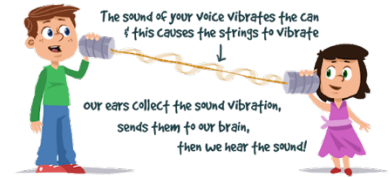




Sound and Light

(Part 3- Communication)



Essential Question: How can we use sound or light to communicate over a distance?

After evaluating the different ways we currently communicate with sound and light, students will design and build a device that uses light or sound to communicate over a distance.

Next Generation Science Standards

- 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.

Materials needed for each pair of students:

- Flashlight (any size or type) for each student
- 2 Plastic or Paper cups
- String- Cut approx. 6 ft.
- paper clips
- Scotch or masking tape



Advanced preparation:

- Poke medium size holes in bottom of each cup big enough so the string will fit through
- Cut String
- Cut a small piece of tape for each student. Students will tape string to the paperclip to keep it from slipping through hole.

Lesson Overview:

This is the third lesson in the 1st Grade Sound and Light Series. Each lesson is designed as a stand-alone lesson, so you can participate in one or all of the lessons! In this lesson students will review how sound and light travel and design a way to communicate over a distance using sound (cups phone) and (Light-Morse Code)

Program Connection Information

Please use an external microphone (conference style) rather than the integrated one in the computer for the audio for your class and locate it centrally in the room. It can be difficult for the Greenbush teacher to hear the students using the computer microphone and therefore it reduces the interactive nature of the lesson. It is fine to use the computer webcam for your video source.

All classes will take place using Zoom desktop video. If your building is already set up to use a desktop video application with a computer, simply open a browser and enter <https://greenbush.zoom.us/j/5337714346> in the URL space. You may need to download Zoom launcher software (free download) if you don't already have it. This needs to be done in advance of the lesson.

If using a Polycom video conferencing unit (or any legacy type video conferencing unit) to connect to a ZOOM conference, make sure the unit is in "encrypted mode" then dial the following IP on the internet: 162.255.37.11 or 162.255.36.11 and once connected, they will ask for a MEETING ID: enter 533 771 4346 (for Sheila at Science Center).

It's always a good idea to touch base with your district technology facilitator prior to your program to make sure all systems/equipment are in place and operational and that there aren't any firewalls in place that might prevent you from connecting to Zoom.

Once you connect, you will enter a Zoom waiting room. Your Greenbush teacher will admit you into the final meeting room.

If you have questions, please call Sheila Sandford at Greenbush, 620-724-6281, or email at sheila.sandford@greenbush.org (best method of contact).