



BUZZING BALLOON

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything when performing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a CHOKING HAZARD. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

INGREDIENTS

- Hex Nut
- Balloon
- Pipe Cleaner

INSTRUCTIONS

STEP 1: Place the hex nut inside the balloon, inflate the balloon, and tie the balloon.

STEP 2: Using your hand, grasp the end of the balloon with the knot. Rotate the balloon so the hex nut spins inside the balloon and observe. Provide evidence that vibrating materials can make sound and that sound can make materials vibrate.

STEP 3: Using the illustration of a sound wave to the right, under “science background,” develop a model of a sound wave with the pipe cleaner. Identify the different parts of the sound wave.

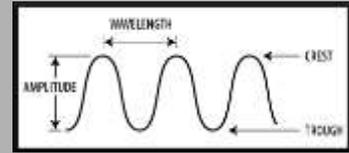
EXPLANATION

Sound is vibrations moving through matter. The hex nut, which has six sides, rubs against the balloon, creating vibrations, causing the balloon to buzz.



SCIENCE BACKGROUND

Sound is vibrations moving through matter. Sound can make matter vibrate, and vibrating matter can make sound. Vibrations cause waves, which have the ability to carry energy from one location to another.



Waves of the same type can differ in amplitude and wavelength. Amplitude measures the height of crests and depth of troughs. Wavelength measures how far apart they are.

I CAN STATEMENTS

- ✓ I can plan and conduct an investigation to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.
- ✓ I can develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

1 – Waves: Light and Sound

4 – Waves

