

Project Guide: Sound and Vibrations

Florida Benchmark: SC.5.P.10.1: Investigate and describe that sound is produced by vibrations and travels through a medium.

NGSS Standard: 4-PS3-2: Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.

Objective:

- Learn how sound is made by vibrations.
- Discover how sound moves through different materials (like air, water, and solids).
- Observe how changing vibrations affects the sound.

Materials:

- Plastic cup
- Balloon
- Rubber band
- Small mirror
- Flashlight

Safety Precautions:

- Handle the flashlight and mirror carefully to avoid breaking them.
- Never point the flashlight directly into someone's eyes.
- Be gentle with the balloon to avoid popping it.

Procedures:

1. Stretch the balloon over the open end of the cup and secure it with a rubber band.
 2. Place the small mirror on top of the balloon.
 3. Shine the flashlight on the mirror.
 4. Speak into the cup and watch the light move on the wall.
 5. Notice how the light pattern changes when you speak louder or softer.
 6. Write down your observations.
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Note: Clean-up

- Remove the balloon from the cup carefully.
- Collect all materials and put them back where they belong.
- Make sure your area is clean before leaving.

