

Next Generation Science Standards

1st Grade

EARTH SCIENCE <u>Earth's Place in the Universe</u> 1-ESS1 <i>Earth's Place in the Universe</i>	LIFE SCIENCE <u>Structure, Function, Information Processing</u> 1-LS1 From Molecules to Organisms: Structures and Processes 1-LS3 Heredity: Inheritance and Variation of Traits	PHYSICAL SCIENCE <u>Waves: Light and Sound</u> 1-PS4 <i>Waves and their Applications in Technologies for Information Transfer</i>
<p>1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted. <i>[i.e. movement of Sun and Moon across sky; stars can be seen at night but not during day.]</i></p> <p>1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year. <i>[i.e. relative amounts in winter vs. late spring]</i></p>	<p>1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. <i>[i.e. protective gear based on turtle shells, acorns or scales; stabilizing tools based on tails or roots; defensive tools based on thorns/quills; sensory equipment based on eyes or ears]</i></p> <p>1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. <i>[i.e. baby signals like calls and fluttering that trigger parental response like feeding or comforting]</i></p> <p>1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. <i>[i.e. leaves may differ in size but are the same shape; dogs of same breed have similar but not identical characteristics]</i></p>	<p>1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. <i>[i.e. tuning forks, plucking string; show effect of sound with rice on a drum, paper near speaker hole, singer shattering glass]</i></p> <p>1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated. <i>[i.e. compare completely dark room, video of cave or deep ocean exploration, pinhole box. Show illumination from natural and artificial sources.]</i></p> <p>1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. <i>[i.e. compare transparent, translucent, opaque, and reflective materials.]</i></p> <p>1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance. <i>[i.e. Use light source, paper cup and string "telephone", drum beats, or telegraph to send signals]</i></p>
NGSS Engineering - K-2-ETS1 Engineering Design		
<p>K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p> <p>K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>		