

Grades 7, 8

Adopted 2018

Matter and Its Interactions

SES-MS-PS1-1. Model how simple parts can be put together to make more complex structures. [SES-MS-PS1-1](#)

SES-MS-PS1-2. Make observations of substances interacting to determine if a chemical reaction has occurred. [SES-MS-PS1-2](#)

SES-MS-PS1-3. Distinguish between natural and synthetic materials. [SES-MS-PS1-3](#)

SES-MS-PS1-4. Describe the relationship between changes in temperature, kinetic energy, and changes in states of matter for water. [SES-MS-PS1-4](#)

SES-MS-PS1-5. Show that the amount of a substance used in a reaction does not change even if the new substance looks different. [SES-MS-PS1-5](#)

SES-MS-PS1-6. Participate in a design project to keep thermal energy in a substance or container. [SES-MS-PS1-6](#)

Motion and Stability: Forces and Interactions

SES-MS-PS2-1. Investigate, and describe, the direction of motion of two colliding objects of equal and of unequal masses. [SES-MS-PS2-1](#)

SES-MS-PS2-2. Incorporated into SES-MS-PS2-1 by including equal and unequal mass. [SES-MS-PS2-2](#)

SES-MS-PS2-3. Ask questions about the strength of magnetic forces. [SES-MS-PS2-3](#)

SES-MS-PS2-4. Use surroundings and information provided to predict the effects of gravity. [SES-MS-PS2-4](#)

SES-MS-PS2-5. Investigate an object that has a static charge. [SES-MS-PS2-5](#)

Energy

SES-MS-PS3-1. Identify changes in kinetic energy on a labeled diagram. [SES-MS-PS3-1](#)

SES-MS-PS3-2. Identify differing amounts of potential energy on a labeled diagram. [SES-MS-PS3-2](#)

SES-MS-PS3-3. Incorporated into SES-MS-PS1-6. [SES-MS-PS3-3](#)

SES-MS-PS3-4. Incorporated into SES-MS-PS1-4. [SES-MS-PS3-4](#)

	SES-MS-PS3-5. Demonstrate how kinetic energy is transferred between objects. SES-MS-PS3-5
Waves and Their Applications in Technologies for Information Transfer	SES-MS-PS4-1. Identify larger amplitude waves as having more energy. SES-MS-PS4-1
	SES-MS-PS4-2. Describe how light waves behave when interacting with various materials. SES-MS-PS4-2
	SES-MS-PS4-3. Select an electronic means and a non-digital means of sending information. SES-MS-PS4-3
From Molecules to Organisms: Structures & Processes	SES-MS-LS1-1. Identify the difference between living and nonliving things. SES-MS-LS1-1
	SES-MS-LS1-2. Explore, and identify, the structure and function of major parts of a cell. SES-MS-LS1-2
	SES-MS-LS1-3. Model that a body system is made up of interacting organs. SES-MS-LS1-3
	SES-MS-LS1-4. Identify the characteristics of plants and behaviors of animals that support successful reproduction. SES-MS-LS1-4
	SES-MS-LS1-5. Identify environmental conditions needed for successful growth of organisms. SES-MS-LS1-5
	SES-MS-LS1-6. Model what a plant uses, what it creates, and what the plant releases during photosynthesis. SES-MS-LS1-6
	SES-MS-LS1-7. Recognize that food is used to produce energy for organisms to live. SES-MS-LS1-7
	SES-MS-LS1-8. Identify situations which require a reactive behavior for survival. SES-MS-LS1-8
Ecosystems: Interactions, Energy, and Dynamics	SES-MS-LS2-1. Recognize the effects of resource availability on individuals and on populations. SES-MS-LS2-1
	SES-MS-LS2-2. Identify ways that organisms interact with each other within an ecosystem. SES-MS-LS2-2
	SES-MS-LS2-3. Explain that energy moves among living and non-living parts of an ecosystem. SES-MS-LS2-3
	SES-MS-LS2-4. Recognize how changes to an ecosystem affect populations. SES-MS-LS2-4

	SES-MS-LS2-5. Identify an action that maintains or improves ecosystems and biodiversity. SES-MS-LS2-5
Heredity: Inheritance and Variation of Traits	SES-MS-LS3-1. Explain that organisms have differences in their traits that can affect their survival. SES-MS-LS3-1
	SES-MS-LS3-2. Students will investigate, and identify, features of living organisms that come from their parents. SES-MS-LS3-2
Biological Evolution: Unity & Diversity	SES-MS-LS4-1. Compare fossils with plants and animals that exist today. SES-MS-LS4-1
	SES-MS-LS4-2. Identify anatomical similarities between modern organisms and fossil organisms. SES-MS-LS4-2
	SES-MS-LS4-4. Incorporated in SES-MS-LS3-1. SES-MS-LS4-4
	SES-MS-LS4-5. Identify desirable traits that can be passed on to offspring. SES-MS-LS4-5
	SES-MS-LS4-6. Demonstrate understanding that natural selection changes distribution of traits in a population over time. SES-MS-LS4-6
Earth's Place in the Universe	SES-MS-ESS1-1. Model the Earth-sun-moon positions for lunar phases, eclipses of the sun and moon, and seasons. SES-MS-ESS1-1
	SES-MS-ESS1-2. Model that the solar system is a collection of many varied objects, held together by gravity, that move in predictable ways. SES-MS-ESS1-2
	SES-MS-ESS1-3. Identify categories of solar system objects (e.g., planets, meteors, asteroids, comets, and moon). SES-MS-ESS1-3
	SES-MS-ESS1-4. Organize, or model, evidence from rocks and rock strata within the geologic time scale to demonstrate Earth's history. SES-MS-ESS1-4
Earth's Systems	SES-MS-ESS2-1. Model the cycling processes involved in the creation of various rock forms. SES-MS-ESS2-1
	SES-MS-ESS2-2. Identify geoscience processes that can change Earth's surface over short time scales or long time scales. SES-MS-ESS2-2
	SES-MS-ESS2-3. Compare locations of fossils, rocks, continental shapes, and structures as evidence of past plate motions. SES-MS-ESS2-3
	SES-MS-ESS2-4. Identify the processes involved in the cycling of Earth's water. SES-MS-ESS2-4

SES-MS-ESS2-5. Utilize data to compare weather conditions in different locations on the same day. [SES-MS-ESS2-5](#)

SES-MS-ESS2-6. Identify how latitude and altitude influence climate. [SES-MS-ESS2-6](#)

Earth and Human Activity

SES-MS-ESS3-1. Identify how the levels of Earth's resources can change over time. [SES-MS-ESS3-1](#)

SES-MS-ESS3-2. Recognize that some natural hazards (e.g., volcanic eruptions, severe weather) can be predicted while others are not currently predictable. [SES-MS-ESS3-2](#)

SES-MS-ESS3-3. Model ways that humans can minimize their impact on the environment. [SES-MS-ESS3-3](#)

SES-MS-ESS3-4. Incorporated into SES-MS-ESS3-1. [SES-MS-ESS3-4](#)

SES-MS-ESS3-5. Recognize natural processes, and human activities, that may impact global temperatures. [SES-MS-ESS3-5](#)

Engineering, Technology, & Applications of Science

SES-MS-ETS1-1. Describe a problem that needs to be solved. [SES-MS-ETS1-1](#)

SES-MS-ETS1-2. Evaluate solutions to given problems. [SES-MS-ETS1-2](#)

SES-MS-ETS1-3. Analyze results from the testing of possible solutions. [SES-MS-ETS1-3](#)

SES-MS-ETS1-4. Create an object or tool from materials provided. [SES-MS-ETS1-4](#)

Engineering, Technology, Science, and Society

SES-MS-ETS2-1. Ask questions about common household, or classroom, appliances. [SES-MS-ETS2-1](#)

SES-MS-ETS2-2. Identify consequences of human choices. [SES-MS-ETS2-2](#)
