

Focus: Students will analyze the relationships between topics including light and sound, parents and offspring, and objects in space. With support, students will engineer solutions to problems and construct arguments based on information learned through investigation.

Waves: Light and Sound

District/NGSS Standard

1.SC.1	Understanding: Students will investigate light and the relationship between sound and vibrating materials to explain how they enable communication. Students who demonstrate understanding will be able to:		
1.SC.1.1	Recognize that sound and light travel in waves.	District	
1.SC.1.2	Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	1-PS4-1	
1.SC.1.3	Make observations to construct an evidence-based account that an object can be seen only when illuminated (by an external light or its own light).	1-PS4-2	
1.SC.1.4	Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.	1-PS4-3	
1.SC.1.5	Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.	1-PS4-4	
Structure, Function, and Information Processing			
1.SC.2	Understanding: Students will use specific examples to demonstrate how plant and animal characteristics are inherited from parents to help them survive. Students who demonstrate understanding will be able to:		
1.SC.2.1	Classify an object as living or non-living.	District	
1.SC.2.2	Identify the basic requirements that plants and animals need to survive.	District	
1.SC.2.3	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.	1-LS1-1	
1.SC.2.4	Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.	1-LS1-2	
1.SC.2.5	Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	1-LS3-1	
Space Systems: Patterns and Cycles			
1.SC.3	Understanding: Students will explain patterns of object movement in the sky throughout the year. Students who demonstrate understanding will be able to:		
1.SC.3.1	Read texts and use media to obtain information about the sun, moon and stars.	District	
1.SC.3.2	Use observations of the sun, moon, and stars to describe patterns that can be predicted.	1-ESS1-1	
1.SC.3.3	Make observations at different times of year to relate the amount of daylight to the time of year.	1-ESS1-2	
Engineering Design			
1.SC.4	Understanding: With support, students will use engineering design to solve problems. Students who demonstrate understanding will be able to:		
1.SC.4.1	With support, 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.	K-2-ETS1-1	
1.SC.4.2	With support, 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.	K-2-ETS1-2	
1.SC.4.3	With support, analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	K-2-ETS1-3	