Connecticut Science

Grade 1

Adopted 2010

Science and Technology in Society

4. **The properties of materials and organisms can be described more accurately through the use of standard measuring units.
 This content standard should be integrated within all PK–5 standards.** 1.4
    1. Use nonstandard and standard measurements to describe and compare the weight, length and size of objects and organisms.
    2. Show approximate size of a centimeter, meter, inch, foot and yard using referents such as a finger, a hand or a book.
    3. Select appropriate tools for measuring length, height, weight or liquid volume.
    4. Use metric and customary rulers to measure length, height or distance in centimeters, meters, inches, feet and yards.
    5. Use balances and scales to compare and measure the heaviness of objects and organisms in kilograms, grams, pounds and ounces.
    6. Use graduated cylinders, beakers and measuring cups to measure the volume of liquids in milliliters, liters, cups and ounces.
    7. Use thermometers to measure air and water temperature in degrees Celsius and degrees Fahrenheit.
    8. Make graphs to identify patterns in recorded measurements such as growth or temperature over time.

Forces and Motion

1. **The sun appears to move across the sky in the same way every day, but its path changes gradually over the seasons.** 1.1
    1. Compare and contrast the relative positions of objects using words (in front of, behind, next to, inside of, above or below) and numbers (by measuring its distance from another object).
    2. Apply direct and indirect pushes and pulls to cause objects to move (change position) in different ways (e.g., straight line, forward and backward, zigzag, in a circle).
    3. Classify objects by the way they move (e.g., spinning, rolling, bouncing).
    4. Conduct simple experiments and evaluate different ways to change the speed and direction of an object's motion.
    5. Observe, record and predict the sun's position at different times of day (morning, noon, afternoon or night).

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6. Conduct simple investigations of shadows and analyze how shadows change as the relative position of the sun (or an artificial light source) changes.

Structure and Function

2. **Living things have different structures and behaviors that allow them to meet their basic needs.** 1.2
    1. Infer from direct observation and print or electronic information that most animals and plants need water, food and air to stay alive.
    2. Identify structures and behaviors used by mammals, birds, amphibians, reptiles, fish and insects to move around, breathe and obtain food and water (e.g., legs/wings/fins, gills/lungs, claws/fingers, etc.)
    3. Sort and classify plants (or plant parts) by observable characteristics (e.g., leaf shape/size, stem or trunk covering, flower or fruit).
    4. Use senses and simple measuring tools to measure the effects of water and sunlight on plant growth.
    5. Compare and contrast information about animals and plants found in fiction and nonfiction sources.

3. **Organisms change in form and behavior as part of their life cycles.** 1.3
    1. Explain that living things experience a life cycle during which they undergo a predictable sequence of changes from birth, growth, reproduction and death.
    2. Distinguish between animals that are born alive (e.g., humans, dogs, cows) and those that hatch from eggs (e.g., chickens, sea turtles, crocodiles).
    3. Compare and contrast the changes in structure and behavior that occur during the life cycles of animals that undergo metamorphosis with those that do not.
    4. Analyze recorded observations to compare the metamorphosis stages of different animals, and make predictions based on observed patterns.