

## Wonder Wednesday – Talking telephones

**Does the length of the string affect the loudness of sound?**

**Could the phone work under water?**

**How does sound help us underwater?**



[www.greatscienceshare.org](http://www.greatscienceshare.org)

Age range(s) – EYFS, KS1, KS2

### Equipment

2 plastic/paper cups, a ball of string (at least 3 meters) or wool/twine, scissors, sellotape.

### Step by step guide

*(Note: Sound is made when something vibrates; the vibrations travel through air or through other solids, liquids and gases to reach our ears.)*

1. Make a small hole in the bottom of the two cups.
2. Cut a long length of string – at least 3 metres.
3. Thread the ends of the string through the holes in the cups and tie a knot on the inside of the cups to stop the string from slipping out.
4. Ask another person to hold one cup. Pull the string taut (tight) and speak into the other cup. Can your friend hear you? Listen whilst your friend talks.

### Challenge yourself!

What happens if the string is not taut?

Are different types of string or cup better than others?

Does the length of the string affect the volume of the sound?

Can you listen around corners?

Can you add more people into the conversation?

### Questions to ask

EYFS/KS1: Can you feel the string vibrate? Does the telephone work outdoors?

KS2: Which type of string makes the best sounds? Does the type of cup make any difference to the sound?

### I wonder....

Use these question stems to stimulate question asking.

|                  |                  |                       |                 |
|------------------|------------------|-----------------------|-----------------|
| <b>What...?</b>  | <b>How...?</b>   | <b>If... then...?</b> | <b>Who...?</b>  |
| <b>Where...?</b> | <b>Could...?</b> | <b>Should...?</b>     | <b>Why...?</b>  |
| <b>Can...?</b>   | <b>When...?</b>  | <b>Which...?</b>      | <b>Will...?</b> |

**We really want to hear what you investigated and what you found.**

**Share your science and be part of the Great Science Share for Schools 2020! [www.greatscienceshare.org](http://www.greatscienceshare.org)**

Use the hashtag #ScienceFromHome and tag us in using @DrChips\_ @GreatSciShare

E-mail your investigation photos or findings to be part of the Daily Dose Showcase [drchipsdailydose@gmail.com](mailto:drchipsdailydose@gmail.com)

### Links to other sites

The Ogden Trust – make a hydrophone: <https://www.ogdentrust.com/assets/general/Phizzi-Practical-Make-a-hydrophone-for-website.pdf>

SciShow Kids: <https://www.youtube.com/watch?v=3yqB2KFwJCo>

This activity sheet was written by Helen Spring (Spring Learning) & Dr Lynne Bianchi from the University of Manchester's Science & Engineering Education Research and Innovation Hub. The Great Science Share for Schools, Dr Jon Chippindall and the authors are not liable for the actions of activity of any persons who uses this resource or in any of the suggested further resources. We assume no liability with regard to injuries or damage to property that may occur as a result of using this information. These

activities are designed to be carried out by children working with an adult. The adult is fully responsible for ensuring the activity is carried out safely. You can access further H&S advice from [www.cleapss.org.uk](http://www.cleapss.org.uk)



#GreatSciShare

@GreatSciShare

Great Science Share for SCHOOLS

An annual campaign inspiring primary and secondary children to share their scientific questions with new audiences!

**16 June 2020**  
A day for all children to share and celebrate their curiosity: register your event for free at [greatscienceshare.org](http://greatscienceshare.org)

MANCHESTER 2021  
The University of Manchester

BASF  
A world of solutions

MANCHESTER CITY COUNCIL

SIEMENS

Practical ACTION

Association for Science Education