



Virtual STEAM

Science

Telephone Challenge

Goal: I can communicate using sound over a distance.

Science Indicator: SC.1.2.1.D Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

Materials:

- 2 - 3oz paper cup
- 10' String



Instructions:

1. Watch YouTube Video for background knowledge:
<https://youtu.be/4S7nG6SlisM>



2. On a sheet of paper, draw and label your telephone. Include string measurements.
3. Poke a small hole in the bottom of both cups.
4. Thread the string through the holes and tie a knot on each end of the string.
5. Find a friend to talk to through the cup. (source)
6. Hold the cups so the string is tight. (this is important) (medium)
7. One person whispers into the cup, while the other person holds the cup up to his/her ear to listen. (receiver)
8. Take turns whispering and listening through your telephone.

Book Extension:

[Sounds All Around](#)

[\(Let's-Read-and-Find-Out Science 1\)](#)

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Vocabulary/ Pre-teach:

- 3 things needed for sound
 - A source, a medium, and a receiver
- Vibrations





9. If unsuccessful, try holding the string tighter and make sure nothing is touching the middle of the string.
10. If you have more string, try making it longer to see how far apart you can stand.
11. Document the challenge using video, photos, drawings, etc.
12. Have fun!

Extension Activity:

- Use a longer piece of string, does the telephone still work?
- Try making the phone with plastic cups, does it change the experiment? Which works better?
- What would happen if you used wire instead of string?

Ignite Our Future Connection:

- **Friendship** - Mutual feelings of care, respect, admiration, concern and love between individuals is what makes a friendship. Lessons cover how to be a good friend, how to make friends and ways to strengthen existing friendships.

