Connecticut Science

Grade 3

Adopted 2010

Properties of Matter

1. **Materials have properties that can be identified and described through the use of simple tests.** 3.1
    1. Compare and contrast the properties of solids, liquids and gases.
    2. Demonstrate that solids, liquids and gases are all forms of matter that take up space and have weight.
    3. Carry out simple tests to determine if materials dissolve, sink or float in water; conduct heat; or attract to magnets.
    4. Classify materials based on their observable properties, including state of matter.
    5. Design and conduct fair tests to investigate the absorbency of different materials, write conclusions based on evidence, and analyze why similar investigations might produce different results.
    6. Explain the role of heating and cooling in changing matter from one state to another during freezing, melting, evaporation and condensation.

Heredity and Evolution

2. **Organisms can survive and reproduce only in environments that meet their basic needs.** 3.2
    1. Compare and contrast the external features and behaviors that enable different animals and plants (including those that are extinct) to get food, water and sunlight; find mates; and be protected in specific land and water habitats.
    2. Explain how behaviors such as hibernation, dormancy and migration give species advantages for surviving unfavorable environmental conditions.
    3. Give examples of ways animals benefit from camouflage.
    4. Evaluate whether an adaptation gives a plant or animal a survival advantage in a given environment.
    5. Design a model of an organism whose adaptations give it an advantage in a specific environment.

Science and Technology in Society

4. **Earth materials provide resources for all living things, but these resources are limited and should be conserved.
 This content standard is an application of the concepts in content standard 3.1 and 3.3 and should be integrated into one of these units.** 3.4
    1. Describe ways people use earth materials, such as fossil fuels, trees, water, soils and rocks as natural resources to improve their lives.
    2. Summarize nonfiction text to explain how humans use technology to access and use natural resources to produce electricity or other products (e.g., paper or concrete).
    3. Explain advantages and disadvantages of renewable and nonrenewable energy sources that can be used for making electricity, fueling cars or heating homes.
    4. Design and conduct experiments to evaluate the effectiveness of different insulating materials for keeping a substance warm or cold (i.e., conducting heat).
    5. Use mathematics to estimate, measure and graph the quantity of a natural resource (e.g., water, paper) used by an individual (or group) in a certain time period.
    6. Distinguish among reducing, reusing, recycling and replacing as conservation techniques.

The Changing Earth

3. **Earth materials have different physical and chemical properties.** 3.3
    1. Differentiate between rocks and minerals.
    2. Use the senses and simple measuring tools to gather data about various rocks and classify them based on observable properties (e.g., shape, size, color, weight, visible markings).
    3. Conduct simple tests to determine properties of different minerals (e.g., color, odor, streak, luster, hardness, magnetism), organize data in a table, and use the data and other resources to identify unknown mineral specimens.
    4. Summarize nonfiction text to compare and contrast the conditions under which igneous, metamorphic and sedimentary rocks are formed.
    5. Observe and analyze rock properties (e.g., crystal size or layers) to infer the conditions under which the rock was formed.
    6. Evaluate the usefulness of different rock types for specific applications (e.g., buildings, sidewalks, stone walls, statues or monuments).