Colorado Science

Grade 5

Adopted 2020

Physical Science PS1

1. **Matter exists as particles that are too small to be seen; measurements of a variety of observable properties can be used to identify particular materials.** PS1.5.1
   a. Develop a model to describe that matter is made of particles too small to be seen. PS1.5.1.A
   b. Make observations and measurements to identify materials based on their properties. PS1.5.1.B

2. **Chemical Reactions that occur when substances are mixed can be identified by the emergence of substances with different properties; the total mass remains the same.** PS1.5.2
   a. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling or mixing substances, the total weight of matter is conserved. PS1.5.2.A
   b. Conduct an investigation to determine whether the mixing of two or more substances results in new substances. PS1.5.2.B

3. **The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center.** PS1.5.3
   a. Support an argument that the gravitational force exerted by Earth on objects is directed down. PS1.5.3.A

4. **The energy released from food was once energy from the sun.** PS1.5.4
   a. Use models to describe that energy in animals' food (used for body repair, growth and motion and to maintain body warmth) was once energy from the sun. PS1.5.4.A

Life Science LS2

1. **Plants acquire their material from growth chiefly from air and water.** LS2.5.1
   a. Support an argument that plants get the materials they need for growth chiefly from air and water. LS2.5.1.A

2. **Matter cycles between air and soil and among plants, animals and microbes as these organisms live and die.** LS2.5.2
   a. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. LS2.5.2.A

Earth and Space Science ESS3

1. **Stars range greatly in size and distance from Earth, and this can explain their relative brightness.** ESS3.5.1
    a. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from the Earth. ESS3.5.1.A
    2. Earth's orbit and rotation and the orbit of the moon around earth cause observable patterns. ESS3.5.2
    a. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. ESS3.5.2.A

3. **Earth's major systems interact in multiple ways to affect Earth's surface materials and processes.** ESS3.5.3
    a. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere and/or atmosphere interact. ESS3.5.3.A

4. **Most of Earth's water is in the ocean and much of Earth's freshwater in glaciers or underground.** ESS3.5.4
    a. Describe and graph the amounts and percentages of saltwater and freshwater in various reservoirs to provide evidence about the distribution of water on Earth. ESS3.5.4.A

5. **Societal activities have had major effects on land, ocean, atmosphere and even outer space.** ESS3.5.5
    a. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. ESS3.5.5.A