

MIDDLE SCHOOL SCIENCE GRADES 6-8

The middle school program builds on the success of the elementary inquiry-based science kits by providing high quality materials to keep the developing adolescent motivated and successful in science. These two-day trainings are designed to provide middle school teachers with experiences in the initial use of the new instructional materials. Teachers will learn how to use the materials and strategies. They will increase their content knowledge in relation to the topic.

<p>G R A D E 6</p>	<p style="text-align: center;">Light (STC) 7 tote unit, 32 student guides</p> <p>Students progress through a series of carefully sequenced activities that introduce the behavior of light, its properties, and many uses. Lessons are divided into three sections: The Nature of Light, Reflection and Refraction, and Using Light.</p> <p>Lab requirements: Must have access to several electrical outlets. Classroom sets provide needed tubes and consumables for each additional class taught</p>	<p style="text-align: center;">Diversity of Life (FOSS) 2 tote unit, 16 student guides</p> <p>Students observe and maintain protists, plants, and animals in the classroom and study their characteristic features. The study progresses from macroscopic to microscopic observation to discover the fundamental unit of life, the cell. Students then investigate organism subsystems and behaviors and consider their adaptive advantages for reproduction and survival.</p> <p>Lab requirements: Must have microscopes with 4x, 10x and 40x optics and electronic balances. Extra classroom sets are essential with this unit. Requires groceries to be purchased.</p>	<p style="text-align: center;">Planetary Science (FOSS) 2 tote unit, 16 student guides</p> <p>Students study the Earth as a celestial object before progressing to lunar science and lunar exploration, and then on to the Solar System. Activities explore the origin of the Moon, celestial motions, Moon phases, lunar geology, cratering processes, imaging technologies, scaling, and space exploration.</p> <p>Lab requirements: Balances and mass sets needed. Some groceries must be purchased.</p>
<p>G R A D E 7</p>	<p style="text-align: center;">Energy, Machines & Motion (STC) 5 tote unit + 5 large boxes, 32 student guides</p> <p>During the module students construct a variety of machines as they explore both physical science and technological design concepts: <i>Energy</i>, investigating how forces transform energy; <i>Machines</i>, conducting inquiries to learn how simple machines work; <i>Motion</i>, exploring the motion of three student-built vehicles.</p> <p>Lab requirements: Must have a balance, hammer and access to several electrical outlets. Additional classroom sets are essential if teaching more than one class of science. Many parts and pieces (KNEX building blocks).</p>	<p style="text-align: center;">Human Body Systems (STC) 8 tote unit, 32 student guides</p> <p>Middle school students have a natural curiosity about their bodies and how they work. This module taps that curiosity and helps students extend their knowledge through a series of lessons divided into three sections: Digestive System, Respiratory and Circulatory Systems, and Musculoskeletal System.</p> <p>Lab requirements: Must have access to sink and fan (light walnuts & marshmallows on fire). Classroom sets provide consumables for each additional class taught. Some groceries to be purchased.</p>	<p style="text-align: center;">Catastrophic Events (STC) 10 tote unit, 32 student guides</p> <p>The module begins with students using a globe to assess geological and atmospheric patterns related to storms, earthquakes, volcanoes, and other catastrophic events. The three parts of the module then build on this initial activity. Lessons are divided into three sections: Storms, Earthquakes, and Volcanoes.</p> <p>Lab requirements: Need computer and projector for CD-ROM images. Access to ice and electrical outlets. Will need to collect 2-liter bottles and purchase some groceries.</p>

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Properties of Matter (STC)

8 tote unit, 32 student guides

This module offers a series of carefully sequenced inquiries to develop students' understanding about what matter is, what its properties are, and how it behaves. Three part module: Characteristic Properties of Matter; Mixtures and Solutions; Compounds, Elements, and Chemical Reactions.

Lab requirements: Burners & burner stands (either alcohol or gas) are required! Many chemicals are used in this unit. Goggles and access to sink are essential.

Populations & Ecosystems (FOSS)

2 tote unit, 16 student guides

Students raise populations of organisms to discover population dynamics in a range of conditions from ideal to extreme. Populations (producers and consumers) are put together to discover balance. Concepts: predator/prey, food chain, consumer, producer, population, interdependence, ecosystem.

Lab requirements: Many organisms are provided with this unit, have your habitats ready. Need room (flat surfaces) to setup and observe mini-ecosystems. Some groceries to be purchased.

Earth History (FOSS)

2 tote unit, 16 student guides

Students investigate rocks and fossils from the Grand Canyon to discover clues that reveal Earth's history. They study the processes that created the rocks. Students then use the knowledge and data from rock observations to make inferences about organisms, environments, and events that occurred over Earth's history.

Lab requirements: Some groceries and supplies must be purchased.