

1st Grade – Physical Science: Light and Sound Waves

- Week 1
 - **Read literacy Article 2B: Do you hear it?** [\(link\)](#): Write about how a guitar and drum vibrate to make sound
 - **Musical Vibrations**
 - Think of ways you can make music with vibrations. If you have access to musical instruments, explore them. List different instruments on how vibrations can be made by blowing air, plucking strings, or striking.
 - **Kitchen Concert**
 - Brainstorm instruments that can be made from common household items. For example, experiment with pitch using bottles, make a straw kazoo, drum on pots, or learn how to play the spoons. List what great ideas you can come up with.
- Week 2
 - **Read literacy Article 3B: Animal Sounds** [\(link\)](#): List 3 different ways animals use sound waves to live
 - **Talk Like the Animals**
 - Share this information with the class digitally or as a display upon return.
 - Research how different animals communicate, such as fireflies, whales, bees, termites, or elephants.
 - Describe how your life would be different if you communicated like the animal you researched.
- Week 3
 - **Read literacy Article 4A: Color My World** [\(link\)](#): Find 3 different objects around your house. Place them in the light and outside in the sunlight. Are they the same color inside as they are outside? Does your investigation confirm the information you read about?
 - **Organisms That Make Their Own Light**
 - Find out how insects like fireflies and ocean animals like jellyfish produce their own light and what they use the light to do. Share this information with the class digitally or as a display upon return.
 - **Bonus: Pinhole Cameras and Viewers**
 - The earliest form of photography used a pinhole viewer known as a camera obscura. Challenge is to come up with different materials to make a camera obscura, and then build and test your design.



- Week 4
 - **Take Home Science Sheet** [\(link\)](#): **Observing Shadows and Their Shapes**
 - **Read literacy Article 5B: Can You See Me** [\(link\)](#): Write your own definition of reflection.
- Week 5
 - **Make a Sundial**
 - Research the history of sundials and sundials around the world (the largest is in the U.S.). Make your own sundial using a paper plate, pencil, and tape. Flip a paper plate upside down and write numbers around the plate, similar to the numbers on a clock. Put a sharpened pencil through the center of the plate and take your sundial outside on a sunny day. Place the plate on the ground with the 12 facing north. Visit the sundial several times throughout the day to evaluate its accuracy.
 - Bonus: Make your own sundial out of different material
 - **Architectural Dilemma**
 - Design a solution to the problem.
 - You have a window in your house that is letting in so much sunlight that algae is growing in your fish tank. You want to let less light come in through the window. What kinds of materials would allow some but not too much light in?

