

# Unit 2 -Properties of Lights and Sound

Content Area: **Science**  
Course(s): **Science 1**  
Time Period: **Marking Period 1**  
Length: **MP 1-2**  
Status: **Published**

## Essential Questions

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- What is light?
- How does light travel?
  
- What is sound?
- What causes sound?
- What devices are used to communicate long distances?
- What tools can be used to design or build a device that uses light or sound to solve a problem of communicating over a distance?

## Big Ideas

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- Sound can make matter vibrate, and vibrating matter can make sound.
- Objects can be seen only when light is available to illuminate them.
  
- People use devices and senses to send and receive information.

## Climate Change

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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.

- Activity: In this unit, students will be able to design a stained glass window using parchment paper and tissue paper as they consider materials from the perspective of how much light they let through.
- Activity: In this unit, students will create a stoplight shaped illustration to communicate using light and color with their peers. Students will work in partnerships to develop a system of communication without sound.

## Cross-Curricular Integration

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Integration Area: English Language Arts

- W.SE.1.6. With guidance and support from adults, gather and select information from multiple sources to answer a question or write about a topic.
- SL.PE.1.1. Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

Activity: Students will design a way to deliver a secret message using a color code and flashlight. to Students will have collaborative conversations to make predictions. Students will recall information from the experiment to write and record their observations.

## **Diversity**

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Objective: Students will understand that Braille is a type of receptive communication.

Activity: Students will watch Braille Alphabet video and observe their name letters. Then students will copy their Braille letter dots onto paper. Finally, students will make raised glue dots on top.

## **CSDT Technology Integration**

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8.1.2.AP.2: Model the way programs store and manipulate data by using numbers or other symbols to represent information

Activity: Students will use Pebble Go to learn about Light and Sound.

## **Resources**

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### **Primary Resources**

- Mystery Science

## **Core**

- Sounds and Vibrations: How Do They Make Silly Sounds in Cartoons? (Mystery Science)
- Sounds and Vibrations: Where Do Sounds Come From? (Mystery Science)
- What If There Were No Windows? (Mystery Science)
- Light and Illumination: Can You See In the Dark? (Mystery Science)
- How could you send a secret message to someone far away? (Mystery Science)
- How Do Boats Find Their Way In the Fog? (Mystery Science)

## **Supplemental**

- Instrument Sound Lab
- Types of Communication Tools Activity