

BOCES Science

Elementary-level Science (ELS)

&

Intermediate-level Science (ILS)

Investigation Kit Catalog

2024-2025

Beginning in Spring 2024 the new Elementary- and Intermediate-level Science Tests were administered to students in Grades 5 and 8, respectively. These tests are designed to measure students' understanding of science skills and concepts contained in the New York State Science Learning Standards (NYSSLS).

Prior to the written test, students will be expected to participate in a series of *Investigation* tasks. *Investigation* tasks are designed to be embedded into instruction and can be offered at any time in the school year.

The four required *Investigation* tasks for the Elementary-level Science are:

- What's in the Bag?: Structure and Properties of Matter (PE: 5-PS1-4)
- Cloud in a Bottle: Weather and Climate (PE: 3-ESS2-3)
- Light It Up: Energy (PE: 4-PS3-4)
- Circle of Life: Life Cycles and Traits (PE: 3-LS1-1)

The four required *Investigation* tasks for the Intermediate-level Science are:

- All Mixed Up: Structures and Properties of Matter (PE: MS-PS1-8)
- Cool It!: Energy (PE: MS-PS3-4)
- It's Alive?: Structure, Function, and Information Processing (MS-LS1-1)
- How's the Weather Up There?: Weather and Climate (MS-ESS2-5)

BOCES 4 Science is proud to offer *Investigation Kits* for both the Elementary- and Intermediate-level Science *Investigation* tasks.

Each kit contains NYSED-specified materials, or approved substitutes, for the corresponding Investigation.

Note: "How's the Weather Up There?" and "Circle of Life" do not have an associated kit of materials. Please download and print materials from the NYSED assessment portal.



Elementary & Intermediate Level Science Investigations



ELEMENTARY

1 ENERGY: *Light It Up*

Students design, test and refine electric circuits that convert one form of energy to another. Students will connect these concepts to electric devices in their lives.

2 INHERITANCE & VARIATION OF TRAITS - LIFE CYCLES AND TRAITS: *Circle of Life*

Students will create life cycle models of three unique and diverse organisms. They will identify differences while showing all have birth, growth, reproduction and death in common.

3 STRUCTURE & PROPERTIES OF MATTER: *What's in the Bag?*

Students mix two substances in a closed system and will determine through evidence if a new substance has been formed. They will also investigate how physical properties can impact rates of reactions.

4 WEATHER & CLIMATE: *Cloud in a Bottle*

Students work collaboratively to investigate weather variables that affect cloud formation. They will explore processes of the water cycle and their relationships with weather/climate.

INTERMEDIATE

1 ENERGY: *Cool It!*

Students analyze data to determine the relationship between the mass of a metal and the amount of heat energy the metal is able to transfer to water. They will plan, conduct and assess their own experiments.

2 STRUCTURE, FUNCTION & INFORMATION PROCESSING: *It's Alive?*

Using a microscope, students will make observations to provide evidence that living things are made up of cells. They will also determine that cells have individual parts that help the cell's overall function.

3 STRUCTURE & PROPERTIES OF MATTER: *All Mixed Up*

Students will design and conduct an experiment to separate a mixture into its individual components and to identify those components.

4 WEATHER & CLIMATE: *How's the Weather Up There?*

Students will collect and analyze weather variable data from weather maps of five consecutive days to determine how the motion and interactions of air masses cause changes in weather.



BOCES 4 Science Unit Alignment with Elementary-level *Investigation* tasks

BOCES **4** Science



Circle of Life

Grade 3: Generations of Butterflies (after unit)
Grade 5: Deer, Deer Everywhere! (after lesson 10)



Cloud in a Bottle

Grade 3: Investigating Weather and Climate (after lesson 7)
Grade 5: Got Water (lesson 6)



Light It Up

Grade 4: Powering Thru the Fair (unit introduction)



What's in the Bag?

Grade 5: Toys Matter (after lesson 8)

Investigation Kits Information

Updated for Fall 2024

The information and prices contained in this *Investigation Kit Catalog* are valid through December 31, 2024. Orders and/or financial commitments received after December 31, 2024 will be subject to potential price increases based on market prices for raw materials.

Please note the following information:

- Availability of Full Kits – these kits provide hands-on materials for 1 teacher with 30 students.
- Kits will be based on a purchase-only model.
- Additional materials may be purchased as needed; please contact BOCES 4 Science for an official quote.
 - Materials will be prioritized for Investigation kits, based on availability.
- Teacher and student directions and answer packets will not be provided with kits. These should be downloaded via the NYSED assessment portal.

Since the *Investigation Tasks* were released by NYSED, there have been persistent supply chain issues and material shortages impacting our ability to procure the necessary supplies for kits. This has impacted vendors throughout New York State – which has caused increased prices and delays in providing materials.

In 2023-2024 BOCES 4 Science was able to provide over 2,000 Investigation Kits to classrooms – ensuring that students were able to complete the *Investigation Tasks* as required by New York State.

We continue to work to obtain materials and produce kits, while understanding that the same materials we are looking for are needed throughout New York State. We are committed to providing the best product and services possible – even in these unprecedented times.

Thank you for your understanding.

BOCES 4 Science is a leader in PK-12 science education – and we will continue to work to ensure that each student has access to the best instructional materials.

As part of our ongoing commitment to science education, we are keeping 2023-2024 prices on all Investigation Kits for the 2024-2025 school year.

Please complete and submit pages 6 and 7 for your order.

Please call or email Steven Montemarano, Director of BOCES 4 Science, with any questions.

Contact Information:

Steven Montemarano

585-617-2360

smontema@boces4science.org

*Note: Investigation kits will not be shipped without a fully executed financial commitment from the district. This includes Purchase Orders, Cross-Contracts, and approved Service Agreements.

BOCES 4 Science Budget Worksheet 2024-2025

District:	
BOCES:	
Contact Name:	
Title:	
Address	
Telephone:	
Fax:	
Email:	

Please send all appropriate order forms with your request to

Monroe 2-Orleans BOCES

Gina Vaccarella
771 Elmgrove Road
Rochester Tech Park, Building 2
Rochester, NY 14624
Fax #: 585-352-1157
Phone #: 585-617-2363
gvaccare@boces4science.org

*Note: Investigation kits will not be shipped without a fully executed financial commitment from the district. This includes Purchase Orders, Cross-Contracts, and approved Service Agreements.

Purchase Order Form: Full Kits

(Materials for 1 teacher and 30 students)

Kits and materials subject to material availability

Please refer to page 5 for further information regarding kits

Elementary-level *Investigation* kits

<i>Investigation</i> Kit Title	Cost	Quantity	Sub-Total	Approximate Date for use in classroom*
Cloud in a Bottle	\$290			
Light it Up	\$635			
What's in the Bag?	\$230			
Sub-Total			(1)	

*Note: BOCES 4 Science will make every attempt to provide materials prior to the date requested. Actual delivery date will be based on district orders, submission of financial commitment, and material availability.

Intermediate-level *Investigation* kits

<i>Investigation</i> Kit Title	Cost	Quantity	Sub-Total	Approximate Date for use in classroom*
It's Alive	\$510			
Cool It!	\$240			
All Mixed Up	\$260			
Sub-Total			(2)	

*Note: BOCES 4 Science will make every attempt to provide materials prior to the date requested. Actual delivery date will be based on district orders, submission of financial commitment, and material availability.

Total Purchase Cost

Elementary-level <i>Investigation</i> kit subtotal – line (1)	
Intermediate-level <i>Investigation</i> kit subtotal – line (2)	
Administrative Charge – 5.2% *Note: No Administrative charges for Monroe 1, Monroe 2-Orleans, Wayne Finger-Lakes, or Genesee Valley BOCES	
Shipping Charge – 13% *Note: No Shipping charges for Monroe 1, Monroe 2-Orleans, Wayne Finger-Lakes, or Genesee Valley BOCES	
Total	

Replacement Materials:

Please contact:

Steven Montemarano, Director of BOCES 4 Science

smontema@boces4science.org

585-617-2360

for an official quote.

Inventory Policy:

Please inventory your materials upon arrival. Any missing/damaged parts must be reported to BOCES 4 Science within 2 weeks of the delivery date.

Financial Commitment:

Investigation kits will not be shipped without a fully executed financial commitment from the district. This includes Purchase Orders, Cross-Contracts, and approved Service Agreements.

Unfortunately, we cannot accept checks or credit cards.

Investigation Kit Supplies

ELS Investigation Kits

<h3>LIGHT IT UP</h3> <p>General Supplies</p> <ul style="list-style-type: none">15 Bags each includes the following:<ul style="list-style-type: none">2 “D” Cell Batteries2 Plastic Battery Holders10 Connectors w/Alligator Clips at both ends3 #48 bulbs3 Mini light bulb Holders1 Electrical Switch10 Extra #48 Bulbs	<h3>WHAT’S IN THE BAG?</h3> <p>General Supplies</p> <ul style="list-style-type: none">15 Bags24 Alka Seltzer Tablet15 Small Plastic Petri Dish (tops and/or bottoms)15 100ml Graduated Cylinder & Base15 Plastic Cups15 Stopwatches1 Box of Matches1 Pad of Post It Notes1 Roll of Blue Tape2 2 Liter or ½ Gallon Bottles1 Package of Paper Towel1 SDS Information Packet30 Safety Goggles1 Sign of each:<ul style="list-style-type: none">“WHOLE TABLET”“FOUR PIECES”“MANY SMALL PIECES” <p>Teacher to Supply</p> <ul style="list-style-type: none">1 Blank Copy of Data Table 2
<h3>CLOUD IN A BOTTLE</h3> <p>General Supplies</p> <ul style="list-style-type: none">15 1 Liter Bottle Temperature Strip Assembly35 Insulated Cup w/line15 50ml Graduated Cylinder & Base2 Thermos Containers2 Box of Matches1 Blue Sharpie Marker1 Red Sharpie Marker1 SDS Information Packet30 Safety Goggles <p>Teacher to Supply</p> <ul style="list-style-type: none">2 Data Table 2	

ILS Investigation Kits

ALL MIXED UP

General Supplies

- 1 16 oz. Clear Container w/lid & labeled Mixture 1
- 1 16 oz. Clear Container w/lid & labeled Mixture 2
- 1 16 oz. Clear Container w/lid & labeled Mixture 3
- 1 16 oz. Clear Container w/lid & labeled Mixture 4
- 4 4 oz. Clear Container w/lid & labeled Mixture 1
- 4 4 oz. Clear Container w/lid & labeled Mixture 2
- 4 4 oz. Clear Container w/lid & labeled Mixture 3
- 3 4 oz. Clear Container w/lid & labeled Mixture 4
- 6 50 ml Graduated Cylinder w/base
 - 1 150ml Bottle of Mineral Oil
 - 3 25ml Bottles of Mineral Oil
- 45 Large Plastic Petri Dish Pieces (Tops and/or Bottoms)
 - 1 Package of Paper Towel
 - 1 Roll of Blue Tape
 - 1 SDS Information Packet
- 30 Safety Goggles
- 10 Plastic Tweezers
- 10 Pipettes
- 10 Magnet
- 15 Plastic Funnel
- 15 Filter Paper
- 10 2" Sieve
- 10 9 oz. Plastic Cup
- 10 12" Metric Ruler
- 10 Hand Lenses

Teacher to Supply

- 15 Substance Identification Flowcharts

IT'S ALIVE

General Supplies

- 5 Microscope Slides – Human Hair
- 5 Microscope Slides – Thread
- 5 Microscope Slides – Sand
- 5 Microscope Slides – Paramecium
- 5 Microscope Slides – Euglena
- 5 Microscope Slides – Elodea
- 5 Microscope Slides – Yeast
- 5 Microscope Slides – Human Cheek Cell (squamous epithelial)
- 5 Microscope Slides – Human Nerve Cell (multipolar neuron)
- 5 Microscope Slides – Onion Bulb Epidermis (allium cepa)
- 5 Microscope Slides – Onion Root Tip (allium)
- 1 Set Microscope Placements

Teacher to Supply

- Microscopes

COOL IT!

General Supplies

- 15 Insulated Cup w/lid
- 15 100ml Graduated Cylinder & Base
- 1 Bag of Metal Washers (approximately 150 washers)
- 15 2-Liter Plastic Bottle

Shared by Class

- 4 Tongs
- 1 Package of Paper Towels

Teacher to Supply

- Hot plates
- Kettle Pot

