## Life Science Focus

**Guiding Questions:**
**How are organisms structured to ensure efficiency and survival?**
**What are the processes responsible for life's unity and diversity?**
**How do materials cycle through the earth's systems?**

**Content Standards:**
**Living things have different structures and behaviors that allow them to meet their basic needs.**
**Organisms change their form and behavior as part of their life cycles.**
**Earth materials have varied physical properties which make them useful in different ways.**

| Benchmark/Expected Performance<br>*Students will:* | Unit | Materials | Field trips/ Outdoor Ed |
|---|---|---|---|
| 1. Identify living, once-living and non-living things<br>2. Know that plants take in water and nutrients, give off wastes, grow, respire, reproduce, and respond to stimuli in their environment<br>3. Classify plants into groups based on characteristics<br>4. Describe characteristics of plants and identify their functions<br>5. Identify characteristics of plants that help them survive in their environment | Plants | Dimensions unit<br>Teacher materials | Connwood<br>Foresters<br>Chatfield Hollow<br>Wadsworth Falls<br>Nature walks |

| | | | |
|---|---|---|---|
| 6. Describe similarities and differences between plants and animals<br>7. Describe how plants and animals depend on one another to live<br>8. List the living and non-living components of an ecosystem and describe their interdependency<br>9. Know that plants can sometimes cause changes in their environment<br>10. Describe the life cycles of flowering plants (seed germination, growth, flowering, pollination, and seed dispersal.<br>11. Observe and describe the effects of light and water on seed germination and plant growth.<br>12. Sort different soils by properties such as particle size, color and composition.<br>13. Understand that properties of soil affect water retention and plant growth. | | | |

## Physical Science Focus

**Guiding Questions:**
**What makes objects move the way they do?**
**How do objects balance?**

**Content Standards:**
**An object's motion is determined by the force applied to it.**
**Objects that are balanced share common principles.**

| Benchmark/Expected Performance<br>*Students will:* | Unit | Materials | Field trips/<br>Outdoor Ed |
|---|---|---|---|
| 1. Know that many different objects and shapes can be made to balance.<br>2. Know that a stable position is one that an object or system returns to after being put into motion.<br>3. Be able to demonstrate that objects near the earth are pulled toward it by the force of gravity.,<br>4. Know that the point of balance of an object or system can be changed by counterweighting.<br>5. Know that a mobile is a system of balanced beams and masses<br>6. Know that objects and systems that go around exhibit rotational motion and that there are different kinds of rotational motion.<br>7. Know that the amount and position of mass affects how an object or system rotates.<br>8. Know that there are different ways to initiate rotational motion in objects and systems. | Balance and Motion | Foss Kit | Eli Whitney Museum<br>Science Center of Connecticut |

## Earth/Space Focus

**Guiding Questions:**
**How do internal and external sources of energy affect the earth's systems?**

**Content Standards:**
**Weather conditions vary daily and seasonally.**

| Benchmark/Expected Performance<br>*Students will:* | Unit | Materials | Field trips/ Outdoor Ed |
|---|---|---|---|
| 1. Identify and use simple weather instruments (thermometer, rain gauge, wind vane).<br>2. Observe and record weather changes<br>3. Know that air contains water, that clouds are made of water and ice, and that precipitation comes from clouds<br>4. Know what seasons exist in New England<br>5. Know that the Sun affects the weather on Earth<br>6. Know that there are different forms of precipitation and identify these forms<br>7. Know and describe the damage caused by severe weather | Weather | Dimensions Unit | Meteorologist |