Date: _____ Name: _____

Tin Can Telephone

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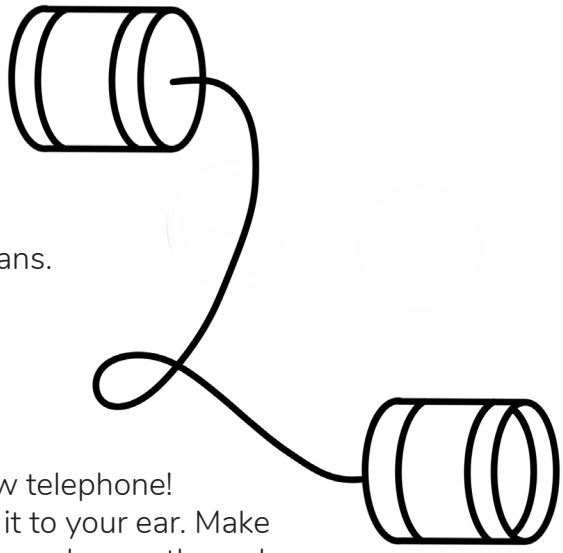
All the sounds you hear are vibrations in the air. In this activity, you can try controlling the path those vibrations take, to send messages to your friend with your very own tin-can telephone (old-school style!) When you talk into the can, the vibrations are transmitted down the string and the sound is reproduced in the other can for the second person to hear.

MATERIALS

- Two metal cans (empty soup cans work well)
- 1 Long string
- Scissors or a sharp blade

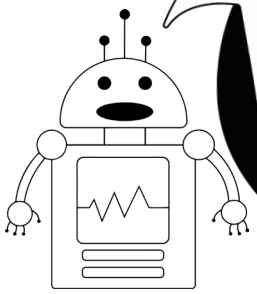


1. Ask an adult to help you cut holes in the clean metal cans. Cut one hole in the middle of the bottom of each can.
2. Thread both ends of the string through each can and secure it with a knot. It should look like this image:
3. Now grab a friend and talk to each other with your new telephone! Put the can to your mouth to talk and listen by putting it to your ear. Make sure the string is tight between the cans to make the sound come through clearer.

CHALLENGE:

Try changing the materials and see which materials work the best. Here are some suggestions:

Instead of a tin can, try one of these:	**Instead of a string, try one of these:**
• Plastic cup	• Twine
• Paper cup	• Wire
• Styrofoam cup	• Elastic bands



Did you know that cellphones work similarly to the tin can telephone? Both involve a transmission of **data** (or information) through waves. When you send a text, the message is transmitted through radio waves. The radio waves then need to be picked up by a cellular tower and then transmitted over to the receiver. In your tin can phone, your voice is carried by mechanical sound waves along the string. In other words, tin cans are like cellphones and the voice carried by sound waves are like text messages carried by radio waves.

SLO: 4-3-01, 4-3-05, 4-3-07, 4-3-16