



## SfS Away from the Classroom!

### P10: Sound (Recommended for Grades 3-5)

Please use the following resources to learn about soundwaves!

Watch this Video: [What is Sound?](#)

#### Answer these questions:

- What is sound?
- How does sound travel through the air?
- What needs to happen for your ears to hear a sound?

#### Activities:

Activity 1: Follow the instructions to make a string phone.

You will need:

<ul style="list-style-type: none"><li>• 2 disposable cups (paper or plastic)</li><li>• 1 piece of string (about 3 m)</li><li>• lab partner</li></ul>	<ul style="list-style-type: none"><li>• A small piece of tape</li><li>• 1 sharp pencil or a pair of scissors* (*Use with adult supervision!)</li></ul>
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1. Use the scissor (or pencil) to make a hole in the bottom of each cup (let an adult do this safely).
2. Thread the string through each cup from outside to inside.
3. Tie a knot at both ends of the string, inside the cup.
4. Tape the knot inside the cup, at the bottom of the cup.
5. Give one cup to your lab partner, keep one cup for yourself.
6. Walk away from each other slowly, until the string is a straight line.
7. One person should talk into their cup, while the other person places the cup over their ear.

Activity 2: Follow the instructions to make “Secret Bells” - an instrument only you can hear.

You will need:

<ul style="list-style-type: none"><li>• 1 metal clothes hanger (or a lightweight metal kitchen utensil such as a whisk or tongs)</li></ul>	<ul style="list-style-type: none"><li>• 1 piece of string (2 ft or more)</li></ul>
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1. Tie one end of the string to the metal hanger.
2. Wind the free end of the string around your index finger a few times.
3. Allow your assembly to swing freely from your two fingers.
4. Place your index finger (with hanger assembly attached) gently on the small flap of skin just in front of your ears, closing off the ear canal without putting your fingers into your ears. Swing the hanger so that it bangs lightly against something hard, like the edge of a desk or a door frame, and then let the hanger hang free.
5. As the hanger vibrates, you should hear the resulting sound ring through the strings like chimes.

Watch this video if you need help with the activities: [P10 Sound.mp4](#)



**Make observations & use Claims, Evidence, and Reasoning!**

1. **Claim:** Sound can travel through air (gasses), water (liquids), and solids.

- **Evidence:**

- **Reasoning:**

2. **Claim:** Sound travels better through a solid (string) than a gas (air).

- **Evidence:**

- **Reasoning:**