

Life Science Focus

Guiding Question:

How do matter and energy flow through ecosystems?

How do science and technology affect the quality of our lives?

Content Standards:

Populations in ecosystems are affected by biotic factors, such as other populations, and abiotic factors, such as soil and water supply.

Populations in ecosystems can be categorized as producers, consumers and decomposers of organic matter. Water moving across and through earth materials carries with it the products of human activities. Most precipitation that falls on Connecticut eventually reaches Long Island Sound.

Benchmark/ Expected performance

Unit

Materials

Field trips/
Outdoor Ed

Students will:

<ol style="list-style-type: none">1. Know how abiotic factors such as temperature, water and sunlight affect plants' ability to create their own food through photosynthesis.2. Know how populations are affected by predator-prey relationships.3. Be able to describe common food webs in different Connecticut ecosystems.	Ecosystems	Hach Water Testing Kits	Vernal Pool Hammonasset
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<p>4. Know how septic and sewage systems affect the quality of surface and ground water sources.</p> <p>5. Know how human activity may impact water resources in Connecticut such as local ponds, rivers and the Long Island Sound ecosystem.</p>			
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Physical Science Focus

Guiding Question:

How does the structure of matter affect the properties and uses of materials?

Content Standards:

Mixtures are made of combinations of elements and/or compounds, and they can be separated using a variety of physical means.

Pure substances can be either elements or compounds, and they cannot be broken down by physical means.

Benchmark/ Expected performance

Unit

Materials

Field trips/
Outdoor Ed

Students will:

1. Know the properties of common elements such as oxygen, hydrogen, carbon, iron and aluminum.	Properties of Matter	Atomic models?	Bristol-Meyers
2. Know how the properties of simple compounds, such as water and table salt, are different from the properties of the elements of which they are made.	Mystery Powders		
3. Know how mixtures can be separated by using the properties of the substances from which they are made, such as particle size, density, solubility and boiling point	Sink or Float PIMMS vol. Vs. material		

Earth/Space Focus

Guiding Question: How do external and internal sources of energy affect the Earth's systems?

Content Standard:

Local and regional weather are affected by the amount of solar energy the area receives and proximity to a large body of water.

Benchmark/ Expected performance

Unit

Materials

Field trips/
Outdoor Ed

Students will:

<ol style="list-style-type: none"> 1. Understand the effect of heating on the movement of molecules in solids, liquids and gases. 2. Know how local weather conditions are related to the temperature, pressure and water content of the atmosphere and proximity to a large body of water. 3. Know how the uneven heating of the Earth's surface causes winds and affects the seasons. 	<p style="text-align: center;">Weather</p>	<p>Flexible Arm Lamps</p> <p>National Geographic Books</p> <p>C/F thermometers</p> <p>Glass barometer</p> <p>Aneroid barometers</p> <p>Sling</p>	<p>Talcott Mountain lab</p>
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