

Overview:

Students explore various activities dealing with sound being made by vibrations.

Objectives:

The student will:

- answer questions about sound vibrations; and
- make a string telephone.

Targeted Alaska Grade Level Expectations:

Science

- [3] SB1.1 The student demonstrates an understanding of the structure and properties of matter by classifying matter according to physical properties (i.e., color, size, shape, weight, texture, flexibility).
- [3] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.

Materials:

- *All About Sounds* by Melvin Berger
- Metal clothes hanger (one per pair of students)
- String (enough to tie 15-20 inches two places on each hanger)
- Small plastic cup or recycled, clean yogurt size container (2 per pair of students)
- Science journal

Activity Preparation:

1. Tie two pieces of string on each hanger. They should sit at the corners of the hanger.
2. Poke a small hole in each container.

Activity Procedure:

1. The teacher should walk around the classroom and clap his/her hands together. Ask the student what sound is being made. Ask why the sound is being made. Write student responses on the board.
2. Tell students they will listen to the book, *All About Sound*, and learn about some investigations they may do to make sounds. Discuss the various activities that characters in the book did to make sound.
3. Give each pair of students a hanger with string attached. Ask them to have one student at a time wrap their index fingers around the string and stick each finger in their ears. Then, they should walk around the classroom and gently swing the hanger to touch a variety of surfaces and objects. Listen to hear the sound the touching makes. Each student should get a turn to explore.
4. When students have all had a chance to explore with the hangers, gather them back as a group and ask: What sounds did you hear? Why were those sounds made?
5. Tell students they will be making a string telephone. Give each student two containers without covers. Tell them to get a length of string about 6 feet. Push one end of the string through the hole in one container. Tie a big knot. Push the other end of the string through the hole in the other container. Tie another knot. Pull the string until the knot is resting on the bottom of each container.
6. Have students ask a partner to take one container and move away from each other until the string is tight. One person should place the open end of the container to his/her ear without touching the string. The other person should speak softly into the open end of the other container. The sound waves move through the string and the partner will hear the voice clearly. The partners should take turns talking.

7. In the science journals, have students draw and label a picture of what they learned about sound.
8. Leave the hangers at the classroom science center for students to do more exploring.

Extension Ideas:

1. Read the book *Oscar and the Bat* by Geoff Waring or *Stella Luna* by Janell Cannon, and discuss echolocation.
2. Have students choose an activity from *All About Sound* (book that was read earlier) to explore..