycle called alternation of generations.

- Low light is 50 to 100 ft. candles of fluorescent light or fluorescent light from the ceiling
- High light level is 200 to 400 ft. candles of fluorescent light 18 to 24 inches from the culture





Cat. No.	Product Type	Media Type	Scientific Name	Price
S07465ND	Chlorella	Alga-Gro™ freshwater	Chlorella	\$10.75/Ea

Freshwater Spirogyra

Collected from Carolina Biological Supply Company's ponds.

• Enough material for a class of 30 students

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Protozoa Classification Set

Protozoa, a group of 215,000 described species of flagellates, *amoebas*, spore formers and ciliates,

are excellent tools to help students understand single-celled organisms.

 Includes nine individual cultures representing the three main classes of protozoa

ALERTS: There is a SHIPPING
ALERT for this product group, see box below.

Cat. No.	Price
S07449ND	\$90.00/Pk

Fungi

Sordaria Demonstration Cross Plate

A cross of *Sordaria fimicola* wild type and the mutant tan strain for demonstrating genetic crossing-over.

- · Easy to perform
- Requires some basic training in microbiology
- One plate

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Price
S07440ND	\$35.00/Ea





Individual Fungi Cultures

Fungi can help you teach many topics in ecology, genetics, biochemistry and other disciplines.

Fungi are important decomposers that help recycle organic materials in food webs, which makes them great subjects for ecological studies. Students can culture them for genetic studies. For studies in biochemistry, students can investigate the role yeast plays in the production of wine, beer and baked goods.

- Available in tube cultures, plate cultures or MicroKwik Cultures™
- Labeled by name and media on which they are cultivated
- Guaranteed for purity and genera
- Incubate at room temperature (26°C)

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Media Type	Packaging	Scientific Name	Price
S07437ND	Rabbit Dung Agar	Plate	Pilobolus crystallinus	\$18.50/Ea
S07441ND	Cornmeal-Glucose-Yeast Agar	Plate	Sordaria fimicola Mutant Tan	\$18.50/Ea
S07243ND	Potato Dextrose Agar	Vial	Penicillium notatum	\$22.75/Ea
S07205ND	Potato Dextrose Agar	Tube	Aspergillus niger	\$14.75/Ea

Carolina™ MicroKwick Culture™: Since a MicroKwik Culture can be refrigerated, you can order it ahead of time for use on short notice.

Plants

Carnivorous Plants Collection

Carnivorous plants derive some or most of their nutrients from trapping and consuming animals or protozoans, typically insects and other arthropods.

- Carnivorous plants should be maintained in a small terrarium or other suitable environment
- Includes purple pitcher plant, venus flytrap, sundew, butterwort
- Not for export

ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Description	Price
S07547ND	Carnivorous Plants Collection	\$65.25/Pk

Elodea densa

Your fish can breathe easier with *Elodea densa*, the best of the oxygenating plants.

This vigorous, healthy plant needs good light and should be anchored in soil or sand.

- · Cultivated form
- Keeps water conditioned and oxygenated
- Can survive and grow as floating fragments
- Recommended for photosynthesis studies
- · Instructions included



Cat. No.	Product Type	Quantity	Price
S07497ND	Elodea densa	12/Pk	\$17.00/Pk
S07498ND	Elodea densa	12/Pk	\$21.25/Pk
S07499ND	Elodea densa	12/Pk	\$36.25/Pk
S07496ND	Elodea densa Coupon	12/Ea	\$23.25/Ea

Note: Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.

Duckweed

Duckweed are small plants that often cover the water like a green carpet.



- · Lemna minor
- Monocot
- Unit contains 100 to 150 plants
- · Instructions included

 \triangle ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S07493ND	\$12.50/Pk







Living Plants

S07500ND Elodea Tips

- Excellent choice for studying plant cells, osmosis, and plasmolysis
- Great source for photosynthetic parenchyma cells
- Can be used to teach plant leaf morphology
- · Not for aquarium use
- For a class of 15

S07550ND Coleus

- An especially good specimen for starch-iodine reaction studies, to show absence of photosynthesis in non-green areas
- White variegated
- Vigorous clone, easy to propagate from stem cuttings
- One plant

S07571ND Tropical Fern Set

 Ferns reproduce via spores and don't have seeds or flowers, most ferns have what are called fiddleheads

S07511ND Liverwort Set

• It is estimated that there are about 9,000 species of liverworts

riangle ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Description	Price
S07500ND	Elodea Tips	\$16.00/Ea
S07550ND	Coleus	\$13.25/Ea
S07571ND	Tropical Fern Set	\$64.75/Pk
S07511ND	Liverwort Set	\$41.00/Pk

Moss Set

Mosses commonly grow close together in clumps or mats in damp or shady locations.



⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Description	Price
S07517ND	Moss Set	\$41.25/Pk

Living Reef Set

Bring a living reef in your classroom!

 Includes 16 marine organisms such as crabs, damselfish, shrimp, snails, starfish, sea cucumbers and anemones, 2 lb. of live rock



⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Description	Price
S07262ND	Living Reef Set	\$180.00/Ea

Animals: Invertebrates

Hydra, Planaria and Daphnia Review Set

Observe the similarities and differences between some of the most popular invertebrates.

Includes:

- A separate culture of Hydra, Planaria and Daphnia
- A pad of 30 Bioreview[™] Sheets for each
- Instructions for culturing each form
- Sold in packs of 3

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Description	Price
S07594ND	Hydra, Planaria, and Daphnia Review Set	\$56.75/Pk

Daphnia pulex

Daphnia pulex is the most common species of water flea.

Daphnia pulex is an easy-to-grow food source for hydra and small fish.

- For a class of 30 students
- Recommended for environmental studies
- · Prolific: grow to feed your fish

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Description	Price
S07269ND	Daphnia pulex	\$14.50/Ea

Daphnia magna

Cultures of *D. magna* contain adults, juveniles, and neonates.

- For a class of 30 students
- A large species of Daphnia
- Commonly used in aquatic effluent toxicity testing
- An obligate algal feeder
- Cultured using powdered Spirulina as a food source

ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Product Type	Price
S07268ND	Daphnia Magna	\$14.25/Ea
S07268CND	Daphnia Magna Coupon	\$29.25/Ea

Note: Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.





Animals: Invertebrates

Hydra

An underwater wonder!

Generally, the brown hydra species shipped is *Hydra littoralis*. Specimens are freshly collected to ensure maximum natural size and optimum physiological condition.



- For a class of 30 students
- Easily maintained in a freshwater aquarium
- · Needs no filtration or aeration system
- Reproduces rapidly when fed daily

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Product Type	Price
S07265ND	Hydra	\$13.75/Ea

Planaria

Remarkable regeneration!

Witness how planaria can grow new heads and tails.

- For a class of 30 students
- Great for regeneration and memory studies
- Affordable
- · Easy to culture
- A single species or color is selected based on availability
- · Instructions included

riangle ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Description	Price
S07590ND	Planaria	\$15.00/Ea
S37298	Planaria, Living Material Coupon	\$28.25/Ea

Brown Planaria

Regenerating wonders!

The size of this planarian varies with the season. Smaller forms are

more prevalent in early spring; larger or mature forms are evident throughout remainder of year.

- For a class of 30 students
- Great for regeneration and memory studies
- · Easy to culture
- Affordable
- Instructions included

ALERTS: There is a SHIPPING
ALERT for this product group, see box below.

Cat. No.	Price
S07229ND	\$15.00/Ea

Mixed Rotifers

Commonly called wheel animals.

- · For a class of 30 students
- Equal numbers of both species in a single culture

ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Price
S07231ND	\$13.50/Ea

Caenorhabditis elegans N2

Caenorhabditis elegans completes its life cycle in three days, developing from egg through four larval stages to adult.

- Wild-type strain
- Extensively used for genetic studies
- Aseptically maintained on Nematode Growth Agar with E. coli as the feeder host

ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Price
S07601ND	\$18.50/Ea

Water Bears

Cryptobiotic (inactive) forms may be made by dehydration and can be reanimated during class for student observation, or about an hour before needed.

- For a class of 30 students
- Tardigrades are supplied in an active form, and are sometimes known as water bears

ALERTS: There is a SHIPPING ALERT for this product group, see box below.







Earthworms

Students can find these tube-shaped, segmented animals living in soil and feeding on live and dead organic matter.

- · Lumbricus terrestris
- Large, mature specimens are suitable for laboratory study and dissection
- Medium-sized specimens are not suitable for dissection, but are good for making slides and for use as food for snakes and large salamanders



- · Instructions included
- Sold in packs of 25

 $\ensuremath{\underline{\wedge}}$ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Product Type	Price
S07271ND	Earthworm	\$26.50/Pk

Note: Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.

Pond Snails

Popular medium sized snails for aquariums and hands-on activities.

- · Instructions included
- Sold in packs of 12

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Description	Price
S07278ND	Snails Pond	\$19.25/Pk

Marine Echinoderm Set

Adult echinoderms are recognizable by their radial symmetry, and include such well-known animals as starfish, sea urchins, sand dollars, and sea cucumbers.

- Set of 16 living animals such as starfish, sea urchins, sand dollars and sea cucumbers with various genera representing a cross section of the phylum Echinodermata
- Sold in packs of 16

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Description	Price
S07581ND	Marine Echinoderm Set	\$206.00/Pk

Terrestrial Isopods

They're crustaceans that live on land - yet breathe through gills!

Sow bugs are fantastic examples of environmental adaptation. *Porcellio* (sow bugs) will play dead or run away when disturbed. *Armadillidium* (pill bugs) roll into a protective ball when nudged.

- Easy to care for in a moist environment
- Great for teaching evolution, adaptation, behavior, and much more
- Field collected
- · Instructions included
- Sold in packs of 50

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Product Type	For Use With (Application)	Price
S07274ND	Sow Bug	Use these easy care animals to teach topics such as evolution, adaptation, behavior and much more, use with AP™ laboratory 11: animal behavior.	\$50.00/Pk
S07654ND	Pill Bug	To teach topics such as evolution, adaptation, behavior and much more, use with AP™ laboratory 11: animal behavior.	\$48.75/Pk
S07274CND	Sow Bug Coupon	Use these easy care animals to teach topics such as evolution, adaptation, behavior and much more, use with AP™ laboratory 11: animal behavior.	\$58.25/Ea

Note: Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.

Lady Beetle 10-Larvae Culture

Observe all 4 stages of complete metamorphosis with lady beetle larvae.

- Alligator-like larvae grow, pupate and metamorphose in 10 to 14 days
- At least 5 of the 10 to 15 larvae are guaranteed to emerge as healthy adult lady beetles



15

Cat. No.	Description	Price
S72460	Lady Beetle	\$23.50/Ea

Note: Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.





Individual **Butterfly Kit**

Raise butterflies in your home or classroom while learning about metamorphosis.

- · Easy to use, easy to raise
- · Comes with live butterfly larvae, pop-up habitat, feeder and instructions
- · Perfect for all ages

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

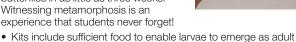


Cat. No.	Price
S28870	\$43.50/Ea

Painted Lady Butterfly Larvae Sets

Teach the concept of butterfly life cycles

The larvae pupate and emerge as adult butterflies in as little as three weeks. Witnessing metamorphosis is an experience that students never forget!



- butterflies.
- Store at 22° to 25°C

5-Larvae Culture Kit:

- 8 oz. cup with food
- Five Vanessa cardui butterfly larvae
- Larvae care instructions

Note: Additional larvae are supplied with each Larvae/Food Set to ensure that at least the specified amount of larvae emerge as healthy adults. Extra food must be purchased if you wish to maintain additional larvae.

33 Larvae Culture Kit:

• 1 cup of 33 larvae

• 1 cup of food

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Product Type	Quantity	Price
S07704ND	Painted Lady Butterfly 5 Larvae Culture	5/Container	\$20.75/Pk
S07705ND	Painted Lady Butterfly 5 Larvae Culture Coupon	5/Container	\$32.25/Ea
S07710ND	Painted Lady Butterfly Culture 33 Larvae Set	3/Container	\$60.50/Pk
S07711CND	Painted Lady Butterfly Culture 33 Larvae Set	Ea	\$76.00/Ea

Note: Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.

Mealworms

The adult mealworm (Tenebrio) lays hundreds of eggs and is the best stage to start a balanced culture. Larvae are ideal food for lizards,

salamanders, turtles, and frogs.

- Pupae metamorphose into adults in two to four weeks
- · Instructions included
- Sold in packs of 100

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Description	Price
S07275ND	Mealworm Larvae	\$16.25/Pk

Butterflies in the Classroom Kit

These kits make keeping live butterflies simple, fun and affordable.

This kit allows students to work hands-on with living butterflies. From a culture cup that contains 33 larvae and food, each student (or pair of students) transfers a larva and food to its own culture vessel, creating an individual chamber for observation. The provided habitat is simple to set up, easy to clean, great for viewing and collapses for convenient storage.





Cat. No.	Description	Price
S07707ND	Butterflies in the Classroom Kit (with Live	\$88.00/Ea
	Caterpillars)	
S07708ND	Butterflies in the Classroom Kit (with Prepaid	\$88.00/Ea
	Coupon)	
S28651	Butterflies in the Classroom Kit Refill	\$64.00/Ea

Note: Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, online Web form or mail. To ensure prompt arrival of material, coupons must be redeemed at least two weeks prior to requested delivery date.

Animals: Vertebrates

Marine Fish Set

Add these exciting fish to your classroom aquarium.

- A selection of 11 fish specially selected for a classroom community marine tank
- Chalk basslets, Royal grammas, Clown gobies, Watchman gobies, Damselfish, and Blennies

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Price
S07261ND	\$231.00/Ea
•	





Largemouth Bass

These fish are very hardy in aquaria maintained at controlled room temperatures.

- Can be used in aquaria and outdoor pools, and for toxicity studies
- Length ranges from one to three inches (length of a fish includes the tail fin)
- · Instructions included
- Sold in packs of 3

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S07713ND	\$38.25/Pk

Blue Channel Catfish

A slender, bluish-gray fish that is a good bottom scavenger.

- These fish are very hardy in aquaria maintained at controlled room temperatures
- Ictalurus punctatus
- Popular aquaculture species
- Length ranges from one to two inches (length of a fish includes the tail fin)
- Instructions included
- · Sold in packs of 3

Note 1: Restricted in Alaska, Oregon

and California. Permit required prior to purchase in Nevada and Virginia.

Note 2: These fish do not ship well during hot weather.

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S07715ND	\$27.75/Pk



Animal Collection and Habitats

Eisco[™] Polycarbonate Aquarium Tank

Polycarbonate aquarium tank features the clarity of glass with the durability and safety of plastic. Made from tough polycarbonate plastic, it is crack-resistant and carries a natural UV filtering quality.



- One piece molded polycarbonate plastic aquarium tank
- Use for terrarium, aquarium, or insect habitat
- · Transparency provides excellent visibility
- UV protectant

Cat. No.	Capacity (English)	Price
S26603	0.75 gal.	\$14.25/Ea
S26596	1.75 gal.	\$23.75/Ea

Education Aquarium Tanks

Aquariums are made with glass panels, fitted and silicone-sealed into injected molded frames.



 Lighted hood covers and electronic ballast hold fixtures for a single fluorescent bulb (available separately)

Cat. No.	Capacity (English)	Price
S06524	20 gal.	\$223.00/Ea

Basic Aquarium Kit

Marina Style 10 kit comes with everything you need for an easy set-up experience.

 Measuring only 20 × 10 × 12 in. (50 × 25 × 30 cm), the sleek design helps save valuable classroom space.



Includes: Marina Slim S15 clip-on filter with quick change filter cartridges, an incandescent canopy and bottom frame with two 15w clear bulbs, Nutrafin Max fish food, Nutrafin AquaPlus and Nutrafin Cycle water purifiers, fish net, thermometer and care guide

Cat. No.	Price
S06532	\$218.00/Ea





Aquarium Gravel

Premium gravel adds a beautiful touch to your aquarium or fish tank.

Whether you're looking for a bright substrate or something for your natural tank, pure water pebbles are exactly what your tank requires.

- Designed specifically for use in freshwater aquariums
- Gravel does not affect water chemistry in any way and provides a great place for beneficial bacteria to colonize

Cat. No.	Weight (English)	Price
S06534	5 lb.	\$11.00/Ea
S06535	25 lb.	\$90.00/Ea

Automatic Fish Feeder

Large-capacity drum is capable of holding up to four weeks of flake food.

- Safe, accurate and easy to feed fish when not fed regularly
- Easy clamp-on mechanism makes it possible to attach to the rim of the aquarium or to let it stand freely on the hood or glass canopy



Cat. No.		Price
S06541		\$85.00/Ea

Eisco[™] Insect Collecting Net with 30 in. Handle

The net is attached to a heavy duty iron ring and has plenty of room for insects.

- · Net for catching insects
- 30 in. handle
- 12 in. diameter net with wire ring
- Net is 31 in. deep

WARRANTY: 1-year limited manufacturer warranty

Cat. No.	Description	Price
S29533	Insect Collecting Net with Wooden Handle	\$27.25/Ea
S29344	Insect Collecting Net with Aluminum Handle	\$43.00/Ea



Designed for sweeping vegetation to collect insects, and features a lightweight aluminum handle with rubber grip.

- 10 in. diameter frame
- 12 in. deep nylon net
- 36 in. lightweight aluminum handle with rubber grip
- · Great durability

WARRANTY: 1-year limited manufacturer warranty

Cat. No.	Price
S29348	\$40.75/Ea

Amazing Bugs[™] Habitat

Suitable for butterflies and other insects. Acts as a handy pop-up habitat that can be hung up or set on a table or shelf.

· Packs flat for storage

Cat. No.

S28650

 Features clear plastic zippered top, clear-view mesh sides, and a sturdy nylon floor

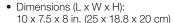


\$18.25/Ea

Ladybug Land

Discover the land of the ladybugs.





riangle ALERTS: CHOKING HAZARD. Small parts. Not for children under 3 yrs.

Cat. No.	Price
S79118	\$4.45/Ea









Learn More

Specimens are fixed with formaldehyde and then repeatedly washed in Bio-Fresh solution to reduce residual formaldehyde. Every specimen meets or exceeds OSHA standards for formaldehyde in the lab. **See page 40** for concentrated solution. Look for the Bio-Fresh name on a variety of specimens beginning on **page 20**.



Identify Major Systems

- Single injected: Red latex in the arterial system
- Double injected: Blue latex in venous system, red in arterial system
- Triple injected: Yellow latex in the hepatic portal system, blue in the venous system, and red
 in the arterial system

Safety, Storage, and Disposal

- Specimens meet or exceed OSHA formaldehyde standards of less than 0.75ppm for eight hours of exposure in a ventilated lab space
- Refrigeration is not necessary, but extreme temperatures (low and high) should be avoided
- Keep vac-packs sealed until needed, then store specimens in Bio-Fresh holding solution for reuse
- Disposal is simple treat specimens and liquids like any other solid and liquid waste
- Always follow your area's guidelines for disposal, dumping, or incineration

Packaging and Labeling

- Most specimens are available in pails or vacuum-sealed plastic bags
- Some smaller specimens come in jars, where indicated

Bio-Fresh Pails

- Filled with Bio-Fresh preservative for safe shipping and easy storage of specimens
- Ideal for specimens intended for reuse
- Contents, lot numbers, and production dates are printed on every label
- Due to the weight of the liquid, special shipping charges apply

Vac-Packs

- Good solution for customers who already have storage methods (pails, plastic bags, etc.)
- Individually packaged specimens are very convenient and easy to distribute to students
- Smaller specimens such as grasshoppers and sheep eyes come in packs of 10 to reduce waste
- Heat sealed with three layers of impermeable plastic and stamped with a production date and lot number

The Fisher Science Education team is committed to providing the highest quality specimens and service.

- All biological specimens are guaranteed for one year
- Receive a full credit on any defective merchandise
- Call Fisher Science Education customer service at 1-800-955-1177 for more information

Specimen Acquisition

We recognize the role that respect for life and the environment play in biology education, which is why only humane and socially acceptable methods of collection are used for the specimens you'll receive. We select suppliers who are in strict accordance with all government guidelines and regulations, and who have all necessary permits for obtaining, processing, and transporting specimens. Endangered, threatened, and protected wildlife will never be sold.

Butterfly Garden With Voucher

Raise butterflies while learning all about metamorphosis in a classroom, or at home.

An award-winning butterfly garden that allows students to watch caterpillars transform into Painted Lady butterflies and explore, eat, spin silk and grow up to 10 times their original size.

Garden includes:

- Pop-up, reusable 11.5 in. tall mesh habitat
- Feeding pipette
- Caterpillars to Butterflies Instruction Guide
- Voucher for a cup of 5 caterpillars and all the nutritious food they
 need to develop into adult butterflies (please note that an additional
 \$7.95 fee is required for shipping and handling of your newborn
 caterpillars)
- 3 of the 5 caterpillars are guaranteed to develop into adult butterflies
- After transforming into butterflies, unzip the top to set the butterflies free
- Ages four and up

 $ilde{\mathbb{A}}$ ALERTS: During extremely hot or cold weather, delivery of live larvae may be delayed

Cat. No.	Price
S17575	\$28.00/Ea

Preserved Specimens

Invertebrates

Formalin Quahog

Ideal for studying bivalve anatomy.

- Venus sp.
- Large, thick-shelled marine clams
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde.

Cat. No.	Price
S37690*	\$3.50/Ea

Preserved Specimens: Nematoda



- Choose from male or female roundworms
- In Fisher Science Education[™] Bio-Fresh[™] solution

Cat. No.	Description	Quantity	Price
S3001*	Ascaris Lumbricoides	10/Pk	\$29.75/Pk



A parasitic nematode also known as roundworm.

- · Ascaris lumbricoides
- Majority are females with very few, if any, males for comparison
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Description	Price
S37687*	Formalin Ascaris	\$25.00/Ea

Formalin Jellyfish

For use in study of anatomy of cnidarians using common, formalin-preserved jellyfish.

- Common marine jellyfish Aurelia
- Class Scyphozoa
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Length (English)	Price
S37683*	4 to 6 in.	\$4.45/Ea
S37684*	3 to 4 in.	\$4.10/Ea

Blue Crab

Callinectes sp.

The most highly developed of all the crustacea. A pugnacious predator, the blue crab is called the "soft-shelled crab" when it is collected soon after molting before its new shell has hardened.



Cat. No.	Description	Price
S1126S*	Blue Crab preserved specimens	\$37.75/Pk

Sea Urchin

Strongylocentrotus purpuratus

- Excellent for typical urchin morphology study
- In Fisher Science Education[™] Bio-Fresh[™] solution

Cat. No.	Description	Quantity	Price
S1185S*	Sea Urchin Purple: Large	10/Pk	\$51.00/Pk



Formalin Blue Crab

Ideal for exploring the anatomy of an advanced crustacean during invertebrate and comparative anatomy classes.



- Blue Crab (Callinectes sp.)
- · Great for studying crustacean anatomy
- Preserved in formalin
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Price
S72736	\$7.30/Ea

Mollusca Clams, Mussels, Scallops, Chitons, Snails



Cat. No.	Preservative	Packaging	Size	Price
S5002P	Bio-Fresh™	Pail	Large	\$32.50/Pk

Formalin Crayfish

For use in exploring relationship between structure, function, and environment using formalin-preserved crayfish.



- · Pacifastacus sp.
- Phylum Arthropoda, class Crustacea
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Injection Type	Price
S37695*	Plain	\$17.25/Ea

Crayfish

Cambarus sp.

One of the most popular arthropod dissection specimens. They are inexpensive, large, and their internal organs are easy to



observe. Single-injected specimens have the heart, arteries and gills filled with colored latex.

Cat. No.	Length (English)	Quantity	Injection Type	Size	Price
S400210	4 to 6 in.	10/Pk	Plain	Large	\$31.00/Pk
S4002100	4 to 6 in.	100/Pk	Plain	Large	\$188.00/Pk
S400250	4 to 6 in.	50/Pk	Plain	Large	\$101.00/Pk
S4003*	4 to 6 in.	10/Pk	Single	Large	\$20.75/Pk

Fisher Science Education™ Earthworms

Segmented worms (Oligochaeta) for dissection.

- A variety of worms that illustrate different biological phenomena
- Choose from segmented worms, that are hermaphroditic, or separate

sexes	пентарпочно,	oi separat	e	
Cat. No.	Description	Length (English)	Preservative	Price
S1065SAB	Earthworm	8 to 10 in.	Bio-Fresh [™]	\$19.25/Pk
S5100S*	Annelida Segmented Worm	10+ in.	Bio-Fresh™	\$26.75/Pk
S14154	Pack of 100		Formaldehyde-free	\$136.00/Pk

Formalin Earthworms

Earthworms

For use in introducing students to invertebrate anatomy. Ideal introductory dissection specimens.



- Phylum Annelida, segmented worms
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Injection Type	Quantity	Price
S37693*	Plain	50/Tube	\$36.75/Pk

Formalin Grasshoppers

An excellent introductory specimen for dissecting and studying insect anatomy.

- Louisiana Lubber Grasshoppers (Romalea microptera or Brachystoma)
- Perfect introductory dissection specimen
- Large size is perfect for studying specialized external and internal anatomy
- · Preserved in formalin
- · Shipped 10 per jar
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Injection Type	Price
S72459*	Plain	\$9.20/Pk
S72737	Single	\$38.00/Pk
	S72459*	S72459* Plain



Formalin Lamprey, Plain, 1 Per Bag

For use in examining the anatomy of the jawless fish. Ideal for comparative anatomy classes and discussions about common ancestry and diversity.



- · Member of class Agnatha
- · Mature specimens
- Characteristics: jawless vertebrate, paired gill openings, no paired fins, well developed eyes
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Price
\$72733	\$13.25/Ea

Formalin Squid

For exploring the form and function of cephalopods. Squid is a complex mollusk with tentacles, arms, and well-developed eye.

- Loligo pealeii or Illex illecebrosus
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- INJECTIONS: Plain: no color



Cat. No.	Length (English)	Length (Metric)	Injection Type	Price
S37627*	Up to 8 in.	Up to 20.3 cm	Plain	\$3.95/Ea
S37622*	12+ in.	30.4+ cm	Plain	\$8.55/Ea
S37626*	8 to 12 in.	20.3 to 30.4 cm	Single	\$7.90/Ea
S37623*	12+ in.	30.4+ cm	Single	\$11.25/Ea

Squid

Loligo sp.

- One of the most developed mollusks
- With well-developed eyes, the squid is a predatory and extremely active animal
- Used for grasping small fish and feeding their horny beaks, their tentacles are highly modified homologues of the clam or snail "foot"

Cat. No.	Length (English)	Quantity	Injection Type	Price
S3072S*	5 to 8 in.	200/Pk	Plain	\$58.75/Pk
S3094S*	5 to 8 in.	10/Pk	Single	\$66.00/Pk
S3056S*	12 to 16 in.	10/Pk	Plain	\$134.00/Pk
S5105*	8 to 12 in.	10/Pk	Plain	\$97.00/Pk

Vertebrates

Comparative Vertebrate Anatomy Kit

Each comprehensive dissection kit allows 1 to 2 students to study variety of vertebrates and compare their unique anatomies.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home
- The dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a plastic ruler
- Each specimen is preserved in formalin fixative, then washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal
- Information packets and detailed disposal instructions come with each kit

Cat. No.	Includes	Price
S81550	Shark, Grassfrog, Rat, Fetal pig, Foam tray, Nitrile	\$98.00/Ea
	gloves x 2, Disposable aprons x 2, Storage bag,	
	Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	

Vertebrates: Amphibians

Advanced Frog Anatomy Kit

Each comprehensive dissection kit introduces 1 to 2 students to basic vertebrate anatomy by dissecting a frog.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home
- The dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel
 - forceps, a teasing needle and a plastic ruler
- Each specimen is preserved in formalin fixative, then washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal
- Information packets and detailed disposal instructions come with each kit

Cat. No.	Includes	Price
S81508	Bullfrog, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$56.50/Ea
S81509	Bullfrog, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$46.75/Ea



Bullfrogs, **Bio-Fresh**

Rana catesbeiana.

- · Provides students with a good specimen for an in-depth dissection study of amphibians
- · Animals are injected with colored latex to identify arteries and veins



5170510	Piain	6 to / In.

Grass Frog The grass frog is the ideal dissection specimen for anatomical studies and for introducing students to all the major organ systems.

Injection Type Length (English)



- · Product is stored and shipped in fluid



Cat. No.	Quantity	Price
S89511*	10/Pk	\$32.50/Pk

Frog Anatomy Kit

Each comprehensive dissection kit introduces 1 to 2 students to basic vertebrate anatomy through the dissection of the frog.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home
- The dissection guide provides in-depth information on the specimen's anatomy
- · Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a plastic ruler
- Each specimen is preserved in formalin fixative, then washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal
- Information packets and detailed disposal instructions come with each kit

Cat. No.	Includes	Price
S81533	Frog, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$27.00/Ea
S81532	Frog, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$38.00/Ea
S81506	Frog, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$40.00/Ea
S81507	Frog, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$30.00/Ea



Frog specimens are fixed in formaldehyde, repeatedly rinsed and packaged in Bio-Fresh solution. These budget-friendly are available with colored latex injections.

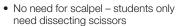
INJECTION KEY

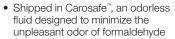
- Plain: Circulatory system not injected with colors
- Single: Arteries injected with red
- Double: Arteries red, veins blue
- Triple: Arteries red, veins blue and hepatic portal veins yellow

Cat. No.	Injection Type	Length (English)	Quantity	Price
S1611S10	Double	4.5 to 5.5 in.	10/Pail	\$128.00/Pk
S1611S50	Double	4.5 to 5.5 in.	50/Pail	\$620.00/Pk
S1631S50	Plain	4.5 to 5.5 in.	50/Pail	\$545.00/Pk
S1672S10	Double	4 to 4.5 in.	10/Pail	\$87.00/Pk
S1672S50	Double	4 to 4.5 in.	50/Pail	\$441.00/Pk

Formalin Frogs

For use in introducing students to vertebrate anatomy. These grass frogs are ideal for study of body systems.







Cat. No.	Injection Type	Length	Quantity	Price
S37646*	Plain	3 to 4 in. (7.6 to 10.1 cm)	1/Ea	\$4.80/Ea
S37643*	Plain	4 to 5 in.	1/Ea	\$8.20/Ea
S37640*	Plain	5+ in.	1/Ea	\$11.50/Ea
S37714*	Double	4 to 5 in.	10/Ea	\$10.75/Ea

Bullfrogs, **Fisher Science Education**[™] Fisher-Free



Cat. No.	Injection Type	Length	Price
S0800S	Plain	6 to 7 in. (15.24 to 17.78 cm)	\$30.50/Pk
S0812S	Single	5 to 6 in. (12.7 to 15.24 cm)	\$20.75/Pk





Frogs, Bio-Fresh™

Frog specimens are fixed in formaldehyde, repeatedly rinsed and packaged in Bio-Fresh solution. These budget-friendly specimens are available with colored latex injections.

INJECTION KEY

- Plain: Circulatory system not injected with colors
- Single: Arteries injected with red latex
- Double: Arteries red, veins blue
- Triple: Arteries red, veins blue and hepatic portal veins yellow

Cat. No.	Injection Type	Length (English)	Quantity	Price
S1619S*	Plain	4 to 4.5 in.	10/Pk	\$81.00/Pk
S1623S*	Single	4 to 4.5 in.	10/Pk	\$73.25/Pk
S1631S*	Plain	4.5 to 5.5 in.	10/Pk	\$120.00/Pk
S1611S*	Double	4.5 to 5.5 in.	10/Pk	\$120.00/Pk

Frogs, Bio-Fresh™

Frog specimens are fixed in formaldehyde, repeatedly rinsed and packaged in Bio-Fresh solution. These budget-friendly specimens are available with colored latex injections.

INJECTION KEY

- Plain: Circulatory system not injected with colors
- Single: Arteries injected with red
 later
- Double: Arteries red, veins blue
- Triple: Arteries red, veins blue and hepatic portal veins yellow

Cat. No.	Injection Type	Length (English)	Quantity	Price
S1619S10	Plain	4 to 4.5 in.	10/Pail	\$86.00/Pk
S1619S50	Plain	4 to 4.5 in.	50/Pail	\$405.00/Pk
S1619S100	Plain	4 to 4.5 in.	100/Pail	\$804.00/Pk

Frogs, Fisher-Free[™]

Frog specimens are 100% formaldehyde-free. They are stored in a nontoxic solution and are mold- and stiffening-resistant. Available with colored latex injections.

INJECTION KEY

- Plain: Circulatory system not injected with colors
- Single: Arteries injected with red latex
- Double: Arteries red, veins blue
- Triple: Arteries red, veins blue and hepatic portal veins yellow

Cat. No.	Injection Type	Length (English)	Quantity	Price
S0902S	Single	4 to 4.5 in.	10/Pail	\$136.00/Pk
S0901S	Plain	4 to 4.5 in.	10/Pail	\$125.00/Pk
S0930S	Plain	4.5 to 5.5 in.	10/Pail	\$155.00/Pk



Vertebrates: Birds

Pigeon Anatomy Kit

Each comprehensive dissection kit introduces 1 to 2 students to the avian anatomy and organ systems through the dissection of a pigeon.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home
- The dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a plastic ruler
- Each specimen is preserved in formalin fixative, then washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal
- Information packets and detailed disposal instructions come with each kit

Cat. No.	Includes	Price
S81520	Pigeon, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$51.25/Ea
S81521	Pigeon, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$41.50/Ea

Formalin Pigeon

For use in exploring avian anatomy, specimen is ideal for comparative vertebrate courses.

- · Family Columbidae
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde



Cat. No.	Price
S37649*	\$18.00/Ea

Pigeons

Columba sp.

Large adult pigeon specimens provide an in-depth view of several traits that all birds share:

- Skin with feathers
- Wings
- Two legs



- Four-chambered heart
- Horny beak

Cat. No.	Injection Type	Preservative	Quantity	Price
S2403S*	Double	Fisher-Free [™]	1/Pk	\$25.25/Pk



Vertebrates: Fish

Perch Anatomy Kit

Each comprehensive dissection kit allows 1 to 2 students to improve their specimen observation skills and achieve a better understanding of bony fish anatomy.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home
- The dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a plastic ruler
- Each specimen is preserved in formalin fixative, then washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal
- Information packets and detailed disposal instructions come with each kit

Cat. No.	Includes	Price
S81530	Perch, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$32.50/Ea
S81531	Perch, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$22.25/Ea

Formalin Dogfish Sharks



For use in exploring anatomy of cartilaginous fish, specimens are ideal for comparative and vertebrate anatomy classes.

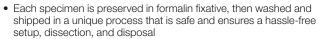
- Member of class Chondrichthyes
- · Mature specimens
- Characteristics: cartilaginous skeleton, five pairs of gill slits, no swim bladder or operculum
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Length (English)	Length (Metric)	Injection Type	Price
S37635*	22 to 27 in.	55.8 to 68.5 cm	Single	\$20.75/Ea
S37634*	22 to 27 in.	55.8 to 68.5 cm	Plain	\$19.00/Ea
S72731	18 to 22 in.	45.7 to 55.9 cm	Plain	\$17.00/Ea
S37630*	27+ in.	68.5+ cm	Plain	\$22.00/Ea
S72732	27+ in.	68.6 cm	Double	\$35.25/Ea
S37632*	27+ in.	68.5+ cm	Double	\$24.25/Ea

Shark Anatomy Kit

Each comprehensive dissection kit allows 1 to 2 students to explore the internal organs and organ systems of a dogfish shark.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home
- The dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a plastic ruler



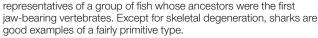
 Information packets and detailed disposal instructions come with each kit

Cat. No.	Includes	Price
S81510	Shark, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$65.25/Ea
S81511	Shark, Foam tray, Nitrile gloves x 2, Disposable aprons x 2. Storage bag	\$53.50/Ea

Dogfish Sharks



Sharks and the cartilaginous skeletoned fishes are



- These sharks are from the Class Chondrichthyes Elasmobranchii squalus, the dogfish sharks
- Shark color injections differ from the standard color progression (see Injection Key)
- Packed in Bio-Fresh™

Cat. No.	Injection Type	Length (English)	Price
S1509S*	Plain	18 to 22 in.	\$17.25/Pk
S1501*	Plain	22 to 27 in.	\$24.25/Pk
S07053	Double	22 to 27 in.	\$307.00/Pk
S1503S*	Plain	27+ in.	\$31.75/Pk
S1030S*	Single	27+ in.	\$34.50/Pk
S1504*	Double	27+ in.	\$35.25/Pk
S1505	Triple	27+ in.	\$44.50/Pk



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Vertebrates: Mammals

Formalin Cats

For use in advanced biology, anatomy and physiology classes.



- Felis catus
- Similar to human anatomy
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Injection Type	Length (English)	Length (Metric)	Price
S37655ND*	Plain	14 to 18 in.	35.5 to 45.7 cm	\$99.00/Ea
S37653ND*	Double	18+ in.	45.7+ cm	\$118.00/Ea

Skinned Cat Anatomy Kit

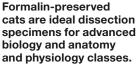


Double injected skinned cat is preserved in sage, non-toxic solution and packaged in a vacuum-sealed bag.

- Cat is double injected (arterial system, red; venous system, blue)
- · Provided in a vacuum-sealed bag
- Does not include dissection tools, safe equipment, or additional dissection material

Cat. No.	Length (English)	Price
S81557	14 to 18 in.	\$125.00/Ea

Formalin Skinned Cats





- Felis catus
- Ideal specimen for studying advanced mammalian anatomy and physiology
- Similar to human anatomy
- Skin has been removed to save time and reveal underlying muscles
- · Preserved in formalin
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

INJECTIONS:

- Plain: no color injection
- · Single: red arteries
- Double: red arteries, blue systemic veins
- · Triple: red arteries, blue systemic veins, yellow hepatic system

Cat. No.	Price
S81620	\$129.00/Ea

Formalin Mink

Packaged in waterproof plastic bags which ensures safe and non-toxic environment.

Vertebrates: Mammals

- Ranch-raised, formalin-preserved mink
- 15 in. in length
- Waterproof student name tags are furnished free with each mink

Cat. No.	Injection Type	Price
S37304*	Plain	\$17.25/Ea
S37305*	Double	\$21.25/Ea

Mink

Mustela vison.

Like rabbits, mink are an excellent alternative or addition to cat dissections.

- Average 13 to 17 in. (33–43 cm)
- Preskinned to reduce lab waste and save time in dissection preparation
- Slender with very small amounts of adipose tissue
- May have cut hands and feet from skinning process
- Oily; processed in formaldehyde, rinsed and held in Bio-Fresh[™], in vacuum-packed bags

Cat. No.	Injection Type	Price
S9214S*	Triple	\$28.25/Pk

Pig Anatomy Kit

Each comprehensive dissection kit introduces 1 to 2 students to basic mammalian anatomy and circulatory system through the dissection of a fetal pig.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home
- The dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a plastic ruler
- Each specimen is preserved in formalin fixative, then washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal
- Information packets and detailed disposal instructions come with each kit

Cat. No.	Includes	Price
S81514	Fetal pig, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$52.50/Ea
S81515	Fetal pig, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$41.50/Ea



Formalin Pigs

For use in introducing students to mammalian anatomy.

- Fetal and/or stillborn pigs that do not have well-defined musculature
- Mainly used in basic high school and college biology classes
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Injection Type	Length (English)	Length (Metric)	Price
S37666*	Double	14+ in.	35.5+ cm	\$31.00/Ea
S37667*	Plain	11 to 14 in.	27.9 to 35.5 cm	\$27.00/Ea
S37672*	Double	7 to 11 in.	17.7 to 27.9 cm	\$29.00/Ea
S37669*	Double	11 to 14 in.	27.9 to 35.5 cm	\$29.00/Ea
S37664*	Plain	14+ in.	35.5+ cm	\$27.50/Ea

Fetal Pigs

Perfect for the beginning biology class.

- Ideally suited for high school and freshman college courses where the emphasis is on basic internal anatomy
- Perfect for the beginning biology class because of its cost, availability, size and easy dissection
- Artiodactyla order is characterized by having an even number of toes
- Specimens are fixed in formaldehyde, rinsed and packaged in Fisher Science Education Bio-Fresh™ solution
- Fisher-Free[™] specimens are 100% formaldehyde free fixed and held in a nontoxic solution

Note: Because it is a fetal specimen, musculature is not fully toned for an in-depth dissection.

Cat. No.	Injection Type	Length (English)	Quantity	Price
S1580S*	Plain	5 to 7 in.	10/Pk	\$83.00/Pk
S1592S*	Double	7 to 11 in.	1/Pk	\$29.75/Pk
S1588S10	Plain	7 to 11 in.	10/Pk	\$293.00/Pk
S1590S*	Single	7 to 11 in.	1/Pk	\$29.50/Pk
S1588VS	Plain	7 to 11 in.	10/Pk	\$269.00/Pk
S1594S	Plain	11 to 13 in.	1/Pk	\$27.25/Pk
S1598S*	Double	11 to 13 in.	1/Pk	\$33.50/Pk
S1596S10	Single	11 to 13 in.	10/Pk	\$301.00/Pk
S1594S10	Plain	11 to 13 in.	10/Pk	\$329.00/Pk
S1598S10	Double	11 to 13 in.	10/Pk	\$322.00/Pk
S1190S*	Plain	13+ in.	1/Pk	\$28.00/Pk
S1194S*	Single	13+ in.	1/Pk	\$29.25/Pk
S1194S10	Single	13+ in.	10/Pk	\$306.00/Pk
S1599S*	Double	13+ in.	1/Pk	\$33.75/Pk
S1190S10	Plain	13+ in.	10/Pk	\$329.00/Pk
S1599S10	Double	13+ in.	10/Pk	\$360.00/Pk
S1598VS	Double	11 to 13 in.	10/Pk	\$350.00/Pk
S1190VS	Plain	13+ in.	10/Pk	\$252.00/Pk

Pigs, Fisher-Free[™]

INJECTION KEY

- Plain: Circulatory system not injected with colors
- Single: Arteries injected with red latex
- Double: Arteries red, veins blue

Cat. No.	Injection Type	Length (English)	Length (Metric)	Price
S1233S	Plain	11 to 13 in.	27.94 to 33.02 cm	\$37.00/Pk
S1235S	Double	11 to 13 in.	27.94 to 33.02 cm	\$37.50/Pk
S1232S	Double	13+ in.	33.02+ cm	\$36.25/Ea

Rabbits, Bio-Fresh™

Oryctolagus cuniculus.

Excellent for herbivore vs. carnivore comparative studies. Excellent herbivore specimen for study. We recommend dissecting at



least one rabbit along with your normal cat study.

Strongest comparisons between the rabbit and cat anatomy exist within:

- · Intestinal systems
- · Eye position and visual acuity
- Dentition
- Forearm musculature and functionality
- Each rabbit comes with a tag and label identifying the sex

Cat. No.	Injection Type	Туре	Quantity	Price
S1851S*	Double	Fur Rabbit	1/Pk	\$79.00/Pk
S1059S	Double	Skinned Rabbit	1/Pk	\$61.00/Pk

Rabbit Triple Skinned

Skinned specimens save valuable classroom time and students can start learning muscles immediately.



- Formalin fixed rabbit goes through a series of non-formaldehyde washes and is shipped in a vacuum sealed mylar-coated bag
- Triple injected rabbits have red latex injected in arteries, blue latex injected in veins and yellow latex injected in the hepatic portal system
- Rabbits provide a lower cost, readily-available alternative to cats and come in a 50:50 sex ratio

Cat. No.	Quantity	Price
S1060S	1/Pk	\$82.00/Pk



Formalin Rats

The well-developed musculature and reproductive system make these specimens ideal for mammalian anatomy study.



- Mature specimen
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Injection Type	Price
S37659*	Plain	\$13.25/Ea
S37661*	Double	\$18.75/Ea

Rats

Rattus norvegicus.

Rats are similar in price to fetal pigs, but have adult musculature. If you desire a mammal specimen that is inexpensive, fully muscled and has well-developed genitalia, the rat is the specimen of choice. Pregnant rats are also available.



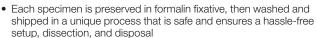
Cat. No.	Injection Type	Preservative	Туре	Quantity	Price
S1825VS	Plain	Bio-Fresh™	Rat	10/Pk	\$184.00/Pk
S1827S*	Double	Bio-Fresh™	Rat	1/Pk	\$24.50/Pk
S1825S10	Plain	Bio-Fresh™	Rat	10/Pk	\$156.00/Pk
S1825S*	Plain	Bio-Fresh™	Rat	1/Pk	\$16.75/Pk
S1179S	Single	Fisher-Free [™]	Rat	1/Pk	\$25.50/Pk

Vertebrates: Mammalian Organs

Mammalian Brain Kit

Each comprehensive dissection kit introduces 1 to 2 students to the mammalian brain via a sheep's brain.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home
- · The dissection guide provides in-depth information on the specimen's anatomy
- · Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a plastic ruler



· Information packets and detailed disposal instructions come with each kit

Cat. No.	Includes	Price
S81538	Sheep brain, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$56.75/Ea
S81539	Sheep brain, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$44.75/Ea

Economy Class Packs: Mammalian Organs

includes 30 specimens (usually in three ten packs) and a set of 15 dissection guides, all at one economical price.



- Mammalian Heart Pack (S06931): plain sheep hearts; An Illustrated Dissection Guide to the Mammalian Heart (12 pgs.)
- Mammalian Brain Pack (S06933): Finest grade sheep brains in dura mater: An Illustrated Dissection Guide to the Mammalian Brain (9)

Cat. No.	Туре	Includes	Price
S06931	Mammalian Heart Economy Class Pack	Plain Sheep heart, an illustrated dissection guide to the Mammalian heart, fifteen copies of 12 page and 4 figure guides set	\$381.00/Ea
\$06933	Mammalian Brain Economy Class Pack	Finest grade Sheep brains in dura mater, an illustrated dissection guide to the Mammalian brain, fifteen copies of 12 page and 4 figure guides set	\$789.00/Ea

Formalin Preserved Sheep Pluck, Plain

Allows students to explore physiological links between organ systems and identify general structures representative of mammals.



- · Heart with aorta and lungs with
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- Plain: No color injection

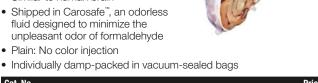
Cat. No.	Price
S28064*	\$20.25/Ea

Formalin Preserved Sheep Half Brain

Used to study mammalian brain structure

- · Similar to human brain
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Price
S28070*	\$10.50/Ea



Formalin Preserved Sheep Brain, Dura Mater Removed



Used to study mammalian brain structure.

- · Similar to human brain
- Sheep brain with dura mater removed and optic chiasma intact
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- Plain: No color injection

Cat. No.	Description	Price
S81894*	Preserved Specimen	\$15.50/Ea
S28069*	Sheep Brain, Dura Mater Removed	\$15.00/Ea

Formalin Preserved Sheep Brain, Dura Mater Intact

Used to study mammalian brain structure.

- Explores general structures representative of mammals
- · Connects structure to function
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde



unpleasant odor of formaldenyde	
Cat. No.	Price
S28065*	\$21.75/Ea

Formalin Preserved Sheep Brain, Dura Mater Removed, Hypophysis Intact

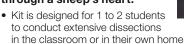
Used to study mammalian brain structure.

- Similar to human brain
- Sheep brain with dura mater removed and hypophysis (pituitary gland) intact to aid in brain study
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- Plain: No color injection
- Individually damp-packed in vacuum-sealed bags

Cat. No.	Price
S28071*	\$21.25/Ea

Mammalian Heart Kit

Each comprehensive dissection kit introduces 1 to 2 students to the anatomy of the mammalian heart through a sheep's heart.



- The dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a plastic ruler
- Each specimen is preserved in formalin fixative, then washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal
- Information packets and detailed disposal instructions come with

Cat. No.	Includes	Price
S81534	Sheep heart, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$44.75/Ea
S81535	Sheep heart, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$33.25/Ea

Formalin Preserved Sheep Heart in Pericardium



Allows students to explore physiological links between organ systems and identify general structures representative of mammals.

- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- Plain: No color injection

Cat. No.	Price
S28073*	\$15.00/Ea

Formalin Preserved Sheep Heart, Plain

Allows students to explore physiological links between organ systems and identify general structures representative of mammals.

- · Heart with base of aorta attached
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- Plain: No color injection

oat. No.	11100
S28067*	\$6.80/Ea



Mammalian Eye Kit

Each comprehensive dissection kit introduces 1 to 2 students to the basic structure of the eye through a sheep's eye.

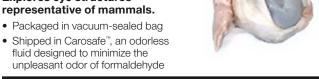
- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home
- · The dissection guide provides in-depth information on the specimen's anatomy
- · Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a
- Each specimen is preserved in formalin fixative, then washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal
- Information packets and detailed disposal instructions come with each kit

Cat. No.	Includes	Price
S81536	Sheep eyes, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$27.50/Ea
S81537	Sheep eyes, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$16.75/Ea

Formalin Preserved Sheep Eyes

Explores eye structures

- Shipped in Carosafe[™], an odorless fluid designed to minimize the



Cat. No.	Price
S28068*	\$1.35/Ea

Formalin Preserved Sheep Kidney

Allows students to explore physiological links between organ systems and identify general structures representative of mammals.

- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- · Plain: No color injection

Cat. No.	Price
S28066*	\$5.60/Ea

Formalin Preserved Sheep Organ Set with Manual

Allows students to identify physiological links between organ systems.

- Explores general structures representative of mammals
- Connects structure to function
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- Simple dissection guides are provided for each organ

Cat. No.	Price
S28075*	\$38.25/Ea

Pig heart

Premium quality organs.

A full selection of pig organs is available for your anatomy classes.



Cat. No.	Description	Price
S9254*	Pig Heart/pericardium	\$19.50/Pk
S9204S*	Pig Heart	\$12.25/Pk

Formalin Pig Heart

Ideal for studying structure and function of heart.

- Four-chambered mammalian heart
- · Like a human heart, only larger
- Easily trace blood flow through the heart
- Shipped in Carosafe™, an odorless fluid designed to minimize the unpleasant odor of formaldehyde



Cat. No.	Price
S37674*	\$9.95/Ea

Formalin Pig Eyes

For use in exploring the anatomy of mammalian eye.

- · Easy dissection and examination of the mammalian eye as pig eyes are similar to human eye
- Smaller than cow eyes and have less muscle and fatty tissue attached
- · Preserved in formalin
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Price
S72455*	\$2.10/Ea



Pig Kidney

Ideal for showing organ structure.

Show kidney structure by dissecting these superior specimens.

INJECTION KEY:

- Plain: No color injections
- Single: Renal artery colored with red latex
- **Double:** Renal artery colored red, renal vein colored blue
- Triple: Renal artery colored red, renal vein colored blue, ureter and renal pelvis colored yellow

Cat. No.	Injection Type	Quantity	Price
S1452S*	Plain	1/Pk	\$7.20/Pk
S9208*	Double	1/Pk	\$16.00/Pk
S9210*	Triple	1/Pk	\$16.75/Pk

Formalin Pig Kidney

For studying structure and function of kidney.

- · Similar to a human kidney, but larger
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde



Cat. No.	Injection Type	Price
S37675*	Plain	\$7.85/Ea
S72738	Double	\$11.50/Ea
S72739	Triple	\$14.00/Ea

Formalin Cow Heart

Ideal for studying structure and function of heart.

- Four-chambered mammalian heart
- · Like a human heart, only much larger
- · Large size allows students to easily study anatomy
- · Easily trace blood flow
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde



Cat. No.	Price
S37676*	\$51.75/Ea

Cow Organs

Larger specimens for easier dissection.

- · Organs are of excellent quality
- · Large size makes them easy for students to dissect
- Vacuum packed in Fisher





For use in exploring anatomy of mammalian eye.

- · Large size allows easy dissection and examination
- · Preserved in formalin
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde



Cat. No.	Price
\$37717	\$3.30/Ea

Formalin Bull Testicle

Supports the study of the male reproductive system.

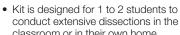
- Procured from an adult bull (2 to 2.5)
- Includes the spermatic cord, epididymis, and vas deferens
- Shipped in Carosafe[™], an odorless fluid designed to minimize the unpleasant odor of formaldehyde

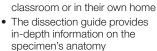


Cat. No.	Price
S72735	\$14.00/Ea

Comparative Mammalian Hearts Kit

Each comprehensive dissection kit allows 1 to 2 students to study a variety of different mammalian hearts and observe the subtle variations.







- · Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a plastic ruler
- Each specimen is preserved in formalin fixative, then washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal
- Information packets and detailed disposal instructions come with each kit

Cat. No.	Includes	Price
S81545	Pig heart, Sheep heart, Cow heart, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$87.00/Ea
S81544	Pig heart, Sheep heart, Cow heart, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$98.00/Ea



Comparative Mammalian Organ Set Kit

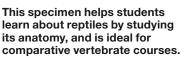
Each comprehensive dissection kit allows 1 to 2 students to study a variety of mammalian organs including the heart, brain, eye, and kidneys.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home
- The dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, and includes scissors, T-pins, steel forceps, a teasing needle and a plastic ruler
- Each specimen is preserved in formalin fixative, then washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal
- Information packets and detailed disposal instructions come with each kit

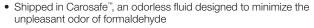
Cat. No.	Includes	Price
S81547	Sheep brain, Sheep heart, Sheep eye, Sheep kidney, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	\$59.50/Ea
S81546	Sheep brain, Sheep heart, Sheep eye, Sheep kidney, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	\$63.50/Ea

Vertebrates: Reptiles

Formalin Non-Venomous Snake







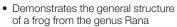
Cat. No.	Price
S37648*	\$31.75/Ea

Dissection Supplies

Teaching Aids

Eisco[™] Jumbo Frog Dissection Model

This jumbo frog dissection model is a great alternative or supplement to traditional dissection, it is also useful for virtual learning.



- · Enlarged for better visualization of internal organs
- Dorsal side shows the external structure of the head, body, and forelegs
- · Cutaway of the ventral view shows internal organs
- Liver and intestine are removed to allow for detailed study of circulatory, female reproductive, and urinary systems
- Vividly hand painted with eco-friendly paint
- Made of durable polyvinyl chloride (PVC) plastic which is corrosion-resistant, lightweight, and has high strength
- · Resists reactions with acids, gasoline, alcohol, and hydrocarbons
- An alternative or supplement to traditional dissection in the classroom
- · Identification key card included

Cat. No.	Price
S27900	\$178.00/Ea

Eisco™ Frog Dissection Model

The frog dissection model is a hand painted, vividly colored replication of a dissected frog with numbered features to assist with organ identification.



- · Mounted on base
- · Includes English key card

Cat. No.	Price
S13527	\$158.00/Ea

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Eisco™ Pigeon Dissection Model

This pigeon dissection model is a great alternative or supplement to traditional bird dissection, it is also useful for virtual learning.

- Model demonstrates the general structure of a pigeon
- Enlarged for better visualization of internal organs
- Vividly hand painted with eco-friendly paint
- Made of durable polyvinyl chloride (PVC) plastic which is corrosion-resistant, lightweight, and has high strength
- · Resists reactions with acids, gasoline, alcohol, and hydrocarbons
- An alternative or supplement to traditional dissection in the classroom
- Identification key card included

Price
\$131.00/Ea

Eisco™ Pig Dissection Model

This pig dissection model is a great alternative or supplement to traditional dissection, it is also useful for virtual learning.

- Model demonstrates the general structure and internal organs of a pig
- Features include detachable liver, intestines, two piece heart, lungs, and stomach
- Made of durable polyvinyl chloride (PVC) plastic which is corrosion-resistant, lightweight, and has high strength
- Resists reactions with acids, gasoline, alcohol, and hydrocarbons
- Vividly hand painted with eco-friendly paint
- An alternative or supplement to traditional dissection in the classroom
- · Identification key card included

Cat. No.	Price
S27906	\$331.00/Ea



Shows internal and external structures.

- Extra large model to study Annelids
- · One part shows external structure
- Another end dissected to show internal organs
- Highlights structures of digestive, circulatory and reproductive systems
- Mounted on base
- Supplied with English key card





Eisco[™] Frog Dissection Model

Demonstrates internal structures of a frog and can be used to enhance or replace physical dissection laboratory activities.

- Model representative of a dissected frog
- Numbered internal and external structures
- Mounted on base
- Supplied with English key card
- · Ideal for biology classrooms

Cat. No.	Price
S80861	\$93.00/Ea

Frog Dissection 3D Model Kit

Assemble and use 3D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81454	\$46.50/Ea



Dissection Guide and Atlas to the Rat

Student-friendly dissection guide with step-by-step instructions and photographs that help anatomic structures.

- Unbound with perforations for 3-ring binder
- · Full color photographs



Dissection Mats

Allow students to self-guide their specimen dissections.

- Double-sided, waterproof vinyl mat
- reusable; easily wipes clean

Includes:

- Simple dissection instructions
- · Detailed, color photographs
- Labeled external and internal anatomy
- · Defined structures with functions

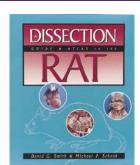
Cat. No.	Subject	Grade Level	Price
S72740	Sheep Brain	3 to Undergraduate	\$7.25/Ea
S72741	Mammalian Heart	5 to Undergraduate	\$7.55/Ea
S72743	Mammalian Kidney	5 to Undergraduate	\$7.25/Ea
S72745	Dogfish Shark	7 to Undergraduate	\$7.25/Ea
S72752	Starfish	3 to Undergraduate	\$7.25/Ea

Fetal Pig Dissection 3D Model Making Kit

Allows students to build a model fetal pig with organs to learn about the anatomy of the major body systems.

- The model can be used look to at the anatomy of the major body systems and covers the nervous system, circulatory system, respiratory system, digestive system, excretory system, and male and female reproductive systems.
- The model also shows how a fetal pig differs from an adult animal through coverage of fetal circulation and the umbilical cord.
- Students can then carry out a dissection to see how the parts fit together for comparative anatomy as well as an excellent means to prepare for a dissection.
- The Model Making Kit includes enough materials for students to assemble up to 5 paper models working cooperatively.
- The comprehensive Teacher Resource Guide included provides illustrated readings, activities, key vocabulary and an assessment, along with teaching opportunities for students to Engage, Explore, Explain, Extend and Evaluate their understanding of the concepts presented.

Cat. No.	Price
\$436047	\$113.00/Ea



Dissection Tools

United Scientific[™] Dissection Kit



A set of 8 dissection instruments that includes a hard plastic case.

- Includes:
- · Dissecting scissors
- · Dissecting forceps
- Scalpel with replaceable blade, no.
 22
- Teasing needle, plastic handle, straight
- Teasing needle, plastic handle, curved
- Dropping pipet
- Transparent vinyl ruler, 6 in.
- T-Pins

Cat. No.	Price
S111009***	\$21.25/Ea

United Scientific™

Dissecting Instruments



A set of 9 dissection instruments with vinyl pouch.

Includes:

- Probe, straight
- · Probe, bent
- Scissors
- Dropper pipet
- Scalpel (2)
- Tissue forceps
- Tweezers
- Ruler
- Pouch

Cat. No.	Price
S111010***	\$14.00/Ea





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A HEAD START ON STEM CAREERS

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Eisco[™] Dissecting Sets

Stainless steel instruments in case.

Economy Set (S14004):

- (1) Scissors
- (1) Forceps
- (1) Straight needle with wooden handle
- (1) Bent needle with wooden handle
- (1) Glass pipet with rubber dropper

Premium Set (S14005):

- (2) Scissors
- (2) Forceps
- (1) Probe & seeker

Advanced Set (S23633):

- (1) 4.5 in. Straight forceps
- (1) 4.5 in. Curved forceps
- (1) 5 in. Artery forceps
- (1) Flat forceps
- (1) 5 in. Bone cutter
- (1) 4.5 in. Scissors



- (1) Scalpel handle with sterile blade
- (1) 6 in. plastic ruler
- (1) Scalpel handle with sterile blade
- (1) Straight needle with wooden handle
- (1) 5.5 in. Scissors
- (1) 5.5 in. Straight needle
- (1) 5.5 in. Curved needle
- (1) 5.5 in. Probe & seeker
- (1) 6 in. Dental probe
- (1) #4 Scalpel handle with #23 sterile blade

Cat. No.	Description	Price
S14004	Economy Dissecting Set	\$12.00/Ea
S14005	Premium Dissecting Set	\$26.50/Ea
S23633	Advanced Dissecting Set	\$43.00/Ea



Healthcare Training and Education Supplies

Explore a complete range of healthcare education products to help prepare the nurses and allied health professionals of tomorrow.

Nursing

Find a range of tools to develop basic knowledge and learn advanced skills.

- Clinical Classroom Facilities
- Infection and Spill Control
- Patient Care Training

Allied Health

Train for specialized fields, like audiology and laboratory science.

- Primary and Emergency Care Education
- Diagnostic Education
- Health Science Specialties
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- Other Specialty Training

Visit fisheredu.com/healthcare-education-products to learn more.



Precision Dissection Kits with Goggles

The ideal instrument packages for dissection classes.

Features:

- Autoclavable, semi-hard, see-thru, slotted plastic case
- Fine quality tools
- · Easy to carry
- Individual sections for each tool, avoids breakage of fragile tools
- Safer to use for students and teachers
- · Excellent for in-lab use and field work

Tools Included:

- Dissecting mall probe chrome plated
- · Ruler, 6 in.
- Student dissecting forceps, 4.5 in.
- Dissecting iris scissors, 4.5 in.
- · Dissecting scalpel with screw-lock blade
- Glass dropper
- · Dissecting needle, straight, plastic handle
- (6) Dissecting T-Pins

Eyewear Included:

- Anti-scratch UV absorbing polycarbonate lens provide outstanding impact strength and optical clarity for rugged protection
- Provides 99.9%-UV protection
- Great wrap-around style with adjustable temples, providing a secure, comfortable fit
- Universal nose bridge prevents slipping and sliding
- Small sizes designed to fit a child or small faces are also available
- Meets ANSI Z87.1-2003 and ANSI + high impact standards
- CUL certified to meet CAN/CSA Z94.3

S72131 includes the above plus latex-free blue nitrile exam gloves

CFIA and FDA approved for food handling

Cat. No.	Description	Price
S72132	Dissection Kit with Goggles	\$15.50/Ea
S72131	Dissection Kit with Goggles and Large Gloves	\$25.25/Ea

Classroom Dissection Set

An ideal, cost-saving classroom dissection set for 20 or 40 students.



• Can also be used for 40 students working in pairs





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Student Dissecting Kits

Complete dissection kits for use in the student lab.

S06831 includes::

- Dissecting scissors, 4.5 in.
- Dissecting forceps, 4.5 in. chrome-plated
- · Dissecting scalpel, chrome-plated
- Two dissecting teasing needles (one angular, one straight) with plastic handles
- Glass dropper with rubber bulb
- Plastic ruler, 6 in.

S06843 Includes::

- Dissecting scissors, 4.5 in.
- Dissecting forceps, 4.5 in. chrome-plated
- · Dissecting scalpel, chrome-plated
- Two dissecting teasing needles (one angular, one straight) with plastic handles
- · Plastic ruler, 6 in.

Cat. No.	Case Material	Price
S06831	Vinyl	\$15.25/Ea
S06843	Plastic	\$15.25/Ea

General Biology Dissecting Kit

For basic general biology dissection.

Includes:

- 5SB Surgical Scissors one side sharp and one side blunt
- 5SBCD Surgical Scissors one side sharp and one side blunt but with curved blades
- Two forceps 5.5 in. (one bent and one straight)
- Two teasing needles (one straight and one bent)
- Scalpel handle no. 3 and no. 4
- Mall probe 6
- One piece blade for scalpel handle no. 3 and no. 4
- Ruler 6 in.
- · Double fold vinyl case

Cat. No.	Price
S06841	\$15.75/Ea



Microdissection Forceps

Ideal for super-fine dissection applications and working under a microscope.

- Set of 5: includes 2 curved and 3 straight microdissection forceps
- Highly precise and extra fine tips to perform microdissection
- Stainless steel
- Transparent case

Cat. No.	Price
\$72112	\$25.25/Ea

Microdissection Forceps

Ideal for working under a microscope.



- Narrow precision points are excellent for precisely manipulating minuscule specimens under the microscope
- Premium quality stainless steel offers durability and reliability
- Length: 4.5 in.

Great for:

- Working under the microscope
- Splinter removal
- · Watch makers application

Cat. No.	Description	Price
S72115	Long Narrow Points	\$3.60/Ea
S72116	Tapered fine points	\$3.50/Ea
S72117	Fine Curved Points	\$3.60/Ea

Featherweight Entomology Forceps

Ideal for handling larvae or eggs without crushing them or specimens stored in vials.

- Bendable
- Set of 2 (S72110) contains one fine tip and one wide top forceps

Set of 5 (S72111) includes:

- 2 featherweight forceps Spring steel bends into virtually any shape
- 1 narrow tip, 4.5 in.
- 1 one broad tip, 4.25 in.
- Insect pinning forceps Surgical stainless steel, 4.5 in.
- 2 Microdissection forceps
- 1 long shank with very fine points, 4.5 in.
- 1 curved with very fine points, 4.5 in.

Cat. No.	Description	Price
S72110	Featherweight Entomology Forceps, Set of 2	\$16.00/Ea
S72111	Entomology Forceps Set of 5	\$25.50/Ea
S72113	Narrow Point	\$8.15/Ea
S72114	Broad Point	\$8.15/Ea



Eisco[™] Stainless Steel Artery Forceps

Feature straight tips with serrated jaws and a box joint.

- Made from high quality stainless steel
- Designed for delicate and accurate work
- Feature straight tips with serrated jaws, box joint, and scissor handles
- Intended for science education purposes only
- Forceps should never be used on humans or other living specimen of any kind
- · Jaw length: 1 in.
- Non-sterile

Cat. No.	Price
S27473	\$10.50/Ea

Eisco[™] Stainless Steel Forceps with Toothed Tips

Provide a tight, slip-resistant grip during delicate work

- Made from high quality stainless steel
- Toothed tips provide a firm, slip-resistant grip
- Perfect for any science or home laboratory
- · Designed for delicate work
- · Reusable and washable
- Length: 4.5 in.

Cat. No.	Price
S27475	\$4.30/Ea

Dissecting Forceps with Fine Points

For delicate dissection.

- Made of stainless steel
- Can be used under the microscope
- Guide pin for matching of points
- Ridges for easy grip
- Length: 11.43 cm (4.5 in.)

Cat. No.	Price
S08096	\$4.75/Ea

Dissecting Forceps – Economy

Used for a range of surgical purposes.

- Made of chrome plated steel
- Serrated tips and knurled handles for better grip in wet and dry use
- Length: 4.5 in.

Cat. No.	Price
\$08099	\$4.35/Ea

Probe Seeker Angular Probe

Used when working with vessels, nerves, and muscles.

- Made from chrome plated steel
- Features a sharp point at one end and angular medium point on opposite side



Cat. No.	Price
S08110	\$4.75/Ea

Eisco™ Hand Microtome

Sturdy, user-friendly tool for providing slices of a variety of materials.

- Hand micrometer
- Replicate precise cuts as thin as 0.01 microns
- Top plate is 75 mm diameter
- · External milled knob
- Clamping mechanism secures specimens of various sizes in place while cutting

WARRANTY: 1-year limited manufacturer warranty



United Scientific[®] Aluminum Dissecting Pan

Dissecting pans are stackable and made of durable aluminum.

- Stackable
- Made of durable aluminum
- Wax not included

Cat. No.	Description	Dimensions (L x W x H)	Price
S111020***	Aluminum Dissecting Tray	11.25 x 7.5 x 1.5 in.	\$12.50/Ea
S111021***	Large Aluminum Dissecting Tray	13 x 9.5 x 2 in.	\$19.25/Ea

Eisco[™] Stainless Steel Dissection Tray

Features four raised ridges to keep specimens in place.

- Dissection tray made out of high-quality stainless steel
- Four raised ridges inside tray help prevent specimens from sliding
- Tray depth measures 1.75 in.
- · Great for classrooms





Eisco™ Wooden **Dissecting Boards**

Wooden dissecting boards made from softwood allow pins to be easily placed to hold specimens.

- · High quality dissecting boards with raised borders on all four sides to contain specimens and supplies
- Made of softwood to allow pins (not included) to be easily placed to hold specimens
- Perfect for displaying insects or other specimens during dissection, or for display

WARRANTY: 1-year limited manufacturer warranty

Cat. No.	Dimensions (L x W x H)	Price
S39752	10.3 x 8.3 x 1 in. (262 x 210 x 27 mm)	\$42.25/Ea
S39753	12.2 x 8.3 x 1 in. (311 x 211 x 27 mm)	\$38.75/Ea
S39754	22.1 x 15.4 x 1 in. (562 x 392 x 27 mm)	\$65.25/Ea

United Scientific **Dissecting Trays** With Wax

Dissecting trays are made of durable aluminum and include a layer of black wax.



Cat. No.	Description	Dimensions (L x W x H)	Price
\$80769***	Large Aluminum Dissecting Tray with Wax	13 x 9.5 x 2 in.	\$22.25/Ea
\$111022***	Aluminum Dissecting Tray with Wax	11.25 x 7.5 x 1.5 in.	\$20.25/Ea

Eisco™ Dissecting Trav

Used for dissection activities.

- Made of stainless steel
- · Tray with wax liner

Cat. No.	Price
S23636	\$28.75/Ea

Eisco™ Dissection Tray

Aluminum dissection tray with wax liner.

- · Works great with premium dissection
- 1 in. thick wax liner can be easily melted for resurfacing
- High quality aluminum construction



United Scientific **Dissecting Pan Black Wax**

For use with a variety of dissecting pans.

Black wax for dissecting pans

Cat. No.	Quantity	Price
S89560***	5 lb.	\$24.50/Ea
S81061***	1 lb.	\$10.25/Ea

United Scientific™ **Insect Pins**

Insect Pins for holding insect specimens in place.



- Steel pins are coated with a corrosion-resistant finish and have a yellow epoxy head
- Sold in packs of 100

Cat. No.	Price
S81080	\$6.55/Ea

Eisco™ T-Pins

Nickel-plated dissecting pins.

- Nickel-plated
- 1.5 in.
- Sold in packs of 100



Cat. No.	Price
\$99385	\$9.05/Pk

Eisco™ Stainless Steel **Probe and Seeker**

Made of high quality stainless steel and features an angled blunt needle.

- Probe and seeker with blunt end needle
- · Made from quality stainless steel
- Single piece probe is 5 in. long (127 mm)
- Great for experiments, dissections, and demonstrations

WARRANTY: 1-year limited manufacturer warranty

Cat. No.	Price
S29350	\$2.40/Ea

Eisco[™] Stainless **Steel Bone Cutter**

Features heavy duty construction,

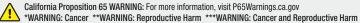
- a return spring, and locking arm.
- · Stainless steel bone cutter
- Heavy duty construction
- Features return spring and locking arm



- · For educational use only
- · Not for medical use, this item should never be used on humans or other living specimens

Cat. No.	Price
S80805	\$30.00/Ea







Eisco[™] Disposable Scalpel, Sterile



Single use, disposable plastic scalpel comes pre-sterilized in an individual packet.

- Disposable scalpel
- Durable, permanent fitted blades
- · Packaged in an individual bag
- Pre-sterilized
- For educational use only
- Not for medical use, this item should never be used on humans or other living specimens

Gat. No.	Price
S80807	\$1.85/Ea

Disposable Scalpel

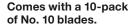


Machine-sharpened, razor-sharp, stainless-steel blade edge that lasts.

- Tapered handle can double as a section lifter, probe, or depressor
- A special safety tab covers the blade to prevent accidents, then snaps off for use
- Shipped in a sealed foil pouch to preserve sterility

Cat. No.	Price
\$17800	\$7.10/Ea

Scalpel Handle #3 with No. 10 Blades



- Scalpel handle features black oxide coating for extra corrosion and rust resistance
- Includes number 10 blades, 10 pieces
- Length: 5 in.
- · Ideal for dissection or wood carving

Cat. No.	Price
\$72156	\$11.50/Ea

Eisco[™] Scalpel Handles



Solid handles provide a good, firm grip during dissection.

- High-quality steel handles
- Slotted to accept blades

Cat. No.	Size	Length (English) Overall	Length (Metric) Overall	Price
S95937	#3	7.08 in.	18 cm	\$11.00/Ea
S95938	#4	9.05 in.	23 cm	\$11.00/Ea

Eisco[™] Stainless Steel Dissecting Scissors, Fine Point

Made from high quality, durable stainless steel and ideal for use with delicate work.

- Features fine points for delicate work
- · Closed shanks
- · For educational use only
- Not for medical use, this item should never be used on humans or other living specimens



Eisco[™] Stainless Steel Dissecting Scissors, Blunt End

Made from stainless steel with a blunt end and closed shanks.

- · For educational use only
- Not for medical use, this item should never be used on humans or other living specimens



Cat. No.	Price
S80803	\$5.20/Ea

Dissection Operating Scissors, Sharp/Sharp



Feature black oxide coating.

Cat. No.	Price
S72155	\$9.10/Ea

Dissecting Scissors, Student Grade



For general purpose dissection.

- Features two sharp points
- · Made of mirror polished stainless steel with a brushed finish
- Length: 11.4 cm (4.5 in.)

Cat. No.	Price
\$08089	\$5.90/Ea



Fisher Science Education[™] Bio-Fresh[™] Concentrate

Keep your specimens moist and preserved.

- Use as a humectant during your dissections to keep your specimens moist, flexible and mold-free
- Use a spray bottle or atomizer to mist your specimens during use and just before sealing them at the end of class
- Dilute per directions on the bottle
- Contains no formaldehyde and is lightly scented

Cat. No.	Capacity (English)	Capacity (Metric)	Product Type	Price
S6010S	32 oz.	946.3 mL	Bio-fresh	\$19.75/Ea
S6011S	128.4 oz.	3797.2 mL	Bio-fresh	\$66.25/Ea
S601010	32 oz.	946.3 mL	Biofresh Spray Bottle	\$23.75/Ea

Fisher Science Education[™] Plastic Zip Bags for Science Kits



For use with multiple science projects.

Sold in packs of 100

Cat. No.	Dimensions (L x W)	Price
S05254	7 x 8 in., 2 mil	\$13.25/Pk

Prepared Slides

United Scientific[™] Algae Survey Slide Set



A set of 15 slides specific to the study of algae.

 Prepared microscope slides in a plastic case

Set of 15 includes:

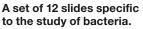
- Chlamydomonas
- Protococcus
- Anabaena
- Oedogonium
- Gloeocapsa
- Vaucheria
- Spirogyra Veg
- Ectocarpus
- Nostoc
- Mixed desmids
- Laminaria



- Volvox
- Mixed diatoms
- Nemalion
- Fucus

Cat. No.	Contains	Price
S89554***	15 slides	\$37.50/Ea

United Scientific[™] Bacteria Slide Set



 Glass prepared microscope slides, supplied in a plastic case

Set of 12 includes:

- Mixed bacteria, bacilli, cocci and spirillium
- Mycobacterium tuberculosis, in tissue
- Cocci, Gram positive and negative
- · Rhizobium, in root nodule
- Bacilli, Gram positive and negative
- Vibrio
- · Escherichia coli
- Spirillu



- Bacillus subtilis
- Staphylococcus epidermidis
- Bacillus megaterium
- Streptococcus lactis

Cat. No.	Contains	Price
S89555***	12 slides	\$47.50/Ea

United Scientific[™] Basic Botany Models Slide Set



A set of 25 slides specific to the study of botany.

 Glass prepared microscope slides, supplied in a plastic case

Set of 25 includes:

- · Chlamydomonas, E
- Spirogyra, vegetative filaments,
 E
- Spirogyra, conjugation, E
- Fucus, dioecious, antheridial and oogonial
- Mucor, conjugation conceptacles on one slide, VS
- Saccharomyces (yeast), budding, E
- Penicillium, mycelium and conidia, E
- Marchantia (liverwort), thallus, antheridia, VS
- Marchantia thallus, archegonia, VS
- Mnium (moss), antheridial head, VS
- Marchantia developing sporogonium, VS
- Mnium, archegonial head, VS
- Dryopteris (fern), prothallus with antheridia
- Dryopteris, pinnule with sori, TS and archegonia, E

- · Pinus (pine), leaf, TS
- Allium (onion), root apex, mitosis, LS
- · Zea, (maize), leaf, TS
- Helianthus (sunflower), young root, TS
- · Zea, stem, TS
- · Helianthus, stem, TS
- Cucurbita (marrow), stem LS for sieve tubes
- Tilia (lime), young and old stem, TS
- Ranunculus (buttercup), flower bud, LS
- Prunus (cherry), leaf, TS
- Pollen grains, wind and insect distribution, E

Cat. No.	Contains	Price
S89556***	25 slides	\$47.50/Ea





United Scientific^{*} **Histology** Slide Set

A set of 25 slides specific to the study of histology.

· Glass prepared microscope slides, supplied in a plastic case

Set of 25 includes:

- · Cerebellum, section
- · Ileum, section
- · Spinal cord. TS
- · Duodenum, TS
- · Nerve, TS and LS
- · Appendix, TS
- · Artery and vein, TS
- · Colon, VS
- · Cardiac muscle, section
- · Pancreas, section
- Lymph node, section
- · Liver, section
- · Spleen, section
- · Kidney, section

Cat. No.

S89557***





- · Scalp, VS
- Ovary, section
- Skin, heavily pigmented, section
- · Uterus, section
- · Striated muscle, section
- Cervix, section
- Mammary gland, section
- Testis, section
- Oesophagus, section
- Thyroid gland, section
- Stomach, fundic portion, section

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\$66.50/Ea	ί

United Scientific™ Basic Plant Anatomy Slide Set



• Glass prepared microscope slides, supplied in a plastic case

Contains

25 slides

Set of 20 includes

- · Helianthus (sunflower), young
- · Prunus (cherry), leaf, TS and old root
- · Monocot, epidermis, E. for stomata
- · Vicia (bean), young root, TS
- · Vicia, root apex, LS
- Psamma (marram grass), leaf,
- Zea (maize), stem, TS and LS
- Lilium, anther, TS
- Cucurbita (marrow), stem, TS and LS
- · Lilium, ovary, TS and LS
- · Helianthus, stem, bundles, TS
- · Lilium, ovary, various stages, TS



- · Helianthus, old stem, TS and
- Capsella, mature cotyledon stage, LS
- Tilia (lime), young and old stem,
- Stigma
- · Tilia, old stem, RLS
- Pollen grains
- · Dicotyledon stem apex, LS
- · Zea seed, LS

Cat. No.	Contains	Price
S89558***	20 slides	\$42.25/Ea
-		

United **Scientific**[™] Protozoa & Algae Slide Set

A set of 20 slides specific to the study of protozoa and algae.

• Glass prepared microscope slides, supplied in a plastic case

Set of 20 includes

- · Amoeba, E
- Mixed foraminifera
- Mixed radiolaria
- Euglena, E
- Trypanosoma in blood smear
- Plasmodium sp. (malaria) in human blood
- · Paramecium, E
- · Paramecium showing conjugation
- · Vorticella, E
- · Chlamydomonas, E
- · Pandorina, E





- · Volvox, with daughter colonies,
- · Nostoc, filaments with heterocysts, E
- · Cladophora, E
- · Chlorella, E
- · Spirogyra, vegetative filaments,
- · Spirogyra, conjugation, E
- · Desmids, mixed species, E
- · Diatoms, mixed species, E
- Paramecium fission

Cat. No.	Contains	Price
S89559***	20 slides	\$72.75/Ea

United Scientific™ **Basic Prepared** Slide Set



Glass prepared microscope slides, supplied in a wooden case.

Set of 25 slides includes:

- Mitosis in plants, cs
- · Pollen grains, wm
- · Amoeba, wm
- · Yeast cells, wm
- · Green Algae, wm
- Typed letter "e" on paper
- Tapeworm, ts
- · Silk fabric, wm
- · Lily leaf, vs
- · Mammal lung, ts
- · Meiosis in animals
- · Aves feather, wm
- · Lily stamen, ts

- · Mammal hair, wm
- Mosquito mouth parts, wm
- · Housefly mouth parts, wm
- · Frog blood smear
- Human blood smear
- · Onion cells, wm
- · Hibiscus stem, ts Wool fabric, wm
- · Fish scale, wm
- · Skeletal muscle, wm
- Herbaceous stem, young, ts
- · Skin cells, vs

Cat. No.	Contains	Price
S96420	25 slides	\$73.75/Ea



United Scientific[™] Prepared General Biology Slides

Set of 25 general biology slides comes with a case for easy storage and retrieval. Includes:

- · Amoeba proteus, wm
- · Hydra, wm
- · Earthworm, cs of posterior
- Daphnia and cyclops, wm
- Housefly head with mouthparts, wm
- Housefly leg with clinging pads
- Mouth smear, squamous epithelium
- · Striated muscle, Is
- Human blood smear
- · Bacteria, smear from mouth
- · Diatoms, mixed, wm
- Spirogrya, vegetative filaments, wm
- · Aspergillus, wm
- · Moss stem with leaves, wm



- Buttercup root, cs
- · Corn stem, cs
- Lilv anthers, cs
- · Lily ovary, cs
- Onion epidermis, wm
- Onion root tip, Is, mitosis
- Human scalp, vertical sections
- Harrian Scalp, vertic
- Compact bone, cs
- Sunflower stem, cs
- · Lilac leaf, cs
- Honeybee anterior and posterior wing

Cat. No.	Contains	Price
S96419	25 slides	\$99.00/Ea

United Scientific[™] Prepared Microscope Slide Set

Prepared microscope slides featuring 24 different subject areas.

- Recommended for elementary through high schools
- The set includes slides depicting Protozoa, Porifera, Coelenterata, Platyhelminthes, Annelida, Anthropoda, Molluska, Echinodermata, Pisces, Reptila, Aves, Mammalia, Development,

Aves, Mammalia, Development, Bacteria, Fungi, Algae, Pteridophyta, Cells, Leaves, Stem, Root, Reproductory organs, Cell contents, and Vascular systems

- Set of 100
- Dimensions: 9 x 8 x 2 in.
- Shipping weight 2.50 lb.

Cat. No.	Contains	Price
S90328	24 slides	\$420.00/Ea

Angiospermae Stems Slide Set

20 microscope slides.

- 1(c). Canna, t.s. of typical monocot stem with scattered bundles
- 2(f). Aristolochia, t.s. of one year, two years stem and older stem, all 3 in on slide

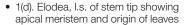


- 4(e). Dicot and monocot stem, t.s. of Ranunculus and Zea
- 5(e). Tilia, lime, two t.s. of stems, first year and two years
- 6(d). Fagus silvatica, beech, three sections of wood, t.s., r.l.s., t.l.s.
- 7(d). Fraxinus excelsior, ash, three sections of wood, t.s., r.l.s., t.l.s.
- 8(c). Quercus, oak, t.s. of stem showing cambium and bark
- 9(c). Sambucus, elder, t.s. of bark showing lenticells
- 10(c). Linum, flax, t.s. of stem showing husk fibres
- 11(b). Linum, flax, isolated husk fibres, w.m.
- 12(d). Ranunculus, I.s. of herbaceous stem
- 13(d). Cucurbita pepo, I.s. of stem with sieve tubes
- 14(d). Sieve plates in top view, t.s. of Cucurbita stem
- 15(c). Lamium, t.s. of square stem, collenchyma
- 16(c). Secale, rye, t.s. of typical grass stem
- 17(c). Nymphaea, water lily, t.s. of aquatic stem, spicular cells
- 18(c). Hippuris, t.s. of typical aquatic stem with large central pith
- 19(d). Urtica, nettle, stinging hairs with poison ducts
- 20(c). Solanum tuberosum, potato, t.s. of tuber with starch grains and cork

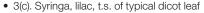
Cat. No.	Contains	Price
S95057L	20 slides	\$409.00/Pk

Angiospermae Leaves Slide Set

15 microscope slides.







- 4(c). Iris, typical isobilateral leaf t.s.
- 5(c). Eucalyptus, a bifacial foliage leaf with schizogenous oil glands t.s.
- 6(d). Fagus, beech, t.s. of sun and shade leaves on one slide
- 7(c). Calluna, ling, t.s. of rolled leaf showing sunken stomata
- 8(c). Nerium oleander, t.s. of leaf showing sunken stomatal pits lined with protective hairs
- 9(c). Ficus elastica, rubber plant, t.s. of leaf showing cystoliths
- 10(c). Elodea, t.s. of leaf showing the simple structure of an aquatic leaf
- 11(c). Tulipa, tulip, epidermis w.m. showing stomata
- 12(d). Aesculus, t.s. of leaf bud with squama and embedded folded leaves
- 13(d). Drosera, sundew, w.m. of leaf with glandular hairs
- 14(d). Nepenthes, t.s. of pitcher with glands
- 15(d). Utricularia, bladderwort, w.m. of bladder

Cat. No.	Contains	Price
S95058L	15 slides	\$325.00/Pk



Angiospermae Flowers Slide Set

15 microscope slides.

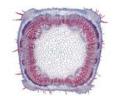
- 1(e). Zea and Ranunculus, t.s. of monocot and dicot flowers
- 2(d). Bellis, I.s. of composite flower bud
- 3(d). Taraxacum, dandelion, t.s. of composite flower bud
- 4(d). Papaver, poppy, t.s. of flower bud with parietal placentation
- 5(d). Cheirantus, wallflower, t.s. of flower bud with marginal-parietal placentation
- 6(d). Solanum, potato, t.s. of ovary with marginal-central placentation
- 7(d). Prunus avium, cherry, flower bud with perigynous ovary l.s.
- 8(d). Pyrus malus, apple, flower bud with hypogynous ovary l.s.
- 9(e). Arum maculatum, flower bud, t.s. showing ovary
- 10(d). Lilium, ovary t.s., showing arrangement of ovules
- 11(d). Lilium, anther t.s. showing pollen chambers and pollen grains
- 12(e). Lilium, anther t.s., early prophase of meiosis
- 13(e). Stigma of Eschscholtzia, w.m. showing penetrating pollen
- 14(b). Pollen of Corylus, hazelnut, w.m.

Arrangement and

Types of Vascular

• 15(c). Pollen types, w.m. of a great variety of mixed pollen

Cat. No.	Contains	Price
S95059L	15 slides	\$325.00/Pk



13 microscope slides.

Packages

Slide Set

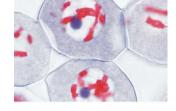
- 1(d). Protostele. Psilotum, stem t.s.
- 2(d). Actinostele. Lycopodium, stem t.s.
- 3(d). Polystele. Pteridium, rhizome t.s. concentric bundles with inner xylem
- 4(d). Ectophloic siphonostele. Osmunda, rhizome t.s.
- 5(d). Amphiphloic siphonostele. Adiantum, rhizome t.s.
- 6(d). Dictyostele. Polypodium, rhizome t.s.
- 7(d). Eustele. Ranunculus, stem t.s., open collateral bundles
- 8(d). Eustele. Lamium, stem t.s.
- 9(d). Eustele. Cucurbita pepo, stem t.s., bicollateral bundles
- 10(d). Atactostele. Zea mays, stem t.s., closed collateral bundles
- 11(d). Arrangement of bundles similar to atactostele in a dicot plant. Podophyllum, stem t.s.
- 12(d). Concentric vascular bundles with outer xylem. Convallaria, rhizome t.s.
- 13(d). Radial concentric vascular bundle. Ranunculus, root t.s.

Cat. No.	Contains	Price
S95061L	13 slides	\$297.00/Pk

Plant Cell Slide Set

12 microscope slides.

- 1(c). Epidermis of allium (onion), w.m. showing simple plant cells with cell walls, nuclei and cytoplasm
- 2(d). Root tips of allium cepa l.s. showing cell division (mitosis) in all stages



- 3(e). Pollen mother cells of lilium. Prophase of first maturation division (meiosis)
- 4(f). Pollen mother cells of lilium. Metaphase and anaphase of first maturation division
- 5(c). Wood of tilia macerated and w.m.
- 6(d). Fruit of pyrus (pear) t.s. showing stone cells
- 7(c). Tuber of solanum (potato) t.s. shows cork and starch grains
- 8(d). Cucurbita pepo (pumpkin) l.s. of stem showing vascular bundles with sieve tubes, spiral and annular vessels
- 9(c). Ricinus endosperm t.s. showing aleurone grains
- 10(d). Anthers of lilium (lily), t.s. pollen sacs and pollen grains
- 11(d). Ovary of lilium (lily), t.s. arrangement of ovules and embryosac
- 12(e). Spirogyra showing conjugation stages and zygotes

Cat. No.	Contains	Price
S95063L	12 slides	\$258.00/Pk

Sea Urchin Embryology Slide Set

12 microscope slides.

- 1(d). Sea urchin, unfertilized eggs
- 2(d). Sea urchin, fertilized eggs
- 3(d). Sea urchin, two cells
- 4(d). Sea urchin, four cells
- 5(d). Sea urchin, eight cells
- 6(d). Sea urchin, sixteen cells
- 7(d). Sea urchin, thirty-two cells
- 8(d). Sea urchin, morula
- 9(d). Sea urchin, blastula
- 10(d). Sea urchin, blastula, beginning gastrulation
- 11(d). Sea urchin, blastula, progressive gastrulation
- 12(d). Sea urchin, pluteus larva

Cat. No.	Contains	Price
S95064L	12 slides	\$417.00/Pk



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Frog Embryology Slide Set

10 microscope slides.

- Frog, morula, l.s. with macro- and micromeres
- Frog, blastula. I.s. shows blastocoel
- Frog, gastrula, sagittal I.s. shows germ layers, dorsal lip, yolk plug
- Frog, neurula, t.s. showing primordium of notochord, entoderm with primary intestinal cavity
- Frog, early tail bud stage, t.s. with neural tube, notochord
- Frog, early tail bud stage, sagittal l.s. with primordium of brain, ntestine, segmentation of mesoderm
- Frog, hatching stage, t.s. through region of head or gills
- Frog, hatching stage, t.s. through region of midbody
- Frog, young tadpole, t.s. through head
- Frog, young tadpole, t.s. through thorax or abdomen

Cat. No.	Contains	Price
\$950661	10 slides	\$348 00/Pk

Pig Embryology Slide Set

10 microscope slides.

- 1(g). 4-6 mm, t.s.
- 2(g). 7-9 mm, sagittal l.s.
- 3(f). 11-12 mm, t.s. through head
- 4(f). 11-12 mm, t.s. through abdomen
- 5(f). 15 mm, t.s. through head
- 6(f). 15 mm, t.s. through thorax
- 7(f). 15 mm, t.s. through abdomen
- 8(g). 15 mm, sagittal l.s.
- 9(g). 20-25 mm, sagittal l.s.
- 10(g). 20-25 mm, frontal l.s.

Cat. No.	Contains	Price
S95068L	10 slides	\$365.00/Pk



General Biology Slide Set A

Prepared slides of animal and plant structures in whole mount (w.m.), longitudinal section (l.s.) and cross-section (c.s.) preparations.

Zoology

- Amoeba proteus, w.m., showing nucleus and pseudopodia
- *Hydra, w.m.,* extended, to show foot, body, mouth, and tentacles
- Lumbricus, c.s., back of clitellum showing muscular wall, intestine, typhlosole, and nephridia
- Daphnia and Cyclops, w.m., both specimens on slide
- Musca domestica, leg, fly with clinging pads (pulvilli)
- · Apis mellifica, honeybee anterior and posterior wing
- Squamous epithelium, isolated (simple) from human cheek
- Striated muscle, I.s., showing nuclei and striations
- · Compact bone, c.s., specially stained for lamellae, canaliculi
- Human scalp, I.s., showing hair follicles, sebaceous glands, epidermis
- Human blood smear, stained for red and white corpuscles

Bacteria and Cryptogams

- Bacteria from mouth, smear, Gram stained showing bacilli, cocci, spirilli, and spirochaetes
- Diatoms, strewn slide of mixed species
- Spirogyra, vegetative filaments with spiral chloroplasts. Rhizopus, w.m., (or Mucor), mycelium and sporangia
- · Moss, w.m., stem with leaves

Botany: Phanerogams Slides

- Rannunculus, c.s., buttercup, typical dicot root
- Zea mays, c.s., corn, monocot stem with bundles
- Helianthus, c.s., sunflower, herbaceous dicot stem
- Syringa, c.s., lilac leaf, showing epidermis, palisade parenchyma, spongy parenchyma, and vascular bundles
- Lilium, c.s., lily, anthers with pollen grains and pollen sacs
- Lilium, c.s., ovary showing arrangement of ovules
- Allium, w.m., onion epidermis with cell nuclei
- . Allium, I.s., onion root tip for mitosis, cell division

Cat. No.	Contains	Price
S500	25 slides	\$140.00/Ea

Animal Cell Set

Set contains 12 animal cytology slides and a brochure, with a range of tissue types that are useful for classroom microscope study.

Includes:

- Squamous epithelium, isolated cells from human mouth. Nuclei and cytoplasm are shown.
- Striated muscle l.s. showing nuclei, striations, myofibrils
- Compact bone and hyaline cartilage t.s., two sections on one slide for comparison
- Nerve fibres isolated, fixed and stained by osmic acid to show myeline sheaths and Ranvier's nodes
- Liver of Salamandra t.s., showing simple animal cells with cellular membranes, nuclei, and cytoplasm
- Kidney of mouse, t.s. vital stained with trypanblue to demonstrate the storage of epithelial cells
- Ovary of cat, t.s. showing primary, secondary, and Graafian follicles
- Testis of frog, t.s. showing spermatogenesis: spermatogonia, spermatocytes, spermatids, and mature spermatozoa
- Salamandra larva, t.s. of skin and other organs selected to show cell division (mitosis) in various stages
- Uteri of Ascaris megalocephala, t.s. iron hematoxyline stained to show details of meiosis with chromosomes and nuclear spindles
- Salivary gland of Chironomus larva: Giant chromosomes showing large chromomeres, Stained for DNA after Feulgen
- Ova from Psammechinus (sea urchin): Unfertilized ova, fertilized ova, early cleavage stages

Cat. No.	Contains	Price
\$5000	12 slides	\$300.00/Ea

Histology of Mammalia, Basic Set

Precision slides are mounted by expert microtechnicians.

Created from fresh, top-quality specimens and expertly fixed, stained and hand-mounted by specialists in the field. Ultrasonically cleaned to eliminate striations and bubbles.

25 microscope slides:

- Squamous epithelium, isolated cells
- Fibrous connective tissue
- Adipose tissue, fat stained Hyaline cartilage, c.s.
- · Compact bone, c.s.
- · Striated muscle, l.s.
- Smooth muscle, c.s. and l.s.
- Blood smear, human
- Artery, c.s.
- Vein, c.s.
- · Lung, c.s.
- Pancreas with islets of Langerhans, c.s.
- Tongue, c.s.

- Stomach, fundic region, c.s.
- Small intestine, c.s.
- · Liver, c.s.
- · Kidney, c.s.
- Ovary with developing follicles, c.s.
- Testis with spermatogenesis, c.s.
- · Cerebrum, c.s.
- · Cerebellum, c.s.
- · Spinal cord, c.s.
- Nerve fibers isolated
- Motor nerve cells, smear from spinal cord
- Scalp, human, l.s. of hair follicles

Cat. No.	Contains	Price
S2400	25 slides	\$321.00/Pk





General Biology Slide Set D

Offers prepared slides of animal and plant structures in whole mount (w.m.), longitudinal section (l.s.) and cross-section (c.s.) preparations. 50 microscope slides.

Histology of Humans and Mammals

- Ciliated epithelium, t.s., fallopian tube of pig
- Tendon, I.s., white fibrous tissue, fibers/cells
- Heart muscle, t.s. and l.s., human, branched fibers with central nuclei and intercalated discs
- · Lymph gland, c.s., pig, lymphoid tissue
- Esophagus, c.s., cat, stratified squamous epithelium
- Stomach, c.s., cat, fundic with gastric glands
- Large intestine, c.s., stained for mucous cells
- Pancreas, pig, showing islets of Langerhans
- Thyroid gland, t.s., pig, glandular epithelium and colloid
- Adrenal gland, t.s., cat, through cortex and medulla
- Sperm, smear, bull spermatozoa
- Motor Nerve Cells, smear, spinal cord of cow
- Cerebrum, t.s., human, cortex with pyramidal cells
- Skin, human, palm, cornified epidermis, sweat glands

Zoology

- Fasciola hepatica, w.m., beef liver fluke
- Taenia, w.m., tapeworm mature proglottids
- Culex pipiens, w.m. (F), mosquito head and mouth parts
- · Culex pipiens, , male head and mouth parts
- · Cimex lectularis, w.m., bed bug, adult

Cytology and Genetics

- Mitochondria, thin section, liver or kidney
- Golgi apparatus, t.s., through spinal ganglion
- Chloroplasts, in leaf Elodea or Mnium
- Aleurone grains, sec. of Ricinus endosperm
- Storage, c.s., liver or kidney vital stained with trypan-blue for storage in epithelial cells
- DNA in cell nuclei, Feulgen stained
- DNA and RNA, fixed and stained with methyl green to show DNA and RNA in different colors
- Giant chromosomes, from Chirionomus salivary gland, individual genes and puffs can be seen
- Human chromosomes, spread in metaphase for counting

- Meiotic and mitotic stages, c.s., crayfish testis, with nuclear spindles
- Maturation divisions, in ova of Ascaris megalocephala, iron-hematoxylin stained
- Cleavage stages, in ova of Ascaris meg., iron-hematoxylin stained

Bacteria and Diseased Human Organs

- Escherichia coli, bacteria from colon, Gram stained
- Eberthella typhi, typhoid fever, Gram stained,
- Tuberculosis, c.s., lung with tubercles in tissue
- Smoker's lung, c.s., human smoker's lung
- Liver cirrhosis, c.s., man, alcohol abuse
- Arteriosclerosis, c.s., human coronary artery with sclerotic wall
- Metastatic carcinoma (cancer), human liver

Embryology

- Sea urchin development, 2/4/8 cell stages
- Sea urchin development, morula, blastula, and gastrula
- Frog embryology, c.s., through blastula/ blastocoel
- Frog embryology, c.s., larva, through organs

Ecology and the Environment

- Leaf, needle of fir, two types, healthy and acid-rain damaged
- Leaf of beech, c.s., two types, healthy and acid-rain damaged
- Bacteria from wastewater, smear

Botany

- *Nostoc*, filamentous colonies in gelatinous sheaths
- Desmids, strewn, mixed species
- Spahgnum, w.m., peat moss, leaf showing chlorophyll-bearing hyaline cells
- Triticum, c.s., wheat stem with central pith and circular arrangement of bundles
- Salvia, c.s., sage square stem, angular collenchyma

Cat. No.	Contains	Price
S750	50 slides	\$489.00/Ea



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Normal Human Histology Set

Views of normal human tissue. 40 microscope slides.

This set of 40 precise, hand-mounted slides gives students a thorough look at normal human tissues. All slides are free of bubbles and striations.



Cat. No.	Contains	Price
S9000	40 slides	\$567.00/Pk

Multimedia Packages: Mitosis and Meiosis

Six selected microscope slides with brochure.

Teacher and Student Packages, set of six slides:

- Allium, root tips, l.s. showing lateral view of all stages of mitosis, iron-hematoxyline
- Whitefish mitosis, l.s. of embryo showing animal mitosis
- Testis of mouse, t.s. showing spermatogenesis in all stages
- Giant chromosomes from salivary gland of Chironomus, squash preparation special stained for chromomeres
- Lilium, microspore mother cells, prophase of first division showing meiosis
- Lilium, microspore mother cells, meta- or anaphase of first division, showing mitosis

Cat. No.	Contains	Price
S90071A	6 slides	\$142.00/Ea

Mitosis, Meiosis, and Fission Set

Shows IPMAT in slides.

Set of five slides shows the stages of nuclear division, cytokinesis,

reduction division and even fission in *Paramecium*.

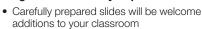
Includes:

- Vicia faba (broad bean) root tip squash, showing all stages of mitosis, stained with Feulgen reaction for DNA. Vicia has 12 large chromosomes
- Whitefish mitosis, sections of Coregonus blasto-disc, all stages of mitosis shown
- · Lily meiosis, first meiotic divisions in cross section of lilium anther
- Grasshopper testis, I.s. to show spermatogenesis and spermiogenesis; stained with iron-hematoxylin
- Paramecium caudatum in fission, w.m. of mass culture including several specimens in fission

Cat. No.	Contains	Price
S10044	5 slides	\$159.00/Pk

Histology Slides for Fish

Agnatha, chondrichthyes, and osteichthyesmitosis, coregonus (whitefish), blastodisc; mitotic stages are all clearly depicted.



- Students can see detail available only from firsthand observation
- Groups of slides are shipped in a slide case for easy storage

Cat. No.	Description	Price
S11465	Whitefish blastodisc slide showing mitosis	\$18.70/Ea
S11468	Whitefish blastodisc hematoxylin stain prepared slides; selected to show more mitotic figures	\$27.75/Ea

Animal Science

Deluxe Owl Pellet Dissection Lab Activity

Students can learn the concepts of food webs and food chains while



identifying the small animals that are prey for the owls.

- Owls have a specialized digestive tract which helps them expel the indigestible parts of their prey in pellet form
- The pellets are heat sterilized and individually wrapped

Kit Includes:

- 15 owl pellets
- 30 dissecting probes
- 15 forceps

- 15 plastic rulers
- 15 hand magnifiers
- 60 nitrile gloves

Cat. No.	Price
S29557	\$111.00/Ea

Barn Owl Pellets

Owl Pellets are a natural educational tool that are useful in introducing students to the nature of food chains, skeletal anatomy, and the identification of prey taken by the barn owl. Consisting mainly of undigested hair and bones, owl pellets are fascinating to investigate and analyze.



- Grade A quality
- Sold in packs of 10

Cat. No.	Price
S19366NB	\$80.00/Pk



Owl Pellet Kit

Students discover what an owl had to eat by examining the owl pellet.

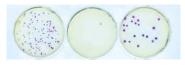
- Includes bone charts for identifying bones and assembling them
- into skeletons to evaluate an owl's food source

 Explore feeding habits of owls and their place in food chain
- May be used by older students to study intricate balance and relationships between tropic levels in food web, energy flow and population densities
- Includes 12 owl pellets and all dissection materials
- Grades K to 12
- Class size: 24 students

⚠ ALERTS: CHOKING HAZARD. Small parts. Not for children under 3 yrs.

Cat. No.	Product Type	For Use With (Application)	Price
S02094	Owl Pellet Kit	Identify skeletal parts of small mammals, study the interrelatedness of food chains, and identify habitats and ecosystem variables	\$200.00/Ea
S02095	Owl Pellet Refill	Students discover what an owl had to	\$114.00/Ea

Battling Bacteria: Ecosystem Dynamics in a Petri Dish Kit



Students create their own microbial ecosystems to investigate the dynamics of competition and abiotic/biotic change on community composition. By using bacteria with short generation times students can observe, test, and collect their own data on key ecological phenomena in a single week!

- Storage: some components require refrigerator and freezer storage
- · Complete in 1 week
- For 10 lab groups

Cat. No.	Price
S27558	\$138.00/Ea

Six Kingdoms Flip Chart with Online Multimedia Lesson

These multimedia kits can help students master key life sciences concepts.

- Provides graphical instruction and write-on/wipe-off activities with one-year online access to a corresponding multimedia lesson featuring in-depth, interactive coverage
- Cignetication
- The multimedia lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices
- Flip chart set features 10 laminated, double-sided charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a teacher's guide with copymaster activities and review questions
- Spiral-bound and mounted on a sturdy easel for years of use, the flip chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features animated, narrated tutorials; interactive exercises & activities; virtual lab investigations; illustrated, narrated glossary; visual resource library; and an inquiry-based student activity guide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any interactive whiteboard
- Covers: Classification; The Six Kingdoms of Life; Archaebacteria & Eubacteria; Protista; Fungi; Plant Kingdom; Plants with Seeds; Animal Kingdom; and Vertebrates & Invertebrates

Cat. No.	Description	Price
S81110	Six Kingdoms Flip Chart with Online Multimedia	\$60.50/Ea
	Lesson	





Microslide[™] **Animal Tissues** (Epithelium & Cartilage)

Set of 8 related 35 mm images photographed through a microscope.

- · Arrows and call outs help the student locate important features
- · Each Microslide is accompanied by a detailed lesson plan designed to stimulate, inform and question students
- Each Microslide is stored in its own pocket

Set of 15 Microslides includes:

- The trachea (50x)
- The trachea (180x)
- · Ciliated columnar epithelium
- Simple cuboidal epithelium (500x)



Cartilage (180x)

- Esophagus epithelium (340x)
- Simple squamous epithelium
- The urinary bladder (125x)

Cat. No.	Price
S81686	\$180.00/Pk

Eisco™ Animal Cell Model

Three-dimensional model showing electron microscopic structure.

- · Demonstrates nucleus, nucleolus, endoplasmic reticulum, mitochondria, ribosomes, polysomes, and Golgi apparatus with centrioles, lysosomes and vacuoles
- · Mounted on base for support
- · Numbered with English key card
- Size (L x W x H): 17 x 12.5 x 7.4 in. (43 x 32 x 19 cm)

Cat. No.	Price
S15640	\$227.00/Ea



Eisco™ Animal Cell Model

This enlarged animal cell model demonstrates the delicate structure of a typical animal cell.

- Enlarged 20,000 times
- Includes organelles like the nucleus, endoplasmic reticulum, mitochondria, ribosomes respectively polysomes, and Golgi apparatus
- · Also demonstrates centrioles, lysosomes and fat vacuoles
- The presentation of the process of extrusion of a Golgi vesicle and pinocytic signs shown by the cell dynamics
- Vividly hand painted with eco safe paint
- Constructed of durable polyvinyl chloride (PVC) plastic which is corrosion-resistant, lightweight, and has high strength
- Resists reactions with acids, gasoline, alcohol, and hydrocarbons
- Size: 15 x 9.5 x 18 in. (38 x 24 x 46 cm)

Cat. No.	Price
S27897	\$220.00/Ea

Simple Animal Cell 3D Model Kit

Assemble and use 3-D models to visualize and investigate key science structures.

- · Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- · Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups



- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81461	\$46.50/Fa

The Wonder of the Animal Cell

Study of the basic element of all living organisms.

Some of the topics covered include:

- Unicellular organisms
- Multicellular organisms
- Specialized cells: muscle, glandular, sensory, nerve, connective tissue, red blood, white blood, sex
- · Multiplication of cells
- Formation of tissue and organs

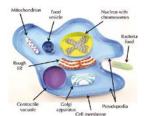
Cat. No.	Price
S94695	\$109.00/Ea



Amoeba 3D Model Kit

Assemble and use 3D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups



- Also includes comprehensive
 Teacher Resource Guide outlining opportunities for your students to
 engage, explore, explain, extend, and evaluate their understanding
 of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81442	\$46.50/Ea

Frog Life Cycle 3D Model Kit

Assemble and use 3D models to visualize and investigate key science processes.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups



- Also includes comprehensive
 Teacher Resource Guide outlining
 opportunities for your students to engage, explore, explain, extend,
 and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Price
\$46.50/Ea
_

Insect X-Ray and Picture Cards

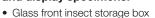
Students can match up the insect X-rays to the double-sided, sturdy picture cards to see straight through the insects.

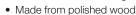
- Discover what it means to be an entomologist, the branch of zoology that studies insects
- Learn the parts of an insect head, thorax and abdomen
- See how very different creatures can have very similar structures
- See straight through the insects, from the top, through the inside, to the bottom
- · Teacher guide details each insect
- Includes 36 double-sided picture cards and 36 X-rays, 4 x 6 in. (10 x 15 cm)

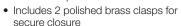
Cat. No.	Price
\$40798	\$28.50/Ea

Eisco[™] Wooden InsectStorage Box

Suits all insect collectors with a perforated chamber and soft pad lining to pin and display specimens.









- Glazed inside with white art paper
- Double walled, perforated fumigation chamber

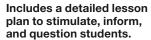
WARRANTY: 1-year limited manufacturer warranty

Cat. No.	Price
S89502	\$121.00/Ea



Botany

Microslide[™] Green Plants Set



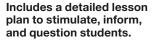
- Microslide strip consists of images photographed through a microscope called photomicrographs
- Arrows and call outs help the student locate important features
- Includes lesson plan with pocket to store Microslide
- Reproducible worksheet with a purchase of 15

Image titles on Microslide:

- Green leaf (110x) x.s stained (10x)
- Green leaf x.s. stained (350x)
- Stomata x.s. stained (480x)
- Root hairs w.m. stained (35x) left side root x.s. stained (20x) - right side
- Celery I.s. (40x) left side/corn x.s. (145x) right side
- Veins in a leaf w.m. stained (40x)
- Chloroplast the food factory- electron microscope (30,000x)
- Leaf with starch w.m. stained (35x)/bean seed w.m. stained (2x)



Microslide[™] Monocots and Dicots Set



- Microslide strip consists of images photographed through a microscope called photomicrographs
- Arrows and call outs help the student locate important features
- Includes lesson plan with pocket to store Microslide
- Reproducible worksheet with a purchase of 15

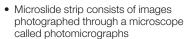
Image titles on Microslide:

- Monocot seed (20x)
- Dicot seed (40x)
- Petunia seedling (10x)
- Monocot and dicot leaves
- Monocot or dicot (50x)
- Monocot dicot stems (34x)
- Dicot stem (18x)
- Monocot flower (6x)

Cat. No.	Price
\$816730	\$12.25/Ea



Includes a detailed lesson plan to stimulate, inform, and question students.



- Arrows and call outs help the student locate important features
- Includes lesson plan with pocket to store Microslide
- Reproducible worksheet with a purchase of 15

Image titles on Microslide:

- Onion skin (110x)/elodea (150x)
- Bean seedling (1/4x)
- Antheridium (12x)/archegonium (12x)
- Fern (20x)

- Female pine cone (2.2x)
- Tulip flower (1/5x)
- Pistal (5x)/double fertilization (420x)
- Monocot seed (20x)/dicot seed (40x)

Cat. No.	Price
S816737	\$12.25/Ea

Simple Plant Cell 3D Model Kit

Assemble and use 3D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups

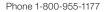


- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Cat. No.	Price
\$81463	\$40.75/Ea







Cross Section Models: Cells

Colorful foam model comes apart to create a cross section view for hands-on classroom demonstrations.



- Activity guides provide ideas, facts and detailed information on the function of the structure being modeled
- Key structures are labeled on one half of the model, and the other half is unlabeled for testing purposes

Cat. No.	Туре	Price
S90816	Cell Model, Animal Cell Cross Section	\$29.25/Ea
S90817	Cell Model, Plant Cell Cross Section	\$29.25/Ea

Eisco™ Model Plant Cell

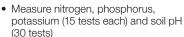
The detailed 3D rendering of a greatly magnified plant cell is ideal for studying its structure and function of the various features.

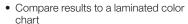
- The model includes the peroxisome, Golgi apparatus, nucleus, nucleolus, nuclear envelope, endoplasmic reticulum, ribosomes, chloroplast, cytoskeleton, cell wall, plasma membrane, mitochondria, vacuole, and cytoplasm
- Features are colored and numbered for comparison with the included key
- · Vividly hand painted
- · Identification key card included
- Model dimensions: 11.5 x 10 x 2 in.
- Base dimensions: 16 x 12 x 1 in.

Cat. No.	Price
S12903	\$177.00/Ea

Garden Guide Soil Test Kit

Ideal for checking soil nutrient levels in school gardens and landscapes.







	Price
\$89510	\$88.00/Ea

Plant Cell Model

Magnified 500,000 to 1,000,000 times.

- Two-piece model presents the structure of a typical plant cell with cytoplasm and cell organelles as viewed from an electron microscope
- All important organelles are raised and displayed in color
- Dimensions: 7.8 x 5.5 x 12.6 in. (20 x 14 x 32 cm)

Displays:

- Cell wall
- · Cell membrane
- Nucleus
- Smooth endoplasmic reticulum
- Rough endoplasmic reticulum
- Ribosomes
- Chloroplasts
- Mitochondria
- · Dictyosomes/Golgi apparatus

Cat. No.	Price
S96171	\$577.00/Ea

Eisco[™] Premium Monocot Stem Model



\$99.00/Ea

Replicates a greatly magnified transverse section of a monocot stem.

- Model features a large 3D view of a monocot root
- Made of polyvinyl chloride (PVC) plastic for durability
- Hand-painted with vivid non-toxic paint
 Numbered and supplied with an
- English key card
- Mounted on base that measures 13 x 10 x 1 in.

Cat. No.

S15018





Eisco[™] Premium **Monocot Root Model**



Replicates a greatly magnified transverse section of a monocot root.

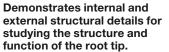
- · Model features a large 3D view of a monocot root
- Made of polyvinyl chloride (PVC) plastic for durability
- Hand-painted with vivid non-toxic
- · Numbered and supplied with English key card
- Model measures 11 x 8.5 x 1 in.
- · Mounted on a sturdy base that measures 13 x 10 x 1 in.

Labeled Parts

• Root Hair, Epiblema, Exodermis, Cortex-Parenchymatous, Inter Cellular Space, Endodermis, Strach Grain, Pericycle, Protoxylem Vessel, Metaxylem Vessel, Conjunctive Tissue, Phloem Bundle, Pith

Cat. No.	Price
S15019	\$94.00/Ea

Eisco™ Premium Root Tip Model



- Detailed, vibrantly colored 3D cross section
- Effectively shows the inner anatomy and vasculature of a root tip, as well as the outer anatomy including root
- Made of polyvinyl chloride (PVC) plastic for durability
- Hand-painted with vivid non-toxic
- · Numbered and supplied with English key card
- · Mounted on base with metal rod

Cat. No.	Price
\$15020	\$160.00/Ea



Provides a visually and

kinesthetically effective method for studying the structure and function of angiosperms.

- Model represents a longitudinal dissection to provide an internal view
- · Provides an excellent visual for understanding structure and function
- Made of polyvinyl chloride (PVC) plastic for durability
- Hand painted with vivid, non-toxic
- Mounted on 22 x 12 x 1.5 in. base
- · Numbered and supplied with English key card

Details Identified

• Stamen, filament, anther, theca, pollen sacs, pollen grain and mother cell, vegetative cell, pollen tube, sperm cells, pistil, stigma, style, ovary, chalaza, external and internal integument, micropyle, nucellus, embryo sac, ovule, synergids, antipodes, secondary nucleus of embryo sac, conducting bundle and flower base with part of perianth

Cat. No.	Price
S15021	\$228.00/E

Eisco™ Plant Cell **Meiosis Models**

Models have been redesigned to reflect the recent concept of chromosome changes from the resting nucleus to the formation of 4 daughter cells.

- · Set of 16 Plant Cell Division models mounted on a board
- Made of polyvinyl chloride (PVC) plastic for durability
- · Hand painted with vivid, non-toxic
- Supplied with English key card
- Base measures 24 x 18 in.

Cat. No.	Description	Price
S15022	Plant Cell Meiosis	\$218.00/Ea

Eisco[™] Angiosperm **Fertilization Model**













Follow us on

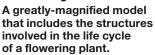








Eisco[™] Angiosperm **Life Cycle Model**



- 3D rendering that effectively shows the life cycle of angiosperms
- Life cycle steps and cells are clearly
- Made of polyvinyl chloride (PVC) plastic for durability
- · Hand painted with vivid, non-toxic paint
- · Mounted on a sturdy base for display
- Supplied with English key card
- Base measures 24 x 12.5 x 2 in.

Process and Structures Identified

• Flower, microsporophyll (stamen), megasporophyll (carpel), microsporangia, ovary, megaspore (mother cell), microspores, pollen tube, ovule, fertilisation, oospore, embryo, seed, seedling, sporophyte

Cat. No.	Price
\$15023	\$377.00/Ea

Eisco™ Premium Monocot Flower Model

A greatly magnified longitudinal section of a wheat flower that demonstrates monocot flower structures.

- This model features a large 3D view of the inside of a monocot flower
- Made of polyvinyl chloride (PVC) plastic for durability
- Hand-painted with vivid non-toxic
- · Numbered and supplied with English key card
- · Mounted on base that measures 9.5 x 15 x 2.5 in.

Details Identified

• Penduncle, rachilla, outer glume, inner gume, inferior palea, lodicules (perianth), ovary wall (hairy), nucellus of ovules, connective, filament of stamens, anther lobes of stamens, embryo sac of ovules, integuments of ovules, 1st, 2nd, and 3rd fertile flowers (florets), terminal male flower, stigmas of ovaries, and anatropous basal ovule in ovarv

Cat. No.	Price
\$15024	\$105.00/Ea





Eisco™ Typical Flower Standing Model

Hand painted, break-resistant plastic typical flower model is a great aid for teaching angiosperm pollination and fertilization.

- · Model of a greatly enlarged, idealized typical flower
- Break-resistant plastic
- · Mounted on a base
- · Numbered with English key card
- · Perfect for teaching angiosperm pollination and fertilization



Eisco™ Typical Flower Model

A typical flower model for biological study.

- Three dimensional details depict internal structures, including reproductive parts
- Numbered with key card for identification of features
- Mounted on a base for display
- Hand painted
- · Perfect for any classroom



Eisco™ Detachable Flower Model

Detachable model of flower for botanical study.

- · Ovary with single interior ovule
- · Fixed on base
- Numbered with English key card
- L x W x H: 42 x 22 x 33 cm (16.5 x 8.6 x 13 in.)







Giant Magnetic Plant Life Cycles

Enlarged for demonstration on the whiteboard.

- · Real-life photos model
- · Displays up to six stages in life cycle of a bean plant and apple
- · Label-free for versatility
- Largest piece measures (H × L)



9 x 7 in. • Grades K+	,	,	•	- -	•
Cat. No.					Price
S04229				\$26.	75/Ea

Dicotyledon Stem Model

Modeled after a sunflower, this one year dicot stem gives anatomy in cross, radial and tangential sections.

- 45X enlarged model of one year old sunflower dicot stem
- Cross, radial, and tangential sections display epidermis, cork layer, phloem region, cambium, xylem region, pith and vital structures in great detail
- · Designed and built to be as accurate as possible
- · Perfect for students and teachers
- · Made of plastic and includes diagram



Dicot Flower Model

Allows students to easily study the floral components and reproductive functions of flowers.

Enlarged to approximately eight times life size.

- · Can be disassembled to reveal the pollen grains inside and show the process of pollination
- Structures are numbered on the flower model and correspond to an identification key
- Dimensions: 17.7 x 15.7 x 12 in. (45 x 39.9 x 30.5 cm)

Cat. No.	Price
S06699	\$182.00/Ea



Made up of a set of 10 models that each depict a separate phase of plant mitosis.

- Set of 10 smaller models
- Individual models each depict a different phase of plant mitotic division
- · Numbered with English key card
- · Perfect for any classroom



Photosynthesis Light Reactions 3D Model Kit

Assemble and use 3D models to visualize and investigate key science processes.

Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models



- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions

Cat. No. S81460 \$46.50/Ea

Chloroplasts 3D Model Kit

Assemble and use 3D models to visualize and investigate key science structures.



- · Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81445	\$46.50/Ea



Advanced Placement Laboratory Kit 4: Plant Pigment Chromatography

and **Photosynthesis**

Experiment demonstrates light-dependent reactions of photosynthesis by colorimetric assay, and helps students to gain an understanding of the biochemical processes by which they work.

Reformulated solvent systems are less flammable and less toxic than commonly used ether and acetone systems.

- · Gain an understanding of the theory and applications of chromatography
- Use thin layer chromatography to separate plant pigments carotene, xanthophyll, and chlorophyll
- Perform an assay of the light reactions of photosynthesis using intact chloroplasts and the dye DCIP

Cat. No.	Price
S11284	\$167.00/Ea

†Rubbing alcohol will not work, as it is only 70% isopropanol.

Plant Cancer Kit

Plant Cancer Kit allows students to investigate cancer in the laboratory.

- · Students safely explore aspects of cancerous cell growth with this self-contained kit
- A fresh carrot is required but not provided
- Experiments enable students to visualize
 - the differences between normal cells and cancerous cells, describe similarities and differences between animal and plant cancers, identify cancer cells, identify a plant cancer or gall, and research current theories on the causes of cancer
- · Students grow their own sunflower plants, then induce crown gall by inoculating plant tissue with Agrobacterium tumefaciens which is required for inducing the cancerous growth (reply card item ships upon request and only in Continental US)
- Students then do a Koch's postulates experiment: inducing cancer
- Allow 3 to 4 weeks if growing plants prior to innoculation and 3 to 4 weeks for tumor growth
- Experiment requires approximately one hour of lab time
- Designed for 24 students
- Recommended in conjunction with Koch's postulate experiment so as to use the same Agrobacterium tumefaciens culture or sub-culturing for later use
- Kit requires a free USDA permit for handling Agrobacterium tumefaciens to be obtained before the organism can be shipped
- Meets National Standards for grade levels 9 to 14

Cat. No.	Price
S27529	\$269.00/Ea

Plant Cloning II Kit

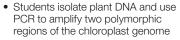
Allows users to generate a plant by cloning its tissue in an exciting and challenging experience that introduces students to biotechnology and sterile techniques.

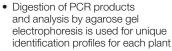
- Students will establish a shoot multiplication culture using an African violet model, use sterile technique to develop African violet cloned cultures, and induce the development of multiple shoots (clones) from the leaf tissue
- · Resulting plantlets may be started in soil
- The complete process takes approximately three months
- No hood or incubator is required
- Includes an instruction manual and a flash drive with a presentation including images of plant material at various stages of the experiment
- Perishable reply card items ship separately upon request and only in the continental US
- Meets National Standards for grade levels 9 to 14

Cat. No.	Price
S27530	\$318.00/Ea

Exploring Plant Diversity with DNA Barcoding Experiment Kit

Students explore the genetic diversity of ten selected plants in this experiment by generating unique identification profiles for each plant.







- DNA isolation (2 hrs), set-up (30 min), DNA digestion (60 min)
- · Requires wet ice shipment for next day delivery

Cat. No.	Price
S29017	\$243.00/Ea







Dose Makes Poison: Testing Environmental Impacts

of Pollution **Experiment Kit**

Students learn how to determine the effects of a given substance on living organisms.

- Biological assay for environmental
- · Inquiry-based: lab students plan and perform plant bioassay
- · Determines environmental hazard of common point and non-point source pollutants
- Results are analyzed using averages, standard deviations, TC50 calculations, and integrating STEM concepts

Cat. No.	Price
S42876	\$105.00/Ea

Plant Cloning Kit

Reproduce entire plant systems from a section of a single plant.

Propagating plants by cloning teaches the importance of sterile biological techniques.

- Students practice sterile techniques required for many biotechnology methods
- Students germinate carrot seeds to provide plant material from which to establish callus culture
- Students induce development of multiple shoots (plantlets) from callus tissue
- Extended process takes approximately four months
- No hood or incubator required
- Includes detailed instruction manual and PowerPoint presentation with images of plant material at various stages of experiment
- For grades 9 to 12
- · Class size: 24 students

⚠ ALERTS: CHOKING HAZARD. Small parts. Not for children under 3 yrs.

Cat. No.	Price
\$25020	\$189.00/Ea

Seed Dispersal Set

Students learn how seeds are dispersed.

Includes:

- Six types of seed (12 or more of each)
- Instructions for demonstrating dispersal by mammals: by mechanical propulsion, by water, and by wind

ALERTS: There is a SHIPPING ALERT for this product group, see box below.



General Seed Set

A great way to introduce germination to students.

Set contains 18 packets

Includes:

- Bean Oats
- Rye grass Barlev
- Alfalfa Pea
- Clover Pine Corn Radish
- Cucumber Soybean
- Lettuce
 - Squash



- Sunflower
- Mung bean
- Tomato
- Wheat

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S07529ND	\$63.00/Pk

Monocot Seeds

Species were selected because of their good germination rates.

- Germinating monocots have one seed leaf, parallel leaf venation, fibrous roots, and scattered vascular
- Flower parts usually occur in threes

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.



Cat. No.	Product Type	Quantity	Price
S07525ND	Seed, Barley Viable	1 lb.	\$15.00/Ea
S07527ND	Seed, Corn Field Viable	1 lb.	\$20.25/Ea
S07528ND	Seed, Sweet Corn Viable	1 lb.	\$23.75/Ea
S07530ND	Seed, Grass Rye Viable	1 lb.	\$15.00/Ea
S07540ND	Seed. Wheat Viable	1 lh	\$15.00/Fa



SHIPPING ALERT: Because these items are living or perishable materials a specified delivery date is required. Orders must be placed through Customer Service at 1-800-766-7000.



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Dicot Seeds

Dicots are the flowering plants whose seed typically has two embryonic leaves or cotyledons.

- · Easily germinated
- Show typical dicot characteristics of two seed leaves, netted venation, taproots, and vascular bundles arranged in a ring
- · Flower parts occur in fours and fives



Cat. No.	Product Type	Quantity	Price
S07523ND	Seed, Alaska Pea	1 lb.	\$15.00/Ea
S07524ND	Seed, Alfalfa	0.25 lb.	\$9.80/Ea
S07526ND	Seed, Broad Beans	1 lb.	\$15.00/Ea
S07531ND	Seed, Bush Lima Beans	1 lb.	\$15.00/Ea
S07532ND	Seed, Little Marvel Pea	1 lb.	\$15.00/Ea
S07533ND	Seed, Mung Beans	1 lb.	\$15.00/Ea
S07534ND	Seed, Pinto Beans	1 lb.	\$15.00/Ea
S07535ND	Seed, Scarlet Globe Radish	1 lb.	\$24.00/Ea
S07536ND	Seed, Red Kidney Beans	1 lb.	\$15.00/Ea
S07538ND	Seed, Soy Beans	1 lb.	\$15.00/Ea
S07539ND	Seed, Sunflower	1 lb.	\$15.00/Ea

Hydroponics Lab

Get a 360° view of growing plants from the roots up.

Use for science fair projects — this set of three growing tubes is a mess-free way to explore hydroponics with water or any media.



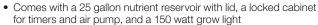
- Supports hands-on science inquiry as students conduct controlled experiments
- Provides a view of growing seedlings transparent seed basket shows how the plant grows both up and down
- Reveals plant roots no soil required
- Provides a write-and-wipe surface for specimen labels
- Engages children in science learning, whether at school or home

Cat. No.	Price
S01904	\$34.00/Ea

Diversified Spaces[™] **Hydroponics Growing System**

The perfect way to learn how plants can grow without soil and helps teach the basic concepts for the plants needs, nutrition, food production, recycling, agricultural technology, and soil-less growing environments.

- Mobile hydroponics center includes grow lights and water pump
- Adjustable timers enable plant growth with the perfect amount of water and sunlight
- Construction allows easy access for students and teachers
- Made of solid maple and maple veneers



- Growing system is completed with a submersible pump, an air pump, an air stone, timers (2), hoses and ten 6 inch net pots
- Unit moves easily on 4 inch locking, leveling casters
- Containment plant tray dimensions (W x D x H): 42 x 27.5 x 8 in.
- Overall dimensions (W x D x H): 52 x 28 x 78 in.

Cat. No.	Price
S14215	\$2,411.00/Ea

Eisco™ Quadrat Metal Frame

With 25 squares.

• Made from solid metal







SHIPPING ALERT: Because these items are living or perishable materials a specified delivery date is required.

Orders must be placed through Customer Service at 1-800-766-7000.



Growth Chamber

Versatile, programmable growth chamber is perfect for plants. animals and cultures.

 ON/OFF indicator lights show chamber status at a glance

Includes:

- · One shelf, four fluorescent lights, and manual
- Three incandescent lamps
- · Two interior electrical outlets
- · Heating cable with temperature sensor
- Watertight removable plastic bottom
- Dual-function panel hygrometer/thermometer
- · Chamber volume: 14.2 cu. ft.
- · Made of rugged steel construction finished with white enamel inside and brown enamel outside
- · Operates on 120VAC 800w
- Bulbs/lights are required but not included

Single control panel features:

- · Main power switch
- Lamp switch Thermostat

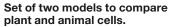
- 24-hour timer/programmer
- · Switches for heater and fan

Cat. No.	Description	Price
S53096MF	Growth chamber	\$9,199.00/Ea
S530961MF	Stand for growth chamber	\$2,023.00/Ea

Biology

Cell Biology

Eisco™ Plant and Animal Cell Comparison Model



- · Enables teaching of plant and animal cell structures
- · Numbered with English key card
- · Mounted on stand
- Dimensions (L x W x H): 9.5 x 6.7 x 7 in. (24 x 17 x 18 cm)

Cat. No.	Price
S15637	\$145.00/Ea





Animal Cell Model

Shows form and structure of a typical animal cell as viewed from an electron microscope.

- · All important organelles are raised and displayed in color
- Dimensions: 8.25 x 4.33 x 12.25 in. (21 x 11 x 31 cm)

Displays:

- Nucleus
- Mitochondrion
- Smooth endoplasmic reticulum (ER)
- Rough endoplasmic reticulum (ER)
- · Basal membrane
- · Collagen fibers
- · Golgi apparatus
- Microvilli
- Lysosome

Cat. No.	Price
S96170	\$577.00/Ea

Simple Cell 3D Model Kits

Assemble and use 3D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- · Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups



- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81462	Simple Bacterial Cell	\$46.50/Ea
S81453	Euglena	\$46.50/Ea
S81459	Paramecium	\$46.50/Ea





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3D Cell Biology Model Kits

Assemble and use 3D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive
 Teacher Resource Guide outlining
 opportunities for your students to
 engage, explore, explain, extend, and
 evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81443	Cell Membranes	\$40.75/Ea
S81444	Cell Nucleus	\$46.50/Ea
S81464	Stem Cells	\$46.50/Ea

Mitosis and Meiosis 3D Model Kit

Assemble and use 3D models to visualize and investigate key science processes.



- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81457	\$46.50/Ea

Mitosis and Meiosis Models

Models display the stages of mitosis or meiosis in a typical mammal cell at an enlargement of approximately 10,000 times.

- The three-dimensional relief models are painted according to the usual coloring methods of microscopy
- Makes the process of cell division easy to understand
- The cell organelles are shown as if opened up in the lower part of the models



- Later anaphase
- Telophase
- Cytokinesis

Stages of Mitosis (S99598)

- Interphase
- Prophase
- Early prometaphase
- Later prometaphase
- Metaphase

Stages of Meiosis (S99599)

- Interphase (stage of G1-phase)
- Prophase I (leptotene)
- Prophase I (zygotene and pachytene)
- Prophase I (diplotene)
- Prophase I (diakinesis)
- Metaphase I
- Anaphase I
- Telophase I, cytokinesis I, interkinesis, prophase II and metaphase II
- Anaphase II
- Telophase II and cytokinesis II

Cat. No.	Description	Price
S99598	Mitosis Model; 60 x 40 x 6 cm; 1.5 kg	\$758.00/Ea
S99599	Meiosis Model; 60 x 40 x 6 cm; 1.7 kg	\$835.00/Ea

• The models are equipped with magnets on the back so that they

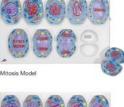
can be easily arranged on a classroom magnetic board

Eisco[™] Animal Cell Division – Mitosis Model

Displays the stages of mitotic cell division.

- · Set of 10 models
- Depicts resting cell, early prophase, prophase, late prophase, metaphase, anaphase, late anaphase, telophase and daughter cells
- Size (L x W x H): approx. 19.6 x 17.7 x 1.5 in. (50 x 45 x 4 cm)

Cat. No.	Price
S15641	\$199.00/Ea







United Scientific[™] Mitosis Manipulatives Kit



Instructive and reusable.

Manipulatives make it easier to teach an abstract concept like mitosis in a science classroom.

- Teacher demonstration model includes large pieces with magnets attached
- Five sets of smaller manipulatives for use by students working in groups
- Reusable

Cat. No.	Price
\$90331	\$522.00/Ea



Visit **fisheredu.com/HDSubscribe** to sign up for this free email.



Mitosis and Meiosis: Cell Growth and Division Flip Charts with Online Multimedia Lessons

These multimedia kits can help students master key life sciences concepts.



- The Multimedia Lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices.
- Flip Chart Set features 10 Laminated, Double-Sided Charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a teacher's guide with copymaster activities and review questions
- Spiral-bound and mounted on a sturdy easel for years of use, the flip chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features Animated, Narrated Tutorials; Interactive Exercises and Activities; virtual lab investigations; illustrated, narrated glossary; visual resource library; and an inquiry-based student activity guide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any interactive whiteboard
- Mitosis Flip Chart (S81103) covers: Comparing Plant and Animal Cells, Cell Cycle; Chromosomes, DNA Replication, Mitosis in Plant and Animal Cells, Comparing Mitosis and Cytokinesis, and Mitosis and Mutations
- Meiosis Flip Chart (S81106) covers: Sexual Reproduction, DNA Replication, Stages of Meiosis I and II, Crossing Over, and Comparing Mitosis and Meiosis

Cat. No.	Description	Price
S81103	Mitosis	\$60.50/Ea
S81106	Meiosis	\$60.50/Ea



61

United Scientific[™] Meiosis Manipulatives Kit

Makes the complex biological process of meiosis come alive in your classroom.

- Teacher demonstration models with 30 large chromosomes arranged in five colorful sets
- A Sun
- Each set consists of a maternal and paternal homolog, and four sister chromatids
- Alleles and parental lineage are clearly identified
- The fifth set has removable alleles for demonstrating cross-over
- Student models consist of smaller sets of chromosomes
- · Kit contents are reusable
- Dimensions: 21 x 19 x 5 in. (53.3 x 48.3 x 12.7 cm)

Cat. No.	Price
S05932	\$485.00/Ea

AP LAB 7: Cell Division — Mitosis and Meiosis

Students identify and differentiate the various stages in mitosis and meiosis.

- Onion root tips are stained to identify the various stages and duration of mitosis
- Meiosis and Crossing Over in Sordaria is also demonstrated
- Students can also analyze mechanisms involved with the loss of cell cycle control in cancer



Cells Flip Chart with Online Multimedia Lesson

This multimedia kit can help students master key life sciences concepts.

 Provides graphical instruction and write-on/wipe-off activities with one-year online access to a corresponding multimedia lesson featuring in-depth, interactive coverage of the concept



- The multimedia lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices.
- Flip chart set features 10 laminated, double-sided charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a teacher's guide with activities and review questions
- Spiral-bound and mounted on a sturdy easel for years of use, the flip chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features animated, narrated tutorials; interactive exercises and activities; virtual lab investigations; illustrated, narrated glossary; visual resource library; and an inquiry-based student activity quide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any interactive whitehoard
- Covers: Discovering Cells; Animal and Plant Cell Organelles;
 Cell Energy; Photosynthesis; Comparing Plant and Animal Cells;
 Organization of Cells; Specialized Cells; and Single-Cell Organisms

 Cat. No.
 Price

 \$81102
 \$70.25/Ea



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- Patient Care Training

Allied Health

Train for specialized fields, like audiology and laboratory science.

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- Diagnostic Education
- Health Science Specialties
- Other Specialty Training

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Eucaryotic Cell Biology Experiment Kit

Familiarizes students with a simple, robust cell culture system.

- Used in life science research and biotechnology laboratories
- Provides student with a skill set desired in both academic research and industry
- · Contains live materials

Time requirements:

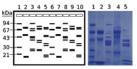
- Basic cell culture techniques 30 minutes
- Examination of insect cell cultures 30 minutes
- Maintenance of insect cell cultures 1 hour
- Cell viability using trypan blue 30 minutes
- · Differential staining using Giemsa stain overnight

Cat. No.	Price
S42877	\$258.00/Ea

Cell Types in the Brain Kit

The brain is an incredibly complex organ that uses a network of cells working together to function and perform everyday activities. This

experiment helps students to examine the differences between cell types in the brain based on their profiles of proteins.



- Storage: some components require freezer storage
- For 6 groups sharing 3 polyacrylamide gels

Cat. No.	Price
S27561	\$98.00/Ea

Morphology of Cancer Cells

This experiment allows students to see the differences between normal and cancer cells in both their growth, and cell types.

Visually compare the morphology of various normal and transformed mammalian cells by microscopic examination. Similar procedures are used to examine biopsy specimens.

Analysis and Comparison of Various Mammalian Cell Types

 Fixes and stains four different cell types for direct microscopic comparison to show the differences between normal and transformed cell cultures

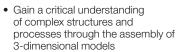
Morphology of cancer cells

 Compares the contact inhibition of normal cells to the increased growth of cancer cell colonies

Cat. No.	Price
S67199	\$162.00/Ea

Osmosis and Diffusion 3D Model Kit

Assemble and use 3D models to visualize and investigate key science processes.





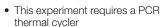
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive teacher resource guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81458	\$46.50/Ea

Detecting COVID-19 Using Reverse-Transcription PCR (RT-PCR)



In this simulated RT-PCR experiment, students will explore the diagnostic test used worldwide to diagnose and monitor the spread of COVID-19.





- Time required: Set up 30 minutes, PCR - 2 hours or overnight, Electrophoresis - 45 minutes
- Instructions, PCR EdvoBeads[™], LyphoPrimer[™] Mix, EdvoQuick[™] DNA Ladder, DNA Templates, TE Buffer, UltraSpec-Agarose[™], TBE Electrophoresis Buffer powder, SYBR[™] Safe Stain, FlashBlue[™] DNA Stain, Microcentrifuge & PCR Tubes
- Some components require freezer storage upon receipt

DISCLAIMERS: Please note, this experiment is a DNA simulation of reverse transcription PCR and is intended solely for educational purposes. There are no viral or human DNA products included in this experiment. The experiment will not perform viral RNA testing for SARS-CoV-2.

Cat. No.	Price
S52005	\$192.00/Ea





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Fisher Science Education™ **Gram Stain Kit**

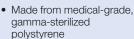
Bacteria stain set for Gram negative and positive results.

- Uses 1% Gentian violet solution, Gram's iodine solution, 95% ethanol (decolorizer), and 1% safranin solution
- · Gram's iodine solution packaged in PVC bottle
- Maximum performance over 12-month shelf life ensured
- This product is an educational grade chemical no C of A is available

Cat. No.	Price
S25344	\$36.00/Ea

fisherbrand **Petri Dishes** with Clear Lid

Feature a new and improved design and packaging.

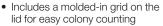


- Ventilation ribs on the lid allow for air circulation
- Manufactured in a state-of-the-art cleanroom facility
- Packaging features a UPS[™] shippable outer carton to prevent
- Product sleeve is made from a strong polymer to prevent bag
- Dishes packed in easy-open product sleeve with tear notch
- Product sleeves are vacuum sealed to prevent scuffing and other damage to dishes
- Sold in cases of 500

Cat. No.	Dimensions (L x W)	Price
S33580A	100 x 15mm	\$160.00/Cs
S35839	60 x 15 mm	\$415.00/Cs

United Scientific™ Petri Dishes, **Polystyrene**

Disposable polystyrene petri dishes offer optical clarity and strength at economical prices.



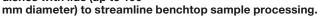
Sterile

Cat. No.	Size	Well Count	Quantity	Price
S89632	65 x 15 mm	One Compartment	650/Case	\$131.00/Cs
S89633	150 x 15 mm	One Compartment	500/Case	\$133.00/Cs
S89634	90 x 15 mm	Two Compartments	180/Case	\$134.00/Cs



Bel-Art[™] Contact Plate / Petri Dish Rack

Safely transports, incubates and stores up to 60 contact plates with lids (up to 72 mm diameter) or 42 Petri dishes with lids (up to 100



- Compatible with RODAC™ and BD™ contact plates or 100 mm Petri dishes and lids
- Rack is configured in 6 columns with bottom-access slots for easy. safe removal of items
- Center divider has a built-in handle with ample space for labeling
- Up to four racks can be stacked together and interlocked to prevent accidental knock over
- A small, stable base preserves bench top space
- Made from white polypropylene that is steam autoclavable at 121°C (250°F)
- · Racks are shipped flat and are easily assembled

Cat. No.	Description	Dimensions (L x W x H)	Holds	Price
S43329	Contact plates with lids (72 mm Diameter)	10.47 x 6.49 x 7 in. (26.6 x 16.5 x 17.8 cm)	60	\$115.00/Ea
S90138	Petri dishes with lids (100 mm Diameter)	13 x 8.25 x 7 in. (33 x 21 x 17.8 cm)	42 petri dishes	\$137.00/Ea

Micro and Molecular Biology

Coronavirus 3D Model Kits

Assemble and use 3D models to visualize and investigate key science processes.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- · Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in
- small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81447	Coronavirus Antibody Test	\$46.50/Ea
S81467	Coronavirus COVID-19 Structure	\$46.50/Ea
S81468	Coronavirus DNA Test	\$46.50/Ea
S81448	Coronavirus Cycle	\$46.50/Ea





Antibodies 3D Model Kit

Assemble and use 3D models to visualize and investigate key science structures.

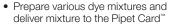
- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive
 Teacher Resource Guide outlining
 opportunities for your students to
 engage, explore, explain, extend, and
 evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Cat. No.	Price
\$81469	\$46.50/Ea
	ψ 10100/E

Micropipetting Basics

Pipetting is a critical skill necessary for the accuracy that is essential in scientific experiments.





· Practice new skills by loading samples onto an agarose gel

Cat. No.	Price
S68632	\$88.00/Ea

Pipetting By Numbers: STEAM Pipetting Practice Kit

Helps students master the fundamental biotechnology technique of micropipetting while creating a colorful, science-themed classroom poster with their own artwork.

- Storage: room temperature
- Completion time: 45 minutes
- For 10 lab groups

Cat. No.	Price
S27559	\$85.00/Ea



Fisher Science Education™ Bacteria Culture Kit

Complete kit is ideal for middle and high school students.

Kit includes:

- Three polystyrene petri dishes, 100 x 15 mm
- Nutrient agar powder to create 120 cc of Agar
- Plastic stir rod to aid in mixing, 6 in. (15.2 cm)
- Instruction sheet for preparing agar

Note: Cultures are not included.



Student Bacteria Experiment Kit

Allows groups of students to culture their own bacteria without an incubator.

Melt the media in a microwave, pour it into media plates, and test for growth in four popular experiments.

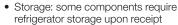
Experiments:

- Test-common use items such as bathroom handles, doorknobs and water fountains
- Clean hand/dirty hand test: How many bacteria does soap eliminate?
- Clean mouth/dirty mouth test: How many bacteria does mouthwash eliminate?
- Which mouth contains more bacteria: a human's or a dog's?

Cat. No.	Price
S68775	\$62.50/Ea

Identification and Characterization of Bacteria Kit

Gram staining is a quick, effective, and medically-relevant identification test that is essential for bacterial classification. Students will use Gram staining to examine the size, shape, arrangement, and gram status (+/-) of Escherichia coli, Bacillus subtilis, and Micrococcus luteus.



- Completion time: 90 minutes
- For 8 groups







How Clean is Clean? Testing the Effectiveness of Antibacterial Cleaners Kit

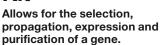
Students will do two experiments to explore the properties of bacterial growth. They will determine a bacteria's ability to resist the antibiotic ampicillin, then test different household cleaners to determine which one is the most effective at preventing bacterial growth.



- Storage: some components require refrigerator storage upon receipt
- Complete in 2 lab periods (24 hours)
- For 10 groups

Cat. No.	Price
S27556	\$99.00/Ea

Rainbow Transformation Kit



- For 10 lab groups
- Set up and plating 50 minutes
- · Overnight incubation
- Transformation efficiency 15 minutes

Cat. No.	Price
S21224	\$172.00/Ea

Transformation of E. coli with pGAL™ (Blue Colony)

Presence of IPTG is not required.

- Students will develop an understanding of bacterial transformation by plasmid DNA by introducing an opportunity to observe an acquired phenotypic trait of the transformed bacterial cells
- The presence of blue bacterial colonies visually demonstrates the expression of a specific gene for the Lac+ phenotype

Cat. No.	Price
S11293	\$172.00/Ea



Helps students develop an understanding of bacterial transformation by plasmid DNA.

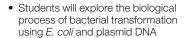
- Enables students to observe the acquired phenotypic trait of green or blue fluorescent protein exhibited by transformed bacterial cells
- Transformants acquire green (GFP)
 or blue (BFP) fluorescent protein genes contained in two different
 plasmids; the GFP gene was mutated to produce the blue protein
- Transformed cells are selected based on antibiotic resistance
- Colonies which express GFP or BFP protein are visibly green and pale blue and will fluoresce when exposed to long-wave UV light

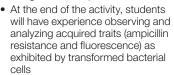
⚠ ALERTS: Transformation experiments contain antibiotics which are used for the selection of transformed bacteria. Students who have allergies to antibiotics such as penicillin, ampicillin, kanamycin or tetracycine should not participate in this experiment. All components intended for educational research only. They are not to be used for diagnostic or drug purposes, nor administered to or consumed by humans or animals.

Cat. No.	Price
S68653	\$172.00/Ea

Transformation of *E. coli* with Green Fluorescent Protein (GFP)

GFP gene was isolated and cloned from the jellyfish *Aequorea victoria*.







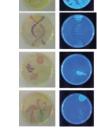
Cat. No.	Price
S68654	\$147.00/Ea



Living Art: Adding STEAM to Transformations Kit

Students will harness the color-producing power of transformed bacteria to create works of living microbial art.

- Storage: some components require refrigerator and freezer storage upon receipt
- This kit is intended for use in conjunction with Transformation Kits \$68653, \$68654, \$21224 or \$05657
- Time required: 60 minutes (plus two incubations)
- For 25 students



Cat. No.	Price
S27566	\$75.00/Ea

Scents and Sense-ability Kit

Allows students to understand that olfactory receptors respond to smells and transmit them as signals to the brain. Students will also be able to understand the principles



of thin layer chromatography and how they apply to the separation of olfactory compounds.

- Storage: room temperature
- For 10 lab groups

Cat. No.	Price
S27560	\$105.00/Ea

Microbiology Science Fair Kit

Enables students to grow their own bacteria by swabbing various surfaces in the classroom.

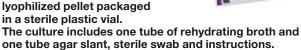
- Hands-on, easy-to-use kit
- Provides opportunity to investigate all phases of growing bacteria
- Includes: 2 g of nutrient agar (makes 100 mL 2% agar), six petri dishes and six sterile swabs



Cat. No.	Price
S07805	\$20.75/Ea

Freeze Dried Bacteria Cultures

The bacteria culture is freeze dried into a lyophilized pellet packaged in a sterile plastic vial.



- · Lyophilized pellet in vial
- Available for five different types of bacteria

Cat. No.	Product Type	Price
S07806	Bacillus subtilis	\$18.50/Ea
S07807	E.coli	\$18.50/Ea
S07808	Micrococcus luteus	\$18.50/Ea
S07809	Serratia marcescens	\$18.50/Ea

Looped Wire Inoculating Needle

Inoculating Needle, Looped End, Nichrome Wire

Nichrome Wire Inoculating Needle with Looped End and 6 inch length metal handle

Cat. No.	Price
S24602	\$7.90/Ea

Inoculating Needles with Nichrome Wire

For dissection experiments.

- Nicrome wire 24 gauge x 5 cm
- Looped end in a 15 cm glass handle

Cat. No.	Price
S24571	\$7.90/Ea







fisherbrand Nichrome/ **Aluminum Inoculating Loops**

Inoculating loops are used to introduce microorganisms into a culture medium.

- Fisherbrand Nichrome/ Aluminum Inoculating Loops are
- provided with a standard aluminum handle
- · Ideal for selecting, inoculating, or transferring microbiological samples
- Loops slide along agar surfaces without cutting or tearing material/sample
- · Cools rapidly after sterilization
- Handle length: 8 in. (203 mm)
- Passivated
- Autoclavable up to 135°C; can be sterilized by EtO/gamma radiation
- Latex-free
- Produced under ISO 9002, GMP, cGMP guidelines
- Sold in packs of 12

Cat. No.	Price
\$35887	\$114.00/Pk

IncuCount **Automatic** Colony Counter 150



Counts colonies and antibiotic reactions in a matter of seconds.

Includes:

- Easy-to-use 10 in. (25.4 cm) Android tablet
- · Intuitive software
- Auto focus with override capabilities

Specifications:

- · CPU: Android based operating system
- Lights: high intensity LED (top and bottom)
- Petri dish capacity: up to 100 mm, including 3M petri film
- · Camera: high quality HD digital camera, Carl Zeiss optics
- Power requirements: 100-240 VAC 50/60Hz, 1.5 Amp
- Compatible with FDA 21 CFR part 11, export as PDF
- · Auto focus with override capabilities

CERTIFICATION: UL approved LED lights, power supply, and camera **DISCLAIMERS:** Note: For Research use only. Not for any human therapeutic or diagnostic use.

Cat. No.	Price
S20821	\$5,185.00/Ea

$100 \times 15 \text{ mm}$ **Prepared Media Plates**

An industry standard for nearly a century, this excellent prepared media supports a wide range of microorganisms.



- · Each plate has an imprinted lot
- Supports a broad spectrum of microorganisms
- Comes in a convenient 10-pack of sterile, ready-to-use plates

Note: C of A unavailable for this item Includes: Prepared Media booklet

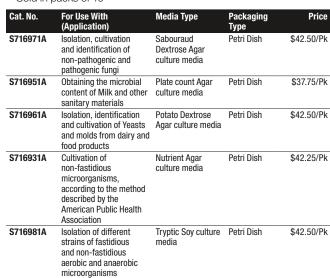
⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Description	Price
S21800ND	Nutrient Agar	\$28.25/Pk
S21801ND	Tryptic Soy Agar	\$28.25/Pk
S21807ND	MacConkey Agar	\$28.00/Pk
S21802ND	Mannitol Salt Agar	\$31.00/Pk

Prepared Culture Media in Plates

Labeled with product name, expiration date and lot number.

- Sterile plates are ready for immediate
- Supplied in disposable plastic petri dishes, 100 mm outside diameter x 15 mm deep
- · Packed in clear, heat-sealed cellophane bags
- · Sold in packs of 10





BioPaddles[™] Dual-Agar Paddles for Environmental Education

Contain microbe-specific media enclosed in a sterile vial.

Flexible, ready-to-use paddles identify and quantify microbes in air, soil, water, or on any surface.

- Longer shelf life than traditional Petri dishes
- No refrigeration required
- · No need for inoculating loops or Bunsen burners
- · Requires simple incubation and a magnifier
- Unique design enhances colony morphology characterization
- Ten paddles per box

Nutrient Agar: For routine culture of non-fastidious bacteria.

Sabouraud Dextrose Agar: For selective cultivation of fungi (yeasts and molds).

Tryptic Soy (TSA)/Rose Bengal (RB) Agar: For cultivation of a wide variety of microorganisms (TSA) and selective isolation of yeasts and molds (RB).

Nutrient TTC/MacConkey: TTC: For field sampling cultivation and enumeration of coliform bacteria total coliform count; Gram (-) bacterial colonies appear as red dots; Gram (+) bacteria are usually inhibited. MAC: Medium gives improved differentiation between coliforms and nonlactose fermenting organisms; Gram (+) cocci are usually inhibited.

Cat. No.	For Use With (Application)	Price
S04344	Environmental education: cultivation of a wide variety of non-fastidious bacteria	\$60.50/Ea
S04345	Environmental education: selective isolation of Fungi (Yeasts and molds) (SAB)	\$60.50/Ea
S04346	Environmental education: cultivation of a wide variety of aerobic and anaerobic microorganisms (TSA), selective enumeration and cultivation of Yeasts, molds and Actinomycetes from food and other surfaces (RB)	\$60.50/Ea
S04347	Environmental education: isolation and differentiation of gram (-) enteric bacilli, Coliform testing/recovery of stressed Coliforms	\$60.50/Ea

BioPaddle[™] Total Coliform Activity

For fast and reliable cultivation and enumeration of coliform bacteria.

- Contains 10 BioPaddles with Nutrient-TTC/MacConkey Agar for field sampling cultivation and enumeration of coliform bacteria Total Coliform Count (TCC)
- Gram (-) bacteria colonies appear as red dots; Gram (+) bacteria and Gram (+) cocci are usually inhibited
- Medium gives improved differentiation between coliforms and nonlactose fermenting organisms

Cat. No.	Description	Price
S04348	Agar paddle; Nutrient-TTC/MacConkey	\$81.00/Ea



100 × 15 mm Prepared Media Plates

An industry standard for nearly a century, this excellent prepared media supports a wide range of microorganisms.

- Each plate has an imprinted lot number and expiration date to ensure quality and viability
- Supports a broad spectrum of microorganisms
- Comes in a convenient 10-pack of sterile, ready-to-use plates

Note: C of A unavailable for this item **Includes:** *Prepared Media* booklet

Cat. No.	Description	Price
S42831	Eosin Methylene Blue Agar	\$32.00/Ea

Nutrient Broth, Prepared Media Tubes

Sterile, ready-to-use media.

- No autoclave needed. Each tube of prepared media is carefully tested for sterility and to verify its ability to support the characteristic growth of appropriate organisms.
- Variety of options-bottles, plates, tubes, and dehydrated media
- Sold in packs of 10

Note: C of A unavailable for this item

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S21803ND	\$28.25/Pk

Nutrient Agar Slant, Prepared Media Tubes

Sterile, ready-to-use media.

- No autoclave needed. Each tube of prepared media is carefully tested for sterility and to verify its ability to support the characteristic growth of appropriate organisms.
- Variety of options-bottles, plates, tubes, and dehydrated media
- Sold in packs of 10

Note: C of A unavailable for this item

 $ilde{\mathbb{A}}$ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S21811ND	\$28.00/Pk



SHIPPING ALERT: Because these items are living or perishable materials a specified delivery date is required.

Orders must be placed through Customer Service at 1-800-766-7000.





Phenol Red Broth Base Lactose with Durham Tube, Prepared Media Tubes

Sterile, ready-to-use media.

- No autoclave needed. Each tube of prepared media is carefully tested for sterility and to verify its ability to support the characteristic growth of appropriate organisms.
- Variety of options-bottles, plates, tubes, and dehydrated media
- Free of antibiotics, pesticides, and other chemicals
- Sold in packs of 10

Note: C of A unavailable for this item

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S21804ND	\$42.75/Pk

Phenol Red Broth Base Dextrose with Durham Tube, Prepared Media Tubes



Sterile, ready-to-use media.

No autoclave needed. Each tube of prepared media is carefully tested for sterility and to verify its ability to support the characteristic growth of appropriate organisms.

- · Variety of options-bottles, plates, tubes, and dehydrated media
- · Free of antibiotics, pesticides, and other chemicals
- Sold in packs of 10

Note: C of A unavailable for this item

⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S21809ND	\$35.25/Pk

Sterile Prepared Agar and Broth

High quality microbiological media at an economical price.

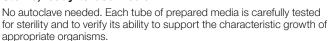
· Packaged in a case of 24





Phenol Red Broth Base Sucrose with Durham Tube, Prepared Media Tubes

Sterile, ready-to-use media.



- Variety of options-bottles, plates, tubes, and dehydrated media
- Free of antibiotics, pesticides, and other chemicals
- Sold in packs of 10

Note: C of A unavailable for this item

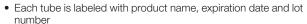
⚠ ALERTS: There is a SHIPPING ALERT for this product group, see box below.

Cat. No.	Price
S21810ND	\$41.00/Pk

Prepared Culture Media in Tubes

Ready-to-use media prepared in disposable borosilicate glass tubes.







Cat. No.	Media Type	Quantity	Price
S716932A	Nutrient Agar, Tube	20 Tubes	\$101.00/Pk
S716942A	Nutrient Broth	20 Tubes	\$100.00/Pk
S716992A	Tryptic Soy Broth	20 Tubes	\$101.00/Pk
S716933A	Nutrient Agar, Slant	20 Tubes	\$92.00/Pk

Nutrient Agar

High quality microbiological media at an economical price

· Packaged in a case of 24

Cat. No.	Description	Volume	Price
S29561	Nutrient Agar	200 mL	\$92.00/Ea
S29562	Sterile Prepared Agar and Broth	125 mL	\$93.00/Ea







SHIPPING ALERT: Because these items are living or perishable materials a specified delivery date is required.

Orders must be placed through Customer Service at 1-800-766-7000.



Dehydrated Culture Media and Ingredients

Essential agents for preparing culture media.

Successful bacteriological work begins with high-quality media. Agar, a solidifying agent,

is an essential component of many media. So when you are planning your class projects, be sure to order ample supplies of agar, too.

Product Type	Quantity	Price
lutrient Agar	454 g	\$176.00/Ea
Agar	500 g	\$190.00/Ea
Agar	100 g	\$39.00/Ea
lutrient Agar	113 g	\$76.00/Ea
ryptic Soy Agar	454 g	\$137.00/Ea
lutrient Agar 1.5%	454 g	\$108.00/Ea
lutrient Broth	454 g	\$179.00/Ea
Potato Dextrose Agar	454 g	\$149.00/Ea
Sabouraud Dextrose Agar	454 g	\$72.75/Ea
	utrient Agar gar gar utrient Agar ryptic Soy Agar utrient Agar 1.5% utrient Broth otato Dextrose Agar	utrient Agar 454 g gar 500 g gar 100 g utrient Agar 113 g ryptic Soy Agar 454 g utrient Agar 1.5% 454 g utrient Broth 454 g otato Dextrose Agar 454 g

Agar Powder

Nutrient Agar is used as a culture medium to cultivate various household bacteria.

- This bag of dry nutrient agar will make 500 mL of agar (1/2 liter)
- Detailed agar preparation instructions included
- This is enough agar for twenty 90 mm petri dishes
- Age 7+

Cat. No.	Price
S81678	\$15.50/Ea

Biochemistry

Biochemistry Molecular Model Kit

Compact/semi-space-filling models feature the "mushroom style" hydrogen atom-link part.

257 atom parts cover a wide range of biochemical structures including amino acids, monosaccharides, fatty acids, glycerol, steroids, purines, pyrimidines, peptides, disaccharides, nucleosides,



nucleotides, coenzymes, proteins, polysaccharides and nucleic acids.

Cat. No.	Price
S68292	\$136.00/Ea

Biochemistry Kits

Kits provide teachers with the resources to develop course material, and experiments of varying complexities.

Biochemistry I:

- Introduce students to the chemistry of living things
- Features five classic biochemistry experiments
- Use Benedicts reagent, Biuret, Sudan IV, Iodine to test for proteins, carbohydrates, and lipids
- Use pepsin to digest protein
- Test the activity of salivary amylase (both in vitro and in vivo)
- Develop a technique for determining ascorbic acid concentration to use to evaluate Vitamin C levels
- · Determine the alkalinity and acidity of foods
- Ideal for students in biology, general science, nutritional science, or biochemistry

Biochemistry II:

- Includes an entire course worth of classic biochemistry experiments presented at a more in-depth level than Biochemistry I
- · Learn how to measure the pH of foods, saliva, and soil
- Learn classic detection methods for sugars, starch, fat, and protein
- Pepsin digestion of protein
- · Amino acid detection using ninhydrin
- Explore the effects of varying conditions on salivary amylase activity
- · Model how digestion works
- Determine ascorbic acid concentration
- Explore dyes and plant pigments using chromatography with different solvents
- Ideal for supporting higher level biology, nutritional science, advanced general science, or biochemistry courses

Product Type	Price
Biochemistry I	\$317.00/Ea
Biochemistry II	\$370.00/Ea
	Product Type Biochemistry I Biochemistry II



Small Group Learning: Chromatography Of Amino Acids

In this activity, students will perform a paper chromatography experiment on three known amino acids, and then use their results to identify the components of an unknown amino acid mixture.



Amino acids are the fundamental building blocks of all proteins. Scientists often need to identify the amino acid contained in a protein. One method for separating and identifying individual amino acids is paper chromatography.

- · Kit contains enough material for 5 groups
- Teacher's Manual and student study guide copymasters are included
- Aligned to the Next Generation Science Standards (NGSS)
- Disciplinary core ideas: PS1A; PS1B
- Performance expectations: MS-PS1-2; HS-PS1-3
- Cross cutting concepts: Patterns
- Engineering practices: planning and carrying out investigations; analyzing and interpreting data; scientific knowledge is based on empirical evidence

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Cat. No.	Price
S40730	\$23.25/Ea

Enzymes 3D Model Kit

Assemble and use 3D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups



- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81452	\$46.50/Ea

Enzymes and the Process of Digestion

Understanding the vital role that enzymes play in the process of human digestion.

With this activity, students expose three nutrients (carbohydrates, proteins and lipids) to different digestive enzymes. These samples tested against nutrients to which no enzymes are added to determine if the enzymes were



effective in digesting the compounds. Upon completion, students understand the importance of the digestive system and the vital role enzymes play in releasing nutrients from food and converting them to a form usable by the body.

Kit includes enough material for 15 groups:

- Pancreatin (powder, 5 g)
- Bile salts (powder, 0.25 g)
- Albumin egg (powder, 2.5 g)
- Soluble starch (2.5 g)
- Pepsin 1:10,000 (1 g)
- Amylase bacteriological powder (25 g)
- 0.1M sodium hydroxide (25 mL)
- 0.1M hydrochloric acid (25 mL)
- Biuret for protein test (25 mL)
- 1% phenolphthalein (25 mL)
- Dilute lugols solution (25 mL)
- Pure olive oil (25 mL)
- 10 plastic pipets

COMPLIANCE: DOT: Small quantity exemption 173.3. Package conforms to 49CFR 173.4.

Cat. No.	Price
S05800*	\$83.00/Ea

Advanced Enzymology Kit

Introduces students to wide variety of enzyme kinetics.

Students use a spectrophotometer to study aspects of enzyme kinetics. They determine the reaction rate of Invertase when subjected to varied substrate concentrations, competitive and non-competitive inhibitors, changes in pH, and changes in temperature

- in temperature.
 Reducing sugars are measured with chemical DNS, which creates distinctive color change
- Grades 11-14
- Class size: 24 students
- Includes all necessary chemicals and reply card for Invertase enzyme and glucose solutions to be shipped separately upon request – reply card items are only shipped within continental United States

⚠ ALERTS: CHOKING HAZARD. Small parts. Not for children under 3 yrs.

Cat. No.	Price
S06758	\$840.00/Ea

Custom-Built Kits for Your Classroom



- Outline the Project
- Align on Production
- Review Your Curriculum
- Place Your Order
- Develop a Plan
- 6 Await Delivery

Visit **fisheredu.com/customkitting** to learn more.



MyPlate Food and Nutrition Curriculum Sets

Master key concepts of food, nutrition, and a healthy lifestyle.

Flip Chart Sets (S81094, S81085)

- The colorfully illustrated pages provide students with an engaging means to understand the food groups, and the importance of making healthy lifestyle choices
- Each page is laminated, double-sided and spiral-bound on a sturdy, free-standing easel
- One side features self-directed readings and easy-to-follow graphical explanations, while the reverse provides write-on/wipe-off exercises for review and reinforcement
- Includes a student activity guide with copy-masters of charts and review questions
- Set includes the following 10 charts: Food Nutrients, Choose MyPlate, Fruits Food Group, Vegetables Food Group, Protein Food Group, Grains Food Group, Dairy Food Group, Oils and Fat, Nutrition Facts Labels, Making Healthy Choices

Bulletin Board Chart Sets (S81099, S81091)

- Each of the charts is laminated and double-sided
- One side features a graphic overview of the concept and easy-to-follow, illustrated explanations
- The reverse side includes write-on/wipe-off activities for student review and reinforcement
- Set includes the following 8 charts: Food Nutrients, Choose MyPlate, Fruits Food Group, Vegetables Food Group, Protein Food Group, Grains Food Group, Dairy Food Group, Oils and Fat

Student Learning Guides (S81100, S81092, S81101, S81093)

 Includes grade-appropriate self-directed readings, easy-to-follow illustrated explanations, pause and review questions, interactive activities, key vocabulary review and assessment questions Covers food, nutrients, food groups, understanding nutrition facts labels, and making healthy choices

Visual Learning Guides Collection Sets (\$81098, \$81090)

- Collection consists of 10 laminated, write-on/ wipe-off Guides
- Each guide covers a different topic and includes 4 panels featuring an illustrated overview of the concept, labeling and review exercises, vocabulary activities, and assessment and review questions
- Includes Teacher Guide with instructions for successful classroom integration
- Comprehensive coverage of: Food Nutrients, Choose MyPlate, Fruits Food Group, Vegetables Food Group, Protein Food Group, Grains Food Group, Dairy Food Group, Oils and Fat, Healthy Snacking, Making Healthy Choices

MyPlate Learning Centers (S81096, S81087)

- Designed for either teacher-directed instruction or independent use by groups of up to 4 students
- Includes four Visual Learning Guides all focused on this key topic – for direct instruction through an easy-to-follow topic overview
- Write-on/wipe-off activities
- · Guiding, assessment review questions
- A Curriculum Mastery Game for small group review, featuring one set of 30 illustrated, self-checking question cards, a laminated game board, materials for four players, and student instructions
- Ideal for use in the classroom, after-school programs, or even at home
- Provides materials for up to 4 students, takes only minutes to set up
- Stores in the zippered pouch provided for years of use

Cat. No.	Description	Title	Grades	Price
S81085	Flip Chart Sets	Food Groups	6 to 10	\$66.50/Ea
S81094	Flip Chart Sets	Food Groups	3 to 5	\$66.50/Ea
S81091	Bulletin Board Chart Sets of 8	Food & Nutrition	6 to 10	\$44.75/Ea
S81099	Bulletin Board Chart Sets of 8	Food & Nutrition	3 to 5	\$44.75/Ea
S81092	Student Learning Guides	Food & Nutrition	6 to 10	\$20.25/Ea
S81093	Student Learning Guides, Set of 10	Food & Nutrition	6 to 10	\$147.00/Ea
S81100	Student Learning Guides	Food & Nutrition	3 to 5	\$20.25/Ea
S81101	Student Learning Guides, Set of 10	Food & Nutrition	3 to 5	\$147.00/Ea
S81090	Visual Learning Guides Collection Set of 10	Food & Nutrition	6 to 10	\$66.25/Ea
S81098	Visual Learning Guides Collection Set of 10	Food & Nutrition	3 to 5	\$66.25/Ea
S81096	Learning Center	Choose MyPlate	3 to 5	\$47.50/Ea
S81087	Learning Center	Choose MyPlate	6 to 10	\$47.50/Ea



Food Nutrients Learning Centers



Master key concepts of food, nutrition, and a healthy lifestyle.

- Designed for either teacher-directed instruction or independent use by groups of up to 4 students
- The Learning Center covers Food Nutrition Labels
- Includes four Visual Learning Guides all focused on this key topic for direct instruction through an easy-to-follow topic overview
- Write-on/wipe-off activities
- · Guiding, assessment review questions
- Includes a Curriculum Mastery Game for small group review, featuring one set of 30 illustrated, self-checking question cards, a laminated game-board, materials for four players, and student instructions
- Ideal for use in the classroom, after-school programs, or even at home
- Provides materials for up to 4 students, takes only minutes to set up
- · Stores in the zippered pouch provided for years of use

Cat. No.	Description	Price
S81088	Understanding Nutrition Facts Learning Center, Grades 6 - 10	\$47.50/Ea
S81097	Making Healthy Choices Learning Center, Grades 3 - 5	\$47.50/Ea
S81086	Food Nutrients Learning Center, Grades 6 - 10	\$47.50/Ea
S81089	Making Healthy Choices Learning Center, Grades 6 - 10	\$47.50/Ea
S81095	Food Nutrients Learning Center, Grades 3 - 5	\$47.50/Ea

Small Group Learning: Science In The Kitchen



This comprehensive kit incorporates a variety of scientific techniques themed around common kitchen materials.

Students will:

- Perform chromatography on commercial food colors
- Perform chemical tests to identify an unknown cooking ingredient
- Examine the protein digesting ability of a common meat tenderizing enzyme
- Use titration to quantify vitamin C levels
- Test an unknown juice or soda (not provided)
- Examine some of the differences and similarities in the materials used to clean (soap, hand dishwashing detergent, and machine dishwashing detergent)

Kit contains enough materials for 5 groups

- Teacher's manual and student study guide copymasters are included
- Aligned to the Next Generation Science Standards (NGSS)
- Disciplinary core ideas: PS1.A, PS1.B
- Performance expectations: MS-PS1-2, MS-PS1-3, HS-PS1-3
- Cross cutting concepts: patterns, structure, and function
- Engineering practices: analyzing and interpreting data; obtaining, evaluating and communicating information; planning and carrying out investigations

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Cat. No.	Price
S40755	\$91 00/Fa



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Eisco™ Food Calorimeter

Students can determine the amount of energy released through the burning of food by measuring the change

in temperature of a sample of water from the combustion of a small amount of food.

 Introduces concepts in thermodynamics and leads to an understanding of energy and its relation to food consumption

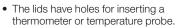
Kit contains:

- Erlenmeyer flask (125 mL)
- Cylindrical metal stand (diameter x H): 4 x 6.75 in.
- Metal suspension plate 4.5 x 4.5 in.
- Cork with nail (food sample holding assembly)
- Rubber stopper
- Experiment Guide

Cat. No.	Price
S23759	\$36.00/Ea

United Scientific[™] Foam Calorimeters

Have excellent insulating properties so you can investigate thermal energy with minimal loss to the environment.



- Outside Dimensions Height: 4.25 in. x Diameter: 4 in.
- Inner container Height: 4 in. x Diameter 4 in.
- Maximum water capacity with lid on 400 mL
- Sold in packs of 10

Cat. No.	Price
S89546	\$41.50/Pk



Advanced Placement Laboratory Kit 4: Plant Pigment Chromatography and Photosynthesis

Experiment demonstrates light-dependent reactions of photosynthesis by colorimetric assay, and helps students to gain an understanding of the biochemical processes by which they work.

Reformulated solvent systems are less flammable and less toxic than commonly used ether and acetone systems.

- Gain an understanding of the theory and applications of chromatography
- Use thin layer chromatography to separate plant pigments carotene, xanthophyll, and chlorophyll
- Perform an assay of the light reactions of photosynthesis using intact chloroplasts and the dye DCIP

Cat. No.	Price
S11284	\$167.00/Fa

† Rubbing alcohol will not work, as it is only 70% isopropanol.

AP Biology Investigation Kit No. 1: Artificial Selection

To study the process of artificial selection by using fast growing plants.

- Students will identify phenotypic differences to observe
- Selective cross pollination is used to examine prevalence of particular phenotypes in successive generations
- Meets AP Science Practices 2, 5, 7, and Big Idea 1
- Materials provided for 32 students in eight lab groups

Cat. No.	Price
S07063	\$91.00/Ea







AP Biology Investigation Kit No. 12: Fruit Fly Behavior

Learn about fruit fly behavior.

- · Students study whether fruit flies move toward or away from important chemicals and food that aid in their survival
- Students can identify patterns by observing fruit fly behavior in the choice behavior chamber
- Students will formulate their own theories based on the fruit flies' response to the chemicals and foods. Then, they can determine what materials and experiments should be tested further.
- Meets AP Science Practices 1, 3, 4, 5, 6, and 7, and Big Idea 4
- Materials provided for eight lab groups

Kit Includes:

- Ethyl alcohol (30 mL)
- Deionized water (30 mL)
- 5% ammonia (30 mL)
- Vinegar (30 mL)



· Fruit fly vials

- Behavior Choice Chambers (8)
- Coupon for perishable materials (8 fruit fly cultures)

Cat. No.	Price
S07060***	\$246.00/Ea

AP Biology Investigation Kit No. 5: Photosynthesis

Students learn necessary components and conditions for photosynthesis using leaf disks to measure oxygen accumulation, and its affect on the process.



Students will design and conduct an experiment

using a selected variable to examine the rate of photosynthesis.

- Meets AP Science Practices 1, 2, 3, 6 and 7, and Big Idea 2
- · Includes enough materials for eight lab groups
- For grades 10-12

Cat. No.	Price
S07045	\$68.25/Ea

AP Biology Investigation Kit No. 4: Diffusion and Osmosis

To observe osmosis and diffusion in living tissue.

- Students study concepts in osmosis and diffusion processes
- Investigate relationship between surface area and volume as it relates to cells and diffusion



- Study how cell size, shape and water elimination affect the overall rate of nutrient intake
- Students use plant tissue to determine molarities of unknown solutions based on direction and degree of water movement
- Meets AP Science Practices 2, 4, and 5, and Big Idea 2
- For 8 groups

Kit Includes:

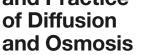
- Agar (45 g)
- Bromothymol blue concentrate (15 mL)
- 2M hydrochloric acid (2 x 25 mL)
- Sucrose quick solution (makes 0.2M, 0.4M, 0.6M, 0.8M, 1M)
- Sodium chloride quick solution
- Ovalbumin quick solution
- · Glucose quick solution

- · Distilled water solution
- Food coloring set
- Plastic cups
- 8 agar block casting trays
- 40 pieces dialysis tubing
- 8 plastic knives, stirrers
- 8 metric rulers
- Microscope slides, coverslips
- Teacher manual
- · Student study guide

Cat. No. Price \$190.00/Ea

Advanced Placement **Laboratory Kit 1: Principles** and Practice

of Diffusion







Experiments help students

develop an understanding of the molecular basis of diffusion and osmosis, and its physiological importance.

- Analyze how solute size and concentration affect diffusion across semi-permeable membranes, and how these processes affect water potential
- · Calculate water potential of plant cells
- Class size: 40 students working in groups of 4

Part A: Dialysis experiments utilizing two dyes of different molecular weights visually demonstrate the size selectivity of membranes. Experiments also demonstrate changes in the equilibrium of the diffusible dye as it is removed from the system.

Part B: Experiment approximates an osmotic system by demonstrating net flow of water through a dialysis membrane.

Part C: Involves the calculation of potato cell water potential from experimental data.

Cat. No. Price S11281 \$167.00/Ea

Beakers can be substituted with clear, disposable plastic cups.



AP Biology Investigation Kit No. 6: Cellular Respiration

Students measure and record the rate of oxygen consumption (cellular respiration).

- · Activity involves use of a respiration chamber
- Germinating seeds and non-germinating material are used as control samples
- Meets AP Science Practices 1, 2, 3, 6 and 7, and Big Idea 2
- This package conforms to 49 CFR 173.4 for domestic highway or rail transport only
- For eight lab groups

Kit Includes:

Cat. No.

S07057*

- Pea seeds (1 pack)
- Plastic beads (1 pack)
- 15% potassium hydroxide (1 bottle)
- · Non-absorbent, absorbent cotton (1 pack)
- Petroleum jelly sealant (1 tube)



- 48 washers
- 24 rubber stoppers
- 24 respiration chambers
- 24 graduated pipets
- · Teacher's manual
- · Student study guides

\$425.00/Ea



AP LAB 6: Cellular Respiration

Students use small respirometers to determine O_2 consumption.

the function of the microrespirometer. Students will observe cell respiration of germinating seeds and describe the effects of temperature on the rate of cell respiration.

Cat. No S06884 \$84.00/Ea

AP Biology Investigation Kit No. 9: Restriction Enzyme Analysis

In this lab students will understand the action and specificity of restriction enzyme. Students also learn the components involved in DNA electrophoresis, and the role of each component as it applies to the entire process of electrophoresis.

Students will perform electrophoresis on DNA samples treated with different restriction enzymes and construct a standard curve using a known DNA

sample, while determining the approximate size of the DNA fragments in unknown samples.

- Meets AP Science Practices 3, 6, and Big Idea 3
- · Materials provided for eight lab groups





For analysis of EcoRI cleavage patterns of lambda DNA.

- This experiment introduces the use of restriction enzymes as a tool to digest DNA at specific nucleotide sequences
- Bacteriophage lambda DNA has a linear structure and six Eco RI recognition sites
- · Separation by agarose gel electrophoresis of an Eco RI digest of lambda DNA will yield six bands (five distinct bands, two are very close in size) corresponding to the DNA fragments

S06887 \$130.00/Ea

AP Biology Investigation Kit No. 7: Cell Division: Mitosis and **Meiosis**

Students will study the cellular steps involved in DNA replication and cell division in both mitosis and meiosis.



- Stages of mitosis in the preparation of plant root tips
- · Crossing over in meiosis via Sordaria cultures
- Meets AP Science Practices 1, 5, 6, and 7, and Big Idea 3
- · Teacher's manual and student's guide included
- Materials for 32 students (8 groups of 4)

Kit Includes:

- 6.0M hydrochloric acid (30 mL)
- 1% toluidine blue (30 mL)
- Sand (500 g)
- Sordaria agar (200 mL)
- Sordaria mating agar (200 mL)
- Slides, coverslips (1 pack ea.)
- 8 forceps

- · 16 plastic pipettes
- 20 petri dishes (sterile)
- 8 inoculating loops (sterile, disposable)
- 7 oz. cups (8)
- 10 disposable scalpels
- · Coupon for perishable materials

Cat. No. S07062* \$242.00/Ea



AP Biology Investigation Kit No. 8: Bacterial Transformation

Students genetically engineer bacteria through transformation with a plasmid that confers antibiotic resistance.



- Efficiency of the procedure is determined by examining the number of resistant bacteria
- Includes teachers manual and student study guide copymasters
- Meets AP Science Practices 1, 3, 5, 6, and 7, and Big Idea 3
- For eight lab groups

Recommended: Incubator (37°C). Requires: Large beaker, microwave (not necessary if melting agar in a waterbath), microfuge tube racks, hot plate or waterbath, markers, and container of ice.

Cat. No.	Price
S07058	\$247.00/Ea

Detection of the Influenza Virus **Experiment Kit**

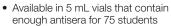
Students perform two common tests (RIDT, RT-PCR) used to diagnose the flu in clinical settings.

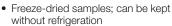
- · Complete in 90 minutes
- Kit is for 8 lab groups

Cat. No.	Price
S29012	\$161.00/Ea

Blood Typing Anti-Sera, Anti-A, Anti-B and Anti-Rh

Use for blood typing of real human blood. Each vial contains enough antisera for 75 students. Refrigeration recommended until used. Materials from human-derived cell lines were found to be negative in tests for Hepatitis B, HIV and EBV.





• Shows negative results for Hepatitis B, HIV and EBV when tested with human-derived cell lines

Cat. No.	Includes	Price
S07802	Anti-A and anti-B	\$39.00/Ea
S07803	Type A, B and Rh	\$79.00/Ea
S07804	Anti-Rh	\$39.25/Ea



Origami Organelles Plant Life Cycle Model



This model shows the stages of a plant life cycle and what happens at each step.

- The life cycle of a flowering plant takes it from a seed to a fully grown plant and back to a seed again
- Takes just 30 minutes to build the model
- Students build their models of a seed, seedling, tree. flower, bee, fruit and deer



- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions (flower):** 5 in. x 4 in. (12 cm x 10 cm)
- Download includes: instructions, color and mono model templates, and classroom PowerPoint presentation
- All you need: paper, scissors, and tape

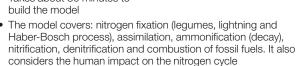
Cat. No.	Description	Price
S05716	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Nitrogen Cycle Model



This interactive model helps students learn about the nitrogen cycle.

- Students build their model using the colorful parts of the template
- Discover the features of the nitrogen cycle by visualizing connections as they make the model
- Takes about 30 minutes to



- It can even be made into a colorful 3-dimensional classroom poster
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 26 in. x 20 in. (67 cm x 50 cm)
- Download includes: instructions, templates, and classroom PowerPoint presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05717	Grade: 4 to 12	\$7.00/Ea

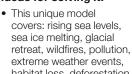


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Origami Organelles Climate Change Model



Students can engage with this colorful, easy-to-build model to learn about the effects of climate change, and discuss ideas for solving it.





habitat loss, deforestation, desertification, ocean acidification, disruption to ecosystems and threats to low level coastlines

- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 9 in. x 10 in. x 4 in. (23 cm x 25 cm x 10 cm)
- Download includes: instructions, color and mono model templates, and PowerPoint presentation
- All you need: paper, scissors and tape

Cat. No.	Description	Price
S05718	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Carbon Cycle Model



Teach the carbon cycle using this colorful, interactive model.

- Students will build their model then study the carbon cycle components such as carbon stores, and carbon transfers
- Carbon transfers shown include photosynthesis, respiration, combustion of fossil fuels, volcanic eruptions, decomposition, erosion of sedimentary rock and diffusion from the ocean surface



- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 8 in. x 6 in. x 4 in. (20 cm x 15 cm x 10 cm)
- Download includes: instructions, model templates, and PowerPoint presentation
- All you need: paper, scissors and tape

Cat. No.	Description	Price
S05719	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Simple Animal Cell Model



Provides a fun introduction to animal cells for students of any age.

 Your students will enjoy learning about cells with this colorful model. The model covers all the main parts of cells (cell membrane, nucleus, chromosomes, mitochondria). For more advanced students, you can



extend the model with optional parts (rough ER, smooth ER, and Golgi)

- Students make their cell model using the colorful parts working alone or in small groups. They can make a simple version or use the optional parts to show more features. It can be printed in color, or in mono on colored or white paper. Includes a full-color PowerPoint class presentation
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 7 in. x 5 in. (17 cm x 14 cm)
- Download includes: instructions, model templates, and PowerPoint presentation
- All you need: paper, scissors and tape

Cat. No.	Description	Price
S05720	Grade: 4 to 12	\$6.00/Ea

Origami Organelles Simple Plant Cell Model



Provides a fun introduction to plant cells for students of any age.

 Your students will enjoy learning about cells with this colorful model. The model covers all the main parts of plant cells (cell membrane, cell wall, chloroplasts, nucleus, chromosomes, mitochondria). For



more advanced students, you can extend the model with optional parts (rough ER, smooth ER, and Golgi)

- Students make their cell model using the colorful parts working alone or in small groups. They can make a simple version or use the optional parts to show more features. It can be printed in color, or in mono on colored or white paper
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 7 in. x 5 in. (18 cm x 14 cm)
- Download includes: instructions, model templates, and full color PowerPoint class presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05721	Grade: 4 to 12	\$6.00/Ea



Origami Organelles Simple Bacterial Cell Model



Students can build a bacterial cell model to gain insights into its structure and functions.

- Bacterial cells are one of the oldest forms of life on Earth and cause many human diseases
- The model shows your students the main structures of a bacterial cell: cell wall, cell membrane, genome, plasmid, flagellum. This easy to make model does not need any tape or glue to build
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 7 in. x 2 in. (17 cm x 5 cm)
- Download includes: instructions, model templates, and full color PowerPoint class presentation
- All you need: paper, scissors and tape

Cat. No.	Description	Price
S05722	Grade: 4 to 12	\$6.00/Ea

Origami Organelles Cell Structure Model



This colorful, easy-to-build model shows what makes animal, plant, bacterial, and fungal cells different from each other.



- To function, they have different combinations of subcellular structures (organelles)
- Your students make models out of the colorful parts of four different cells
- Utilize the model to look at what the subcellular structures do and compare and contrast the different types of cells
- The model covers the following: nucleus, chromosome, mitochondrion, chloroplast, vacuole, cell membrane, cell wall, cytoplasm, ribosomes, plasmids, and flagella
- Takes just 30 minutes to build the model
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: Bacterial Cell length: 4 in. (11 cm)
- **Download includes:** instructions, model templates, and classroom PowerPoint presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05723	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Biology Bundle



Get all 83
Biology Origami
Organelles in
one convenient
set that can be
downloaded and
printed as often
as needed, at no
additional cost.

 Includes instructions, templates and presentations for these models: Abdomen, Alveoli, Amoeba, Apoptosis, ATP Synthase,



Anaerobic Respiration and Fermentation, Antibodies, Biochemistry of Vision, Calvin Cycle, Carbon Cycle, Cell Membranes, Cell Nucleus, Cell Signaling, Chlamydomonas, Citric Acid Cycle, Colorful Chromosomes, Cool Chloroplasts, CRISPR-Cas9, Crucial Krebs and the Link Reaction, Digestive System, DNA Replication, DNA Structure, Easy Eye, Electron Transport Chain, Endoplasmic Reticulum, Enzymes, Euglena, Fermentation, Fertilization and Reproductive Technology, Frog Life Cycle, Fun with Flowers, Gene Cloning, Gluconeogenesis, Glucose Uptake by Small Intestine, Glycolysis, Golgi and Lysosome, Groovy Glycolysis, Human Brain, Human Ear, Human Eye, Human Heart, Human Kidney, Immune System, Lac Operon, Leaf Structure, Link Reaction/Pyruvate Oxidation, Liver and Spleen, Lungs, Lymph Node, Malaria, Mega Mitochondria, Mighty Mitochondria, Mitosis and Meiosis, Muscle Shuffle, Nephron, Nerve Cell, Nerve Impulses, Neuromuscular Junctions, Osmosis and Diffusion, Paramecium, Parasympatheic Nervous System, Phloem and Translocation, Photosynthesis Light Reactions, Polymerase Chain Reaction (PCR), Receptor Tyrosine Kinases (RTKs), Rod Photoreceptor Cell, Simple Animal Cell, Simple Bacterial Cell, Simple Plant Cell, Skin, Spinal Nerves, Stem Cells, Super Simple Cell, Sympathetic Nervous System, Synapses, Teeth, Transcription, Translation and Protein Synthesis, Urinary System, Villus, Water Cycle, Xylem, Zika Virus

- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Due to the number of files in this set, 9 email links are sent within a few hours of purchase
- Download Includes: Instructions and color and mono model templates. PowerPoint classroom presentations are included for all models.
- All You Need: Paper, scissors, glue or tape

Cat. No.	Description	Price
S05724	Grade: 4 to 12	\$327.00/Ea



Origami Organelles DNA Structure Model



Teach DNA structure as part of introductory or advanced lesson plans.

Teaches the importance of complementary base pairing, nucleotide structure, double-helix shape, 5' and 3' ends, antiparallel strands, sugar-phosphate backbone, purines and pyrimidines and DNA sequence



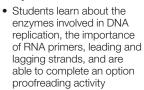
- Students can build base pairs then combine them to make the DNA double helix
- Models can be built in different lengths and in any sequence needed to support your lesson plan
- Takes about 20 minutes to make a 12 base pair model
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: DNA strand: 17 in. x 4 in.
- Download includes: instructions, color and mono model templates and PowerPoint presentation
- All you need: paper, scissors and tape

Cat. No.	Description	Price
S05725	Grade: 4 to 12	\$7.00/Ea

Origami Organelles DNA Replication Model



Engage students in introductory or advanced DNA replication lesson plans using this easy-to-build model.





- Takes about 20 minutes to make a 12 base pair model
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: 14 in. (35 cm) long
- Download includes: instructions, model templates, and PowerPoint presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05726	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Gene Cloning Model



This colorful, interactive model helps students learn about gene cloning and genetic engineering.

- Students can make a plasmid model from base pairs, perform a restriction enzyme digest, and add a gene insert
- Insert can represent either the insulin or green fluorescent protein (GFP) genes
- Students learn about plasmid structure, use of vectors, marker genes, restriction enzymes recognition sites, sticky ends, multiple cloning sites, and promoters
- Takes about 20 minutes to make if divided between 5 groups of students. Can be kept intact and reused once assembled
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: 16 in. (40 cm) diameter
- Download includes: instructions, color and mono model templates and PowerPoint presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05727	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Lac Operon Model



Give students a hands-on way to learn about and explain gene regulation in E. coli.



as a food source. The genes are only switched on when lactose is present

- Your students will make a model of the *lac* operon and use it to see how bacteria are able to control these genes. The model covers the lac repressor, RNA polymerase, operator, promoter and the *lacZ*, *lacY* and *lacA* genes and their products
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 19 in. x 7 in. (48 cm x 18 cm)
- Download includes: instructions, model templates, and PowerPoint presentation
- All you need: scissors and tape

Cat. No.	Description	Price
S05728	Grade: 4 to 12	\$7.00/Ea



Origami Organelles Transcription Model



Use this colorful, interactive model to teach the principles of transcription.

 Transcription is how the genetic information stored as DNA in the nucleus is copied into RNA so it can be used to make proteins



- Your students will make a model of a DNA template and transcribe it into messenger RNA. The model covers the role of promoters, transcription factors, and RNA polymerase. RNA processing is also covered including RNA splicing, exons, introns, poly-A-tail and 5' cap
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: 25 in. x 10 in. (64 cm x 26 cm)
- Download includes: instructions, model templates, and PowerPoint presentation
- All you need: paper, scissors, and tape

505729	Grade: 4 to 12	
Origa	ami Organelle	S







Teach protein synthesis and ribosomes.

Ribosomes are the factory workers of the cell. Your students will build their own model ribosome out of paper that they can hold in the palm of their hand. They will then use the model to make a peptide from five amino acids using transfer RNAs (tRNA) following a massenger



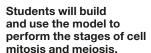
- RNAs (tRNA) following a messenger RNA (mRNA) sequence

 Covers: translation, protein synthesis, codons, anticodons
- Covers: translation, protein synthesis, codons, anticodons, messenger RNA (mRNA), transfer RNA (tRNA). Useful as homework or classroom activity
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 5 in. x 3 in. x 4 in. (13 cm x 7 cm x 10 cm)
- Download includes: instructions, model templates, and colorful PowerPoint classroom presentation
- All you need: paper, scissors, and tape

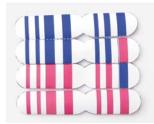
Cat. No.	Description	Price
S05730	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Mitosis and Meiosis





 Mitosis: Students will perform chromosome alignment and segregation, and learn about the cell cycle as they make two diploid daughter cells



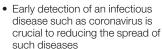
- Meiosis: Students will carry out independent assortment and crossing over while creating four haploid daughter cells
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: largest chromosome 12 cm (5 in.) long
- Download includes: instructions, model templates, and PowerPoint presentation
- All you need: scissors and tape

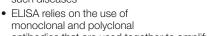
Cat. No.	Description	Price
S05731	Grade: 4 to 12	\$7.00/Ea

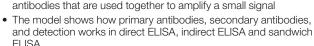
Origami Organelles ELISA Model



Show students how three types of ELISA tests detect viruses and help reduce the spread of infectious diseases, like coronavirus.







- Time to build model takes about 30 minutes
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 3 in. x 2 in. (8 cm x 5 cm)
- **Download includes:** instructions, color and mono model templates, and classroom PowerPoint presentation
- All you need: paper, scissors, tape

Cat. No.	Description	Price
S05732	Grade: 4 to 12	\$7.00/Ea



Origami Organelles Coronavirus Model



Teach the structure and functions of the SARS-CoV-2 virus that causes COVID-19 and its variants.

 The outbreak of coronavirus (2019-nCoV) highlights the importance of understanding how such viruses infect us and how we can use this understanding to develop vaccines and medicines



- The model includes the viral envelope, RNA genome, spike protein, membrane protein, envelope protein and the enzymes replicase and protease
- Your students will learn about coronavirus structure and life cycle and provides a good starting point to discuss the challenges that are caused by novel virus strains
- It can also be used as an introduction to general virus structure for all levels of students
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: 6 in. (15 cm) in diameter
- Download includes: instructions, model templates and PowerPoint presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05733	Grade: 4 to 12	\$7.00/Ea

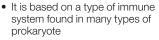
Origami Organelles CRISPR Model



Help students gain insight into genome editing.

 CRISPR is a genetic engineering technique that makes editing genomes easy and inexpensive







- Next, they use these to see how genome editing is done. Making the model and carrying out the activity makes CRISPR easy to understand
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 10 in. x 7 in. (26 cm x 18 cm)
- Download includes: instructions, model templates, and full color PowerPoint class presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05734	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Polymerase Chain Reaction (PCR) Model



Use this colorful model to help your students understand PCR.

They learn about the importance of Taq polymerase, that DNA is only synthesized in the 5' to 3' direction, DNA primers, the steps of PCR - denaturing, annealing and extension. Compare PCR and DNA replication using the DNA replication model



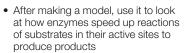
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: DNA Template 14 in. (35 cm) long
- Download includes: instructions, model templates, and PowerPoint presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05735	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Enzymes Model



This easy to make model gives your students a way to visualize how enzymes catalyze biochemical reactions inside our cells.





- Then use the model to see how inhibitors work and how enzymes are regulated
- Covers: enzyme substrate interaction, active site, catalytic cycle, competitive inhibitors, non-competitive inhibitors, allosteric activators, allosteric inhibitors, and cooperativity
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 4 in. x 5 in. (11 cm x 13 cm)
- Download includes: instructions, color and mono model templates, and classroom PowerPoint presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05736	Grade: 4 to 12	\$7.00/Ea



Origami Organelles Fermentation Model



This model shows students how enzymes perform fermentation, and teaches students the different types of fermentation and their relation to protein structure.



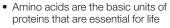
- Anaerobic fermentation is essential to regenerate NAD+ to keep glycolysis working
- When carried out by microbes such as yeast it produces alcohol and carbon dioxide as byproducts that are used in brewing and baking
- In our muscles, fermentation instead produces lactic acid that must be removed later on
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: 13 in. x 7 in. (33 cm x 18 cm)
- Download includes: instructions, color and mono model templates, and PowerPoint presentation
- All you need: paper, scissors, glue or tape

Cat. No.	Description	Price
S05737	Grade: 4 to 12	\$7.00/Ea

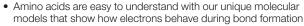
Origami Organelles Amino Acids Model



Model all 20 amino acids with the Origami Organelles Amino Acids Model.



- Their sequence in proteins is encoded by the genetic code of DNA
- They have two functional groups: carboxylic acid and an amino group
- Each amino acid also has a unique side chain (or R group)



- Your students first build their easy to make paper models of atoms and electrons
- They use these to form organic molecules by sharing electrons between the atoms
- The differently colored electrons make it easy to see how the bonds are formed
- The models can then be used to show the structure of the 20 naturally occurring amino acids, their physical properties and the formation of peptide bonds
- Clear instructions are provided in the PowerPoint presentation
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: Model atom diameter 4 in. (10 cm)
- Download includes: instructions, model templates, and Powerpoint presentation
- All you need: paper, scissors, and tape

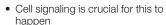
Cat. No.	Description	Price
S05738	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Cell Signaling Model



Make cell signaling easy to understand with the interactive Origami Organelles Cell Signaling Model.

- The fight or flight response relies on a fast reaction to the hormone adrenaline (epinephrine)
- One of the responses for liver and muscle cells is to quickly break down glycogen into glucose as an energy source



- Your students will make a model of the cell signaling pathway that leads from the hormone receptor to the enzyme that breaks glycogen down
- It covers G protein-coupled receptor, G protein, cyclic AMP as a second messenger, phosphorylation, and protein structure
- By using dynamic models what can seem complex becomes clear
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 11 in. x 9 in. (28 cm x 23 cm)
- Download includes: instructions, model templates, and PowerPoint presentation
- · All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05739	Grade: 4 to 12	\$7.00/Ea

Origami Organelles Synapses Model



This hands-on membrane modeling system helps students to understand how synapses work.

- After making their models, your students will fuse a synaptic vesicle to the presynaptic membrane and release a neurotransmitter. Once this crosses the synaptic cleft and binds to the receptor, ion channels open and cause changes in the postsynaptic membrane that may
- lead to an action potential if the threshold is passed
 Covers synapse structure, role of neurotransmitter, summation, inhibitory and excitatory synapses
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- Dimensions: 10 in. (25 cm) across
- Download includes: instructions, color and mono model templates, and PowerPoint presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05740	Grade: 4 to 12	\$7.00/Ea



Origami Organelles Frog Dissection Model

Use this detailed model to help students learn about organ systems, to prepare students for a frog dissection, or as an alternative to dissection.

- With this model, your students can carry out a dissection using our detailed paper model of a frog. Use to prepare students for a dissection or as an alternative to a real dissection
- Students assemble the easy-to-make frog using the colorful parts working alone or in small groups
- · Build the frog and then add the organs to the model
- The model can be used to identify the organs of a frog including the heart, lungs, liver, gall bladder, spleen, esophagus, stomach, pancreas, small intestine, large intestine, urinary bladder, kidneys, adrenal body, fat bodies, cloaca, male and female parts
- Takes about 30 minutes for a group of students to make the model
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 15 in. x 10 in. (38 cm x 27 cm)
- **Download includes:** instructions, color and mono model templates, and classroom PowerPoint presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05741	Grade: 4 to 12	\$9.00/Ea

Origami Organelles Fetal Pig Dissection Model



Use this detailed model to teach students about key body organ systems, to prepare students for fetal pig dissection, or as an alternative to dissection.



- With this model, your students can carry out a dissection using a detailed
 - paper model of a fetal pig. Use to prepare students for a dissection or as an alternative to a real dissection
- Students make the model of a fetal pig out of the colorful parts
- Build the pig and then add the organs to the model
- The model shows how a fetal pig differs from an adult animal covering the fetal circulation and umbilical cord
- Carry out a dissection to see how the parts fit together
- It can be used to look at different organ systems and for comparative anatomy
- Takes about 60 minutes to make the model but can be carried out over a series of sessions
- The model can be used to look at the anatomy of the major body systems. It covers the nervous system (brain and spinal cord), circulatory system (heart and major blood vessels), respiratory system (lungs and trachea), digestive system (mouth, esophagus, stomach, small intestine, spiral colon, rectum, pancreas, liver, gallbladder), excretory system (kidneys and bladder) and male and female reproductive systems
- For use in class or for distance learning at home
- How it works: The model purchase includes a license for unlimited use at one site or an entire campus. The model will be emailed as a PDF to be downloaded and printed for repeated classroom use
- **Dimensions:** 14 in. x 10 in. (35 cm x 24 cm)
- Download includes: instructions, color and mono model templates, and classroom PowerPoint presentation
- All you need: paper, scissors, and tape

Cat. No.	Description	Price
S05742	Grade: 4 to 12	\$10.00/Ea



Visit fisheredu.com/HDSubscribe to sign up for this free email.





Genetics

Chromosomes, Genes and **DNA Flip Chart Set**

Introduce and review standards-based science concepts. The set features 10 double-sided, laminated charts, each 12 x 18 in. and spiral-bound on a durable, free-standing easel.

- Side 1 of each chart features a graphic overview of topic
- Side 2 serves as "write-on/wipe-off" activity chart
- Also includes Activity Guide featuring copy-masters and exercises

Provides comprehensive coverage of the following topics:

- Chromosomes
- Genes
- DNA
- From DNA to Protein
- DNA Transcription: DNA to
 RNA



- Translation: RNA to Protein
- The Genetic Code
- DNA/RNA Structure
- Mutations
- Vocabulary Review

Cat. No.	Price
S04876	\$64.75/Ea

Chromosomes 3D Model Kit

Assemble and use 3D models to visualize and investigate key science structures.



- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81446	\$46.50/Ea

United Scientific[™] DNA Models and Kits

Accurately depict a 16-base-pair section of DNA.

- Phosphate-deoxyribose backbone and four bases represented by custom plastic moldings
- Shows shapes of molecules in scale and illustrates bonding between them
- Supported by a central pillar, which can rotate on a circular stand

Pre-assembled DNA Model (S05910)

 Handedness of the backbone chains and the relative sizes of the major and minor grooves in the relaxed molecule are correctly portrayed

DNA Model Kits (S06993 and S06991)

- Built to a scale of 10 cm to 1 nm
- Dimensions: 25 × 9 × 9 in. (63.5 × 22.9 × 22.9 cm)
- S06993: Single Model, unassembled
- S06991: Four models, one assembled, three unassembled

Cat. No.	Description	Price
S05910	DNA model, Pre-assembled	\$106.00/Ea
S06993	DNA Model, Unassembled	\$69.00/Ea
S06991	DNA Model Kit – includes four models, one assembled three unassembled	\$321.00/Ea

Eisco[™] DNA Model Kit

Construct a three dimensional model of DNA that can be rotated on its base.

- Easy to construct, the colorful bases snap together in the correct sequence, and the pairs attach to a center rod representing hydrogen bonds
- Two flexible strands signifying alternating pentose and phosphate units attach to the end of each pair, forming the double helix
- Emphasizes the base pair sequence and function of DNA
- Once completed, model can be rotated on its sturdy base
- Includes enough materials to construct one models
- Supplied with manual
- Dimensions (L x W x H): 5.125 x 5.125 x 17.75 in. (13 x 13 x 45 cm)

Cat. No.	Price
S27904	\$101.00/Ea





DNA Double Helix Model

Demonstrates three coils of a DNA double helix with base pairing.

- Preassembled
- RNA cord is attached to one end to show the basis of RNA transcription

Cat. No.	Price
S1790612	\$447.00/Ea



DNA Structure 3D Model Kit

Assemble and use 3D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups



- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

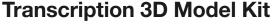
Cat. No.	Price
S81451	\$46.50/Ea

DNA Replication 3D Model Kit

Assemble and use 3D models to visualize and investigate key science processes.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81450	\$46.50/Ea



Assemble and use 3D models to visualize and investigate key science processes.

 Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models

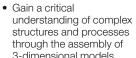


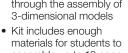
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81465	\$46.50/Ea

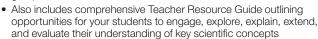
Translation and Protein Synthesis 3D Model Kit

Assemble and use 3D models to visualize and investigate key science processes.









- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81466	\$46.50/Ea



GGUGUU

Gene Cloning 3D Model Kit

Assemble and use 3D models to visualize and investigate key science processes.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- · Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81456	\$46.50/Ea

United **Scientific**[™] **Protein Synthesis Manipulative** Kit

Teach protein synthesis with hands-on manipulatives.

Large, colorful models of DNA, mRNA, Ribosomes, tRNA and

Amino Acids. Includes magnets to attach to the blackboard for a visual simulation of protein synthesis.

- Smaller size models provide students with hands-on learning. Activities include identifying the amino acid sequence resulting from a unique DNA sequence
- Includes downloadable teacher guide with suggested activities

Cat. No.	Price
S65998***	\$483.00/Ea

Genes in a Tube

Students can transfer their DNA to a tube that can be worn as a pendant.

- · Students extract and precipitate their own DNA
- Transfer to tube or save on a DNA report card





Sickle Cell Gene Detection

Gain an understanding of the effect of mutations on health and disease.

Genetically inherited diseases in humans can be caused by a single nucleotide mutation resulting in a change. Such a substitution can affect the structure and function of a critical protein, rendering it partially or completely nonfunctional. A classic example is hemoglobin in sickle cell anemia



- Agarose gel-based experiment designed for DNA staining and visualization with InstaStain™ Methylene Blue
- Demonstrates the use of a restriction enzyme that discriminates between the normal and sickle cell hemoglobin genes
- · This experiment does not contain human DNA

Cat. No.	Price
S94670	\$130.00/Ea

Small Group Learning: Genetics Of Blood Types

Blood type, an inherited characteristic. has use in everything from forensic investigations to medical procedures.



In this activity, students will learn about the genetics that determine blood type and the possible inheritance patterns and how they express themselves.

- Students will use simulated blood to determine the blood type of four unknown samples and use their results to assist in the resolution of a fictional paternity dispute
- · Kit contains materials for 5 groups
- Aligned to the Next Generation Science Standards (NGSS)
- Disciplinary Core Ideas: PS1.A; PS1.B; LS1.A; LS1.B; LS3.A; LS3.B
- Performance Expectations: MS-PS1-2; MS-LS3-2; HS- LS3-1; HS-LS3-3
- Cross Cutting Concepts: Structure and Function; Cause and Effect; Scale, Proportion and Quantity; Science is a Human Endeavor
- Engineering Practices: Developing and Using Models; Asking Questions and Defining Problems; Analyzing and Interpreting Data

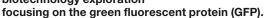
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Gat. No.	Price
S40735	\$24.25/Ea



Exploring Biotechnology with Green Fluorescent Protein

Four experimental modules are combined into one experiment to provide a comprehensive biotechnology exploration



- Bacterial cells are transformed to express the green fluorescent protein (GFP)
- Transformed cells are then grown and the GFP is purified by column chromatography
- The purity of the protein fractions are analyzed by SDS polyacrylamide electrophoresis

Experiment times:

- Module I: Transformation, 45 minutes
- Module II: Isolation of GFP, 45 minutes
- Module III: Purification of GFP by Chromatography, 45 minutes
- Module IV: Analysis by GFP by Denaturing SDS Gel Electrophoresis, one hour

Cat. No.	Price
S05657	\$240.00/Ea

The Mystery of the Crooked Cell

Demonstrates detection of the mutation that causes sickle cell anemia.

Students use electrophoresis to separate dyes that represent patient

samples and controls. Developed in partnership with Boston University School of Medicine.

Cat. No.	Price
S96377	\$89.00/Ea

In Search of My Father

Solve the mystery of two boys separated from their parents a decade ago.

- Students identify the biological mother by mitochondrial DNA
- Identify the biological father using chromosomal DNA
- Complete in 45 minutes

'	
Cat. No.	Price
S05713	\$85.00/Ea



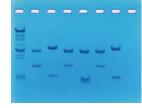
Cholesterol Diagnostics

Study cholesterol-based diseases.

- In this experiment, a simulated genetic test for familial hypercholesterolemia (FH) is demonstrated in which patients are tested for a DNA polymorphism linked to the FH gene
- Develop an understanding of the genetics and DNA-based diagnostics of cholesterol-based diseases
- This experiment does not contain human DNA

Cat. No.	Price
S94608	\$130.00/Ea

DNA Fingerprinting Using Restriction Enzymes



Learn about restriction enzymes.

- The objective of this simulated forensic analysis is to develop an understanding of DNA fingerprinting by use of restriction enzymes
- Hypothetical crime scene samples are provided in addition to DNA samples, restriction enzymes and reaction buffer, to digest suspect's DNA
- Digestion products are separated by agarose gel electrophoresis
- Students determine the guilty suspect through identification of the unique restriction enzyme fragmentation patterns
- Does not contain human DNA
- Some components require refrigeration, some require freezing

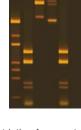
Cat. No.	Price
S94610	\$174.00/Ea

Analysis of DNA Methylation using Restriction Enzymes Experiment Kit

Training kit to understand mechanisms of DNA methylation.

- Explores effects of DNA methylation on restriction enzyme activity
- Plasmid DNA will be digested with the restriction enzymes *DpnI* and *DpnII*
- Methylated and unmethylated DNA will produce restriction fragments that are distinct from one another
- Restriction fragments are analyzed using agarose gel electrophoresis

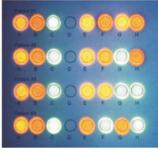
Cat. No.	Price
S42875	\$153.00/Ea



DNA/RNA Microarrays

Membrane microarray technology enables scientists to screen large numbers of samples in one assay.

Benefit from cost savings by reducing the sample size, while saving time and yielding accurate results.

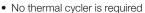


- Students apply simulated DNA and RNA samples to a membrane to screen for positive and negative samples
- · Complete in one hour

Cat. No.	Price
S05648	\$171.00/Ea

Detection of Genetically **Modified Organisms Kit**

Students use agarose gel electrophoresis to explore molecular methods used by scientists to identify genetically modified organisms.



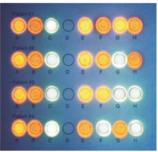
- · Students are encouraged to explore controversy surrounding use of genetically modified organisms
- For 8 gels
- · Completes in 60 minutes

Includes: instructions, Ready-to-Load™ QuickStrip™ DNA samples, UltraSpec-Agarose™ powder, practice gel loading solution, electrophoresis buffer, InstaStain™ Blue and FlashBlue™ stain, calibrated pipette, and microtipped transfer pipettes

Materials needed: electrophoresis apparatus, power supply, automatic micropipet and tips, balance, microwave or hot plate, white light visualization system

Storage: stable at room temperature. Recommended to store Ready-to-Load QuickStrip™ samples in refrigerator.

Cat. No.	Price
S21121	\$130.00/Ea



Eisco™ Genetic Traits Taste Testing Strips

Demonstrate how the ability to taste a certain compound is based on heredity.

Is it sweet, salty, bitter or tasteless?

- Depending on their own genetics, students will experience different tastes from the test strips
- PTC seven out of 10 students will detect a definite taste; remainder will not
- Sodium benzoate genetics determine if the paper tastes sweet, salty, bitter or tasteless. Students that taste PTC may not be able to taste thiourea.
- Control strips have no PTC, sodium benzoate or thiourea

Cat. No.	For Use With (Application)	Product Type	Price
S85287A	Used to demonstrates the effects of heredity on taste, seven out of 10 students will detect a definite taste, remainder will not	PTC Paper Taste Strip	\$4.75/Pk
S85286A	Used to demonstrates the effects of heredity on taste	Control Paper Taste Strip	\$4.65/Pk
S85288A	Genetics determine if the paper tastes sweet, salty, bitter or tasteless if a student can taste PTC, he may not be able to taste thiourea	Sodium Benzoate Paper Taste Strip	\$4.70/Pk
S85289A	Used to demonstrates the effects of heredity on taste	Thiourea Paper Taste Strip	\$4.70/Pk

Electrophoresis

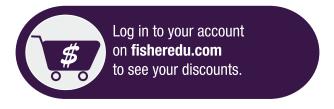
DNA Fingerprinting Electrophoresis Lab Activity Educational Kit

Students will learn about restriction enzymes and importance of these enzymes in DNA fingerprinting process.

Experiments to perform agarose gel electrophoresis on four DNA samples to determine if DNA from suspects matches that of DNA found at a crime scene.

- · Contains enough materials for 8 groups
- Includes teacher's guide and student study copymasters

Cat. No.	Price
S28493	\$112.00/Ea







Phone 1-800-955-1177

DNA Fingerprinting: Identification of DNA by Restriction Fragmentation Patterns

Reveals techniques used in forensic and medical procedures.

Basic concepts of DNA fingerprinting are featured in this lab. Students will compare crime scene DNA with suspect DNAs. Fingerprint patterns are separated by agarose gel electrophoresis and the students determine who may have done it!



Cat. No.	Price
S11109	\$130.00/Ea

DNA Paternity Testing Simulation Kit

Introduces students to the use of DNA fingerprinting in a simulated paternity determination.

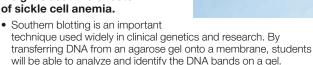
- A child's DNA fingerprint is compared to their parents.
- The experiment does not contain human DNA.



Cat. No.	Price
S11114	\$130.00/Ea

In Search of the Sickle Cell Gene by Southern Blot

Use Southern blots to detect mutations while gaining insight about the effects of sickle cell anemia.

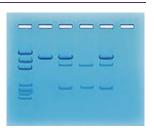


 Your students will use Southern blotting to find a point mutation in the hemoglobin gene that indicates Sickle Cell Anemia

Cat. No.	Price
S11315ND	\$239.00/Ea

Cancer Gene Detection

In this experiment, students determine a pedigree for a family suspected to be carriers of mutations in their p53 genes. A DNA test indicates their likelihood of developing cancer.



The p53 gene is a tumor-suppressing gene that prevents uncontrolled cell division of cancer cells. Mutations in the p53 gene are present in more than 50% of cancers. Testing people for mutations in their p53 gene can indicate an increased risk in developing cancer. These tests raise intriguing ethical questions for both the individual tested and the family of an individual who chooses to be tested.

Cat. No.	Price
S66828	\$130.00/Ea

Construction and Cloning of DNA Recombinant

To study gene structure, function, and to enhance gene expression.

- Activity is divided into five modules
- Clones are constructed by ligation of a vector and a fragment insert
- The constructs are then transformed into competent cells and the cells are grown and selected for resistance



- Plasmid DNA is then isolated from the transformants, cleaved with restriction enzymes, and analyzed by agarose gel electrophoresis
- Recommended for college level courses
- · For 5 lab groups
- Time: enzyme digestion 30 min., gel preparation 30 min., electrophoresis 45 min., staining 15 min. and destaining 20 min.

Activity requirements: Electrophoresis tank and power supply, automatic micropipet with tips, balance, microwave or hot plate, waterbath, large weigh boats for staining, UV transilluminator, floating racks for microtest tubes, pipet pump or bulb, 5 or 10 mL pipets, laboratory glassware, metric rulers, distilled water and ice

Cat. No.	Price
S11301ND	\$573.00/Ea



GFP Transformation Extension: Colony PCR Experiment Kit

Determines whether cloning and transformation experiments were successful.

- Colony PCR to analyze bacteria transformed with pFluoroGreen
- Single colony used as DNA template for PCR
- Resulting PCR sample is analyzed using agarose gel electrophoresis
- Used in conjunction with Transformation Kits S68653, S68654 or S05657

Cat. No.	Price
S42874	\$212.00/Ea

Principles and Practice of Agarose Gel Electrophoresis

Introduce basic concepts and procedures of agarose gel electrophoresis with this simple, safe, fast, and colorful experiment.

Demonstrate to your class how electrophoresis separates molecules on the basis of size and charge.



Demonstration DNA Electrophoresis LabStation[™]

A basic electrophoresis unit that is suitable for instructor-led presentations.



Cat. No.	Price
S68644	\$573.00/Ea

EDGE[™] Integrated Electrophoresis System



Merges an electrophoresis chamber, power supply and blue light into a single, safe, easy-to-use apparatus.

- Enables real-time visualization of DNA migration
- Integrated electrophoresis chamber, power supply & blue light
- Dual 100/150 volt modes w/ automatic safety cutoff switch
- Includes 10 x 7 cm gel tray, rubber end caps & (2) 6/8 tooth combs
- Permanent platinum electrodes no replacement required
- built-in fan & ventilated design prevent condensation
- Compatible with SYBR[™] Safe, GelGreen[™] & other blue light-reactive dves
- Universal voltage for worldwide use

WARRANTY: 3 years

Cat. No.	Price
S52000	\$329.00/Ea

MV10 Protein Electrophoresis Apparatus

Seamless vertical electrophoresis unit is designed for separation of proteins on a single polyacrylamide gel.



Redesigned MV10 vertical protein electrophoresis unit capable of holding one vertical polyacrylamide gel. The unit has color coded parts to ensure proper orientation.

- Gel support cassette clip holds gel securely, allows for easy placement and removal of gel
- · New, sleek design
- · Domed lid with sturdy overmold grip feature
- Modified shape improves gel running speed by 10-15%
- Stabilizing feet raise the unit off the bench to promote cooling and improve stabilization
- Placement of color-coded anode/cathode sides completely eliminates the chance of improper or reverse lid placement
- Electrode lead 90° right angle shape improves stability by lowering the overall profile
- Patent pending

WARRANTY: Manufacturer's limited lifetime warranty and free technical support

Cat. No.	Price
S90257ND	\$336.00/Ea



M12 Complete[™] Electrophoresis Package

Student-friendly horizontal electrophoresis apparatus for DNA, dye, and protein agarose gels. Includes trays, combs, and end caps.



- The package supports one or two student groups
- Students can use two standard length gel trays for experiments that require less separation, or one long gel tray for experiments that require more separation
- Students see results in 30-40 minutes

WARRANTY: Includes a lifetime warranty

Cat. No.	Price
S90242ND	\$277.00/Ea

M36 HexaGel Electrophoresis Apparatus

Apparatus allows students to run six gels and separate up to 36 samples simultaneously.

Six groups of students can load their own individual gels and six gels are run together for 30-40 minutes. Eliminate cumbersome gel tray taping and pour gels quickly and easily with our innovative gel tray sealing rubber end caps.



- New, sleek design
- · Contoured lid enhances visualization
- Vented base
- Color coded push tabs
- · Pour spout to pour out used buffer
- · Replaceable electrode modules

Cat. No.	Price
S11515A	\$480.00/Ea

fisherbrand Large Gel Electrophoresis System

Provide leak-free casting in a 20 x 25 cm gel tray with six comb positions.

Improve resolution in Northern and Southern blotting of large gels and multiple samples.

- Available with same self-contained buffer recirculation method as Midigel System (S98617)
- Run up to 36 samples per comb position with supplied combs
- Permit up to four sets of samples to be run equal distances on the same gel
- Allow shorter gels to be poured when used with accessory wall comb
- Gel size: 20 x 25 cm, Buffer volume: 2.3 L
- Dimensions (L x W x H): 14.7 x 11 x 4 in. (37.5 x 28 x 10 cm)
- May also be used with programmable power inverter for field inversion electrophoresis

Cat. No.	Price
S98616	\$1,256.00/Ea

fisherbrand Midigel Electrophoresis System

Provide leak-free gel casting in 13 x 16 cm gel tray with two comb positions.

Run up to 32 samples on one gel with combs supplied.

- Available with buffer recirculation method that prevents ionic depletion on long gel runs, keeps ionic gradients from distorting results when multiple sample series are run simultaneously, and prevents pH changes that can cause problems in RNA gels
- Buffer volume: 800 mL
- Can run up to 48 samples on a gel with accessory combs

000017	
\$98617 \$881.0	0/Ea

DuoSource[™] 150 Power Supply

Designed to power any combination of horizontal or vertical electrophoresis units.

- Safety features include a fused UL-approved, three-pronged power plug and non-conductive casing
- Equipped with an easy-to-replace 1 Amp slow burn fuse
- Delivers direct current, constant voltage at settings of 75 and 150V
- · Maximum current is 300mA



 Cat. No.
 Price

 \$11509E
 \$307.00/Ea



QuadraSource[™] Power Supply

Power a combination of electrophoresis units with this 650mA power supply.

Run experiments in the least time possible with this powerful, versatile unit.

- Easy-to-use, fully programmable interface for setting voltage, current or timer control, with each parameter displayed in real time
- Programs may be paused or resumed at any point





Cat. No.	Price
S05704	\$584.00/Ea

White Light Box

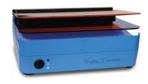
Safely enhance the visualization of DNA stained with FlashBlue[™], proteins stained with Coomassie Blue, and autoradiograms.

- Features a spacious 25 x 25 cm (9.94 x 9.84 in.) viewing area
- Illuminated by long life LEDs
- Housed in a slim aluminum body
- · Does not include an amber gel viewing filter
- · Power rating: 8 watts
- Power supply: uses external 110V power brick

Cat. No.	Price
S11552	\$252.00/Ea

TruBlu™ Blue Light **Transilluminator**

For viewing DNA gels stained with SYBR™ Safe eliminating the need for UV light or ethidium bromide. The unit is optimized to fit Edvotek Gels, and the high intensity control and orange lid ensure superior visualization.



- · Developed in concert with the inventor of the technology under license from Clare Chemical Research, Inc
- Viewing Area: 14.5 cm x 18 cm
- · Optimized for Edvotek Gels
- Blue Light High Intensity Control
- Orange Contrast Lid
- Vivid results
- US Patent Nos. 6,198,107, 6,512,236, 6,914,250
- EP Patent No. 0 965 034
- Made in U.S.A.

Cat. No.	Price
S42878	\$422.00/Ea

Long Wave UV Mini-Lights

Used to detect hydrolysis of fluorescent substrate.

- Hand-held
- · Also detects fluorescent Artemia and Daphnia after their ingestion
- Can also be used for observing fluorescence in Green (gfp) and Blue (bfp) fluorescent proteins

Cat. No.	Price
S95133	\$67.00/Ea

Classroom DNA **Discovery LabStation™**

The reengineered M36 Electrophoresis Apparatus features the latest in electrophoresis design, and supports up to six groups of students.

Includes:

- 1 x M36 HexaGel Electrophoresis Apparatus (7 x 7 cm Trays (6))
- 1 x DuoSource[™] 75 Power Supply
- 2 x Fixed Volume MiniPipette[™] 40 μL
- 1 x Yellow Micropipet Tips 1 to 200 μL (1 Rack of 96 Tips)
- 1 x Whose DNA Was Left Behind

Cat. No.	Price
S72163	\$525 00/Fa

DNA DuraGel™

Designed for students to learn pipetting samples in agarose gels.

- DNA DuraGel[™] gels are permanent polymer gels that allow students to practice the critically important skill of pipetting/gel loading
- The clear, reusable gels are designed for the practice of loading 5 - 35 µL of samples
- The gel grids are imprinted with a ruler for sizing DNA fragments. Also included are simulated FlashBlue™ and ethidium bromide gel images. ideal for representing how actual gels



Gat. No.	Device Holas	Includes	Price
S05711	6 Gels (12 to 24 Students)	6 reusable DNA DuraGel™, 4 FlashBlue™ and 4 Ethidium Bromide gel images, practice gel loading solution and mini-transfer pipets	\$80.00/Ea



Reagents for Electrophoresis

Cat. No.	Description	Price
S11601	Melt and Pour 0.8% UltraSpec-Agarose; 400 mL	\$38.75/Ea
S11601B	Melt and Pour 0.8% UltraSpec-Agarose; 5 × 400 mL	\$191.00/Ea
S11605	UltraSpec-Agarose; DNA Electrophoresis Grade, 20 g	\$66.25/Ea
S11605B	UltraSpec-Agarose; DNA Electrophoresis Grade, 100 g	\$254.00/Ea
S11607	Electrophoresis Buffer, 50X TAE (tris-acetate-EDTA), For 50 L	\$42.75/Ea
S11609	FlashBlue [™] Plus DNA Staining System; For 3 L	\$29.00/Ea
S05678	SYBR™ Safe DNA Stain; 100 μL dilutes to 750 mL	\$226.00/Ea
S94619	Tris-Borate EDTA Buffer 5 L	\$42.75/Ea



Immunology

Immunoelectrophoresis Kit

Intermediate level experiment uses immunoelectrophoresis to separate and characterize a mixture of proteins.

- Lets students examine the specificity of the antigen-antibody interaction
- Identifies proteins based on their combined electrophoretic and immunological properties
- Experiment uses agarose gel electrophoresis

No experiment components contain human serum.

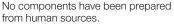


naman coram.	
Cat. No.	Price
S90247ND	\$190.00/Ea

Antigen-Antibody Interaction: The Ouchterlony Procedure Kit

Introduce students to the principles of antigen-antibody interactions using the Ouchterlony procedure.

 Demonstrates a fundamental reaction of immunology — the binding interaction of an antibody to an antigen and its resulting precipitate, which makes it possible to assay



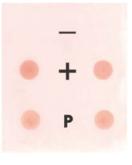


Cat. No.	Price	
S90246ND	\$190.00/Fa	

Clinical Diagnostic Immunoblot

Demonstrates a sensitive immunological assay used in research and clinical laboratories to quantify protein antigens.

Clinical diagnostics kits employ the principles of the immunoblot (dot blot), a technique used to determine the presence of an antigen.



- In this experiment, students will prepare a dot blot membrane to determine the presence of an antigen
- Antigens are absorbed into a membrane that is then treated sequentially with an antigen-specific antibody solution and a secondary antibody conjugated to an enzyme
- The enzyme-substrate reaction generates a color product that precipitates on the membrane, indicating a positive reaction

Cat. No.	Price
S96347	\$190.00/Ea

Southern Blot Analysis For DNA Fingerprinting

Advanced-level experiment for DNA fingerprinting.

This experiment introduces your students to Southern blotting as a tool for "DNA Fingerprinting" in a hypothetical paternity determination.

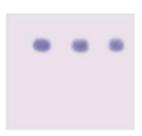


DNA fragments are first separated by agarose gel electrophoresis, then transferred to a nylon membrane, and visualized by staining.

Cat. No.	Price
S11207	\$172.00/Ea

AIDS Kit II: Simulation of HIV Detection by Western Blot

Provides a comprehensive introduction to the molecular biology and pathogenesis of AIDS.



- Separate protein samples using horizontal agarose electrophoresis
- Samples are transferred to a membrane and detected by staining
- Demonstrate the concepts and methodology involved with Western blots

Instructor's guide provides:

- Pre-lab preparations and common pitfalls to avoid
- Answers to study questions and MSDS sheets

Does not contain HIV or its derivatives. No components have been prepared from human sources.

Cat. No.	Price
S66751	\$190.00/Ea



Western Blot Analysis, Polyacrylamide-Based

In Western Blot analysis, protein identification is based on antibody and antigen reactions.

- Proteins are separated on a polyacrylamide gel, and are transferred (blotted) to a nylon membrane
- Membrane is exposed to solutions containing primary antibody, followed by a secondary antibody coupled to an enzyme



- Membrane is then soaked in a substrate solution to develop the color reaction to identify the antigen protein band
- Molecular weights of the visible bands are measured using prestained protein markers of known molecular weight

Experiment times:

- Electrophoresis: one hour
- · Blot: overnight
- Detection: two hours and 30 minutes

Kit does not require an electrotransfer apparatus.



Researching Alzheimer's Disease by ELISA Kit



Students will become neuroscientists searching for Alzheimer's Disease biomarkers. Explores potential biomarkers by analyzing simulated patient samples from control and Alzheimer's Disease populations.

- Storage: some components require refrigerator storage
- · Completion time: 1 class period
- For 10 lab groups

Cat. No.	Price
S27563	\$137.00/Ea

Introduction to ELISA Reactions Kit

Teaches students the concepts of the Enzyme Linked Immunosorbent Assay (ELISA).

- Determine the reaction steps of ELISA

 a precise and sensitive antibody-based detection method for antigens such as bacterial and viral proteins
- · Perishable items shipped separately

No components have been prepared from human sources.

Cat. No.	Price
S90245ND	\$190.00/Ea

AIDS Kit I: Simulation of HIV-1 Detection

Students will perform an ELISA test by coating microtiter plate wells with simulated HIV antigen, and then test simulated donor serum for anti-HIV antibodies.



- A model for HIV-1 detection without the use of blood
- Enzyme-linked immunoabsorbent assay (ELISA) is currently used for initial clinical screening of the blood supply for HIV-1
- Students add simulated HIV antigen to wells in the microtiter plate and follow it with washing and introduction of simulated antibodies of HIV-1 positive or negative samples
- A second antibody is added which binds to the first antibody of HIV-1 positive samples and results in a color change

Note: some kit contents may need to be redeemed by mail.

Cat. No.	Price
\$11271	\$190.00/Ea

Expanding Our Testing: Using ELISA to Detect COVID-19



97

In this simulated medical test, students will perform the ELISA to detect the presence of COVID-19 antibodies in simulated patient samples.

- Hands-on simulation of molecular testing for COVID-19
- Learn about the characteristics of coronaviruses
- Understand antibodies and immunoassays
- Perform an ELISA to detect the presence of COVID-19 antibodies in simulated patient samples
- For 10 Lab Groups
- · Complete experiment in 60 minutes
- Kit includes 10X ELISA wash buffer, ELISA dilution buffer, antigen (lyophilized), primary & secondary antibodies (lyophilized), ABTS substrate (lyophilized), ABTS reaction buffer, microtiter plates, microcentrifuge tubes, & transfer pipets
- All you need: Distilled or deionized water, beakers, pipet pump or bulb, lab glassware, disposable lab gloves, & safety goggles. Recommended: automatic micropipettes (0-50 µl, 100-1000 µl) and tips
- Some components require refrigerator storage
- Please note, this experiment is a simulation and intended solely for educational purposes. There is no virus or human blood products included with this experiment. The experiment will not detect SARS-CoV-2 antibodies in human blood samples.

DISCLAIMERS: Please note, this experiment is a simulation and intended solely for educational purposes. There is no virus or human blood products included with this experiment. The experiment will not detect SARS-CoV-2 antibodies in human blood samples.

Cat. No.	Price
S52002	\$140.00/Ea



Quantitative ELISA Laboratory Activity



Antibodies are highly specific in their recognition of antigens.

- ELISA experiment demonstrates the quantification of varying concentrations of viral antigens as detected by the intensity of the color reaction due to the accumulation of products
- Meets the requirements in the BSCS Blue Biology curriculum
- · Complete in two hours

All you need:

- · Distilled or deionized water
- 37° C incubation oven
- Automatic micropipets with tips
- · Laboratory glassware

Cat. No.	Price
S05654	\$190.00/Ea

PCR, CRISPR, and Bioengineering

Quick PCR

Lets students gain hands-on experience in the principles and practice of the Polymerase Chain Reaction (PCR).

- Experiment uses a set of primers and lambda DNA template in a time-saving, two-step process
- Allows the lab to be completed in one session
- · Does not contain human DNA



Amplification of DNA by PCR

In this easy PCR experiment, students will make billions of copies of a small amount of DNA in just 90 minutes.

- Students simply mix template DNA and primers with PCR beads
- Students then take samples every few PCR reaction cycles and analyze them on a DNA gel
- As they analyze samples, students will see increasing amounts of DNA

Cat. No.	Price
S11330	\$224.00/Ea

Exploring the Genetics of Taste: SNP Analysis of the PTC Gene Using PCR Experiment Kit

To identify the presence of the single nucleotide polymorphism (SNP) in an amplified segment of the PTC gene that links detection of the characteristic taste of PTC paper.

Five Modules Include:

- Extraction of DNA from buccal cells
- Amplifying the segment that contains the polymorphic nucleotide
- Digestion of the amplified fragment with the restriction enzyme that recognizes the SNP
- Analysis by gel electrophoresis
- Tasting the PTC paper to confirm the results obtained

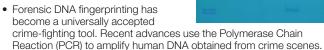
Kit details:

- For 25 reactions
- Complete in 3 hrs. 30 min.
- · Level: Advanced
- Requires wet ice shipment for next day delivery

Cat. No.	Price
S29018	\$271.00/Ea

DNA Fingerprinting by PCR Amplification

Demonstrates the utility of DNA amplification in forensics.



- Develop a basic understanding of DNA fingerprinting
- Experiment is based on a crime scene scenario and has an inquiry-based component
- Enables varied results depending on the selection of DNA fingerprinting patterns
- Students analyze PCR reactions obtained from different suspects and compare them to a crime scene sample
- · Does not contain human DNA

Cat. No.	Price
S94607	\$130.00/Ea



PCR-Based DNA Typing

DNA typing adapted from FBI technology.

A safe experiment for classroom use to demonstrate DNA fingerprinting.

Alu-Human DNA Typing (S66823)

- Examine students' DNA for an Alu element on Chromosome 16
- Investigate DNA patterns
- Compare Alu genotypes with those of their classmates

VNTR Human DNA Typing (S66824)

- Use PCR to fingerprint students' DNA at the D1S80 locus on Chromosome 1
- Provide an example of the variable number of tandem repeat (VNTR) polymorphism

Cat. No.	Includes	Price
S66824	Instructions, proteinase K, PCR EdvoBeads™, control DNA and primers, microtubes, chelating agent, Agarose, DNA ladder, practice Gel loading solution, Gel loading dye, Buffer, FlashBlue™ stain	\$281.00/Ea
\$66823	Instructions, proteinase K, PCR EdvoBeads™, control DNA and primers, microtubes, chelating agent, Agarose, DNA ladder, practice Gel loading solution, Gel loading dye, Buffer, InstaStain™ Ethidium Bromide and FlashBlue™	\$281.00/Ea

Diagnosing Huntington's Using PCR

Students will conduct a DNA fingerprinting exercise on simulated patient samples to determine if

2640bp — 1400 bp — 1100 bp — 1100 bp — 1100 bp — 600 bp — 600 bp — 200 bp —

family members are heterozygous or homozygous for Huntington's Disease. Amplified DNA segments are then analyzed by agarose gel electrophoresis.

- Storage: some components require freezer storage
- Sufficient for 5 complete sets of reactions

Cat. No.	Price
S27564	\$186.00/Ea

Identification of Genetically Modified Foods Using PCR

Some foods, such as tofu and corn flakes, contain raw materials from genetically modified organisms (GMOs).

In this experiment, your students will extract DNA from food or plant material

and perform PCR to determine if any GM indicator genes are present. Amplified DNA is separated and sized by agarose gel electrophoresis.



EdvoCycler[™] Jr. Offers superior

Offers superior performance and ease-of-use in a sleek form factor with a vivid touchscreen display.

- Easy to use and program
- Holds 16 x 0.2 mL PCR samples and 8-tube strip compatible
- 7 inch HD color touchscreen displays real-time cycling data
- Edvotek PCR Programs included, plus storage for 100 more
- Standalone machine no PC or smartphone required
- High precision algorithm yields superior results



- Heated lid prevents sample evaporation
- Active cooling to 4°C
- Instant incubate function
- Temperature range: 4 to 99°C
- Maximum ramp rate: 4°C
- Made in U.S.A.

WARRANTY: Two years

Cat. No.	Price
\$72162	\$744.00/Ea

EdvoCycler[™] 2

Affordable PCR for the classroom without compromise.

The sequel to the bestselling EdvoCycler" has been fully re-imagined to offer the classroom advanced PCR functionality at the lowest sample price. At 48 wells, the Edvocycler" 2 doubles the capacity of the original machine and offers faster performance and ease-of-use in a sleek new form factor with a vivid touchscreen display.



Proudly made in the U.S.A. and backed by a 2 year warranty!

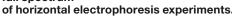
WARRANTY: Two years

Cat. No.	Price
S68640	\$2,291.00/Ea



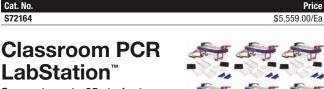
Classroom **PCR Discovery** LabStation[®]

A versatile package suited to run the full spectrum



Includes the following:

- 6 x Cat. #502/504 M12 Complete™ Package (7 x 14 cm Tray & 7 x 7 cm Trays (2)
- 3 x Cat. #509 DuoSource[™] 150 (75/150 V, for 1 or 2 units)
- 6 x Cat. #590 Variable Micropipette (5 to 50 μL)
- 2 x Cat. #534 Piccolo Microcentrifuge
- 1 x Cat. #541-542 EdvoCycler[™] 2 (48 x 0.2 mL)
- 1 x Cat. #557 TruBlu™ Blue Light Transilliminator (14.5 x 18 cm viewing surface)
- 1 x Cat. #539 1.8 L Water Bath



LabStation[®]

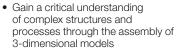
Supports up to 25 students. Includes:

- Six M12 electrophoresis apparatus (7x14 cm and 7x7 cm trays)
- Three DuoSource[™] 150 power supplies (75/150V, for one or two units)
- Six variable micropipets (5 to 5µl)
- Two Piccolo Microcentrifuges
- One EdvoCycler[™] (25 x 0.2 mL)
- One TruBlu[™] Blue Light Transilluminator
- One 1.8 L Digital Water Bath



CRISPR 3D Model Kit

Assemble and use 3D models to visualize and investigate key science structures.



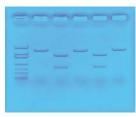


- · Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to engage, explore, explain, extend, and evaluate their understanding of key scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems, and processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Price
S81449	\$47.00/Ea

Using CRISPR to Treat Cystic **Fibrosis Kit**

Simulate the use of CRISPR-Cas9 to target a genetic mutation found in a patient suffering from Cystic Fibrosis. Students



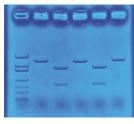
will develop an understanding of guide RNA (gRNA) design, and use agarose gel electrophoresis to examine pre-prepared DNA samples after CRISPR treatment.

- Storage: room temperature stable
- Refrigerator storage of ready-to-load QuickStrip[™] samples recommended
- Suitable for 8 gels
- Expected time: 45 minutes

Cat. No.	Price
S27552	\$132.00/Ea

A-maize-ing Editing: Using **CRISPR to Improve Crops Kit**

Students will assume the role of plant geneticists working to develop corn crops capable of thriving in a changing environment. This experiment will allow students to develop an understanding of CRISPR-Cas9 applications. cleave DNA, and examine results after gel electrophoresis.



- Storage: some components require freezer storage upon receipt
- · Sufficient for 8 gels
- Time range: 80 min. to 105 min.

Cat. No.	Price
S27553	\$153.00/Ea



Hack the Planet: Using CRISPR to Terraform Mars Kit

Simulate the use of CRISPR-Cas9 to modify bacterial DNA, which will then be transformed into auxotrophic E. coli that are incapable of surviving on the Martian surface. Only bacteria that receive the successfully edited DNA can survive, thrive, and help to terraform Mars!



- Storage: some components require freezer storage upon receipt
- Time range: three 1 hr. modules
- For 5 groups

Cat. No.	Price
S27554	\$244.00/Ea

Engineer and Explore Your Own Enteric Coated Drugs (STEM)

Students will learn the basic structures and pathway of the digestive system, understand the digestive functions of the stomach and small intestine, and investigate how the properties of different enteric coatings react



in different sections of the digestive system.

- Students explore the purpose of an enteric coating and engineer a simulated coating most suitable for certain pharmaceutical needs
- Materials for 15 groups
- · Includes teacher's manual and student guide
- Aligned to the Next Generation Science Standards (NGSS)
- Disciplinary core ideas: ETS1.A; ETS1.B; LS1.A; ETS1.C
- Performance expectations: MS-LS1-3; MS-LS1-7; MS-ETS1-1; MS-ETS1-2; MS-ETS1-3; MS-ETS1-4; HS-LS1-2; HS-ETS1-2
- Cross cutting concepts: energy and matter; influence of science, engineering and technology on society and the natural world; systems and system models
- Engineering practices: developing and using models; asking questions and defining problems; analyzing and interpreting data; engaging in argument from evidence; constructing explanations and designing solutions

DISCLAIMERS: Next Generation Science Standards is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards was involved in the production of, and does not endorse, this product.

Cat. No.	Price
S40764	\$59.75/Ea

Linking STEM to Agarose Gel Electrophoresis Educational Kit

Help students learn how gel electrophoresis is used in DNA fingerprinting, DNA paternity testing, genetics (related to health and well-being), and the detection of genetically modified foods. Comes with four unique module options.



- Links STEM concepts using agarose gel electrophoresis
- Dyes can be separated in agarose gels and students will use core STEM tools to determine band size
- · Utilize critical thinking and reasoning skills
- For 10 lab groups
- Complete in 45 minutes
- · Level: beginner

Cat. No.	Price
S29009	\$85.00/Ea

Engineering a Drug Delivery System Kit

Teaches students about the importance of drug delivery by testing simulated delivery systems in environments that mimic different parts of the body.



- Biomedical engineers design devices, equipment, and processes to improve medical treatment methods, the quality of human health, and life
- They apply engineering principles to biology and medicine to create products such as prosthetic limbs and artificial organs, among others
- One major focus of biomedical engineers is the design of drug delivery systems, which can control the transport and release of medicine in the body to more effectively treat diseases and illnesses
- Students will learn what properties must be considered when designing new drug delivery systems
- The delivery systems will be analyzed and compared, allowing students to engineer an optimal solution
- This lab has enough materials for 15 lab groups
- Teacher's manual and student guide are included

Cat. No.	Price
S27126	\$71.50/Ea





Engineer and Explore Materials for Prosthetics Kit



Investigates materials that biomedical engineers use when creating prosthetic devices. Students identify the physical properties of various metals, ceramics, and polymers to determine which are most suitable for use.

Students will:

- Investigate the physical properties of various metals, ceramics, and polymers to understand how they differ
- Then students will determine which materials would be most suitable for use in a hip replacement prosthetic
- Students will then engineer their own prosthetic arm that meets design requirements and mimics the functionality of a real hand
- Kit contains enough materials for 15 groups
- Teacher's manual and student study guide copy masters are included

⚠ ALERTS: CHOKING HAZARD, Children under 8 yrs. can choke or suffocate on uninflated or broken balloons. Adult supervision required. Keep uninflated balloons from children. Discard broken balloons at once.

Cat. No. Price \$27127 \$356.00/Ea

Biomaterials To Make Your Own Contact Lenses



Engineers play an integral role in finding a ratio of materials

to maximize the desired properties and decrease the negative effects of other properties. Students will engineer a lens using 2 different materials.

- Students will determine the correct material and the concentration that has similar properties as a contact lens, while discovering the correct optical properties, tensile strength and hydrophobicity
- A hydrogel is a polymer like plastic, which has favorable optical properties and favorable flexibility/strength but like paper and glasses/ceramics is hydrophilic, which is necessary for a contact lens to function properly
- Aligned to the Next Generation Science Standards (NGSS)
- Disciplinary core ideas: ETS1.A; ETS1.B; ETS1.C; PS1.A
- Performance expectations: MS-ETS1-1; MS- ETS1-3; MS- ETS1-4; HS-PS1-3; HS-ETS1-2
- Cross cutting concepts: influence of science, engineering and technology on society and the natural world, patterns
- Engineering practices: asking questions and defining problems, analyzing and interpreting data, constructing explanations and designing solutions, planning and carrying out investigations

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Cat. No.	Price
S40765	\$73.75/Ea

Stem Investigations: Design a Biodegradable Plastic Kit

Learn how engineers develop bioplastics that

break down quickly and produce less harmful byproducts. In this lab, students make samples of bioplastics to study how composition affects physical properties.

- Hundreds of millions of tons of plastic are produced each year and used for a variety of products, from packaging to automobiles
- The majority of these products are disposable items, leading to excessive amounts of plastic being discarded into landfills and the oceans
- Due to the major threat this poses to the environment, scientists and engineers are developing bioplastics that break down more quickly, and produce less harmful byproducts than traditional plastics
- In this activity, students will make samples of different bioplastics to study how composition affects their physical properties
- They will then use what they have learned to create a bioplastic that could be used to replace PET plastic in disposable water bottles
- Additionally, students will design an experiment to compare the biodegradability of their bioplastic samples to a traditional plastic
- Kit contains enough materials for 15 groups
- Teacher's manual and student study guide copy masters are included

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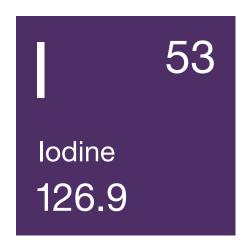
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