South Dakota Science

5th Grade Science

Physical Science PS

1 Matter and Its Interactions PS1

1 Develop a model to describe that matter is made of particles too small to be seen. (SEP: 2; DCI: PS1.A; CCC: Scale/Prop.) 5-PS1-1

2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total mass of matter is conserved. (SEP: 5; DCI: PS1.A, PS1.B; CCC: Scale/Prop.) 5-PS1-2

3 Make observations and measurements to identify materials based on their properties. (SEP: 3; DCI: PS1.A; CCC: Scale/Prop.) 5-PS1-3

4 Plan and carry out an investigation to determine if the mixing of two or more substances results in new substances. (SEP: 3; DCI: PS1.B; CCC: Cause/Effect) 5-PS1-4

2 Motion and Stability: Forces and Interactions PS2

1 Support an evidence-based argument that the gravitational force exerted on objects is directed toward the center of the Earth. (SEP: 7; DCI: PS2.B; CCC: Cause/Effect) 5-PS2-1

3 Energy PS3

1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. (SEP: 2; DCI: PS3.D, LSI.C; CCC: Energy/Matter) 5-PS3-1

Life Science LS

1 From Molecules to Organisms: Structures and Processes LS1

1 Engage in an evidence-based argument that plants get the materials they need for growth chiefly from air and water. (SEP: 7; DCI: LS1.C; CCC: Energy/Matter) 5-LS1-1

2 Ecosystems: Interactions, Energy, and Dynamics LS2

1 Develop a model to describe the movement of matter and energy among producers, consumers, decomposers, and the environment. (SEP: 2; DCI: LS2.A, LS2.B; CCC: Systems) 5-LS2-1

Earth and Space Science ESS

1 Earth's Place in the Universe ESS1

1 Support an argument that differences in the apparent brightness of the sun compared to other stars is due to distances from the Earth. (SEP: 7; DCI: ESS1.A; CCC: Scale/Prop.) 5-ESS1-1

Skip to main content

2 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. (SEP: 4; DCI: ESS1.B; CCC: Patterns) 5-ESS1-2

2 Earth's Systems ESS2

1 Develop a model to describe the interaction of geosphere, biosphere, hydrosphere, and atmosphere. (SEP: 2; DCI: ESS2.A; CCC: Systems) 5-ESS2-1

2 Describe and graph the amounts and percentages of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. (SEP: 5; DCI: ESS2.C; CCC: Scale/Prop.) 5-ESS2-2

3 Earth and Human Activity ESS3

1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. (SEP:8; DCI: ESS3.C; CCC: Systems) 5-ESS3-1

Engineering, Technology, and Applications of Science ETS

1 Engineering Design ETS1

1 Define a simple design problem reflecting a need or want that includes specified criteria for success and constraints on materials, time, or cost. Alignment may include 3-PS2-4; 3-LS4-4; 3-ESS3-1; 4-PS3-4 3-5-ETS1-1

2 Generate and compare multiple solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. Alignment may include 4-ESS3-2 3-5-ETS1-2

3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved. Alignment may include 4-PS4-3 3-5-ETS1-3