Science: Grade 4

ENERGY	**1a**	**Identify that moving objects contain energy.** LC-4-PS3-1A
	1b	**Demonstrate that objects moving faster possess more energy than objects moving slower.** LC-4-PS3-1B
	2a	**Identify examples of how energy can be moved from place to place (i.e., through sound or light traveling; by electrical currents; heat passing from one object to another).** LC-4-PS3-2A
	3a	**Identify the change in energy or the change in objects' motions when objects collide (e.g., speeds as objects interact, direction).** LC-4-PS3-3A
	4a	**Relate an example that demonstrates that energy can be converted from one form to another form (e.g., electric circuits that convert electrical energy into light, motion, sound or heat).** LC-4-PS3-4A
WAVES AND THEIR APPLICATIONS IN TECHNOLOGIES FOR INFORMATION TRANSFER	**1a**	**Describe the properties of waves using a model (e.g., drawings, diagrams) to show amplitude (height) and wavelength.** LC-4-PS4-1A
	1b	**Identify relationships involving wave amplitude, wavelength, and the motion of an object (e.g., when the amplitude increases, the object moves more).** LC-4-PS4-1B
	1c	**Identify amplitude as a measure of energy in a wave.** LC-4-PS4-1C
	1d	**Identify wavelength as the distance between a point on one wave and the identical point on the next wave.** LC-4-PS4-1D
	2a	**Arrange a model to show that light can be seen when light reflected from its surface enters the eye.** LC-4-PS4-2A
FROM MOLECULES TO ORGANISMS: STRUCTURE AND PROCESSES	**1a**	**Identify external macroscopic structures (e.g., bird beaks, eyes, feathers, roots, needles on a pine tree) that support growth, survival, behavior, and reproduction of organisms.** LC-4-LS1-1A
	1b	**Identify internal structures (e.g., heart, muscles, bones) that support growth, survival, behavior, and reproduction of organisms.** LC-4-LS1-1B
		Identify that sense receptors provide different kinds of information, which is processed by the brain. LC-4-LS1-2A

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	2b	Identify how animals use their sense receptors to respond to different types of information (e.g., sound, light, odor, temperature) in their surroundings with behaviors that help them survive. LC-4-LS1-2B
	2c	Identify how animals use their memories to help them survive. LC-4-LS1-2C
EARTH'S PLACE IN THE UNIVERSE	1a	Identify rock formations that show how the Earth's surface has changed over time (e.g., change following earthquakes). LC-4-ESS1-1A
	1b	Identify older fossils as being found in deeper, older rock layers. LC-4-ESS1-1B
EARTH'S SYSTEM	1a	Use data to compare differences in the shape of the land due to the effects of weathering or erosion. LC-4-ESS2-1A
	1b	Identify how living things affect the shape of the land. LC-4-ESS2-1B
	2a	Use maps to locate different land and water features of Earth. LC-4-ESS2-2A
	2b	Use maps to determine that earthquakes and volcanoes often occur along the boundaries between continents. LC-4-ESS2-2B
	3a	Identify how plants affect the environment (e.g., some have roots that can stabilize or destabilize the soil). LC-4-ESS2-3A
	3b	Identify how animals affect the environment (e.g., they disturb rocks, soil, and sediment; some build dams or nests). LC-4-ESS2-3B
EARTH AND HUMAN ACTIVITY	1a	Identify the origins of the natural sources humans use for energy and fuel. LC-4-ESS3-1A
	1b	Identify environmental effects associated with the use of a given energy resource. LC-4-ESS3-1B
	2a	Describe solutions to reduce the impact of a natural Earth process (e.g., earthquake, flood, volcanic activity) on humans. LC-4-ESS3-2A