South Carolina Science

Seventh Grade

Matter and Its Interactions PS1	1	**Develop models to describe the atomic composition of simple molecules and extended structures.** 7-PS1-1
	2	**Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.** 7-PS1-2
	3	**Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.** 7-PS1-3
	5	**Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.** 7-PS1-5
	6	**Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes.** 7-PS1-6
Energy PS3	1	**Construct and interpret graphical displays of data to describe the proportional relationships of kinetic energy to the mass of an object and to the speed of an object.** 7-PS3-1
	2	**Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.** 7-PS3-2
	5	**Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.** 7-PS3-5
From Molecules to Organisms: Structures and Processes LS1	6	**Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.** 7-LS1-6
	7	**Develop a model to describe how food molecules in plants and animals are rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.** 7-LS1-7
Ecosystems: Interactions, Energy, and Dynamics LS2	1	**Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.** 7-LS2-1
	2	**Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.** 7-LS2-2

Skip to main content

	3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. 7-LS2-3
	4 Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations. 7-LS2-4
	5 Evaluate competing design solutions for maintaining biodiversity and ecosystem services. 7-LS2-5
Earth and Human Activity ESS3	**1** Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes. 7-ESS3-1
	3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment. 7-ESS3-3
	4 Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems. 7-ESS3-4
	5 Ask questions to clarify evidence of the factors that have impacted global temperatures over the past century. 7-ESS3-5