Next Generation Science Standards DCI Arrangements

First Grade

Waves and their Applications in Technologies for Information Transfer

A Wave Properties PS4.A

a Sound can make matter vibrate, and vibrating matter can make sound. 1-PS4-1

B Electromagnetic Radiation PS4.B

a Objects can be seen if light is available to illuminate them or if they give off their own light. 1-PS4-2

b Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (Boundary: The idea that light travels from place to place is developed through experiences with light sources, mirrors, and shadows, but no attempt is made to discuss the speed of light.) 1-PS4-3

C Information Technologies and Instrumentation PS4.C

a People also use a variety of devices to communicate (send and receive information) over long distances. 1-PS4-4

From Molecules to Organisms: Structures and Processes

A Structure and Function 1-LS1-1

a All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. 1-LS1-1

B Growth and Development of Organisms LS1.B

a Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive. 1-LS1-2

C Information Processing LS1.D

a Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. 1-LS1-1

Heredity: Inheritance and Variation of Traits

A Inheritance of Traits LS3.A

a Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents. 1- LS3-1

B Variation of Traits LS3.B

a Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. 1-LS3-1

Earth's Place in the Universe

A The Universe and its Stars ESS1.A

a Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted. 1- ESS1-1

B Earth and the Solar System ESS1.B

a Seasonal patterns of sunrise and sunset can be observed, described, and predicted. 1-ESS1-2