

# Walkie Talkies!

STEM Activity



# Sound Is Energy

Vibrations make sound. Sound is energy.



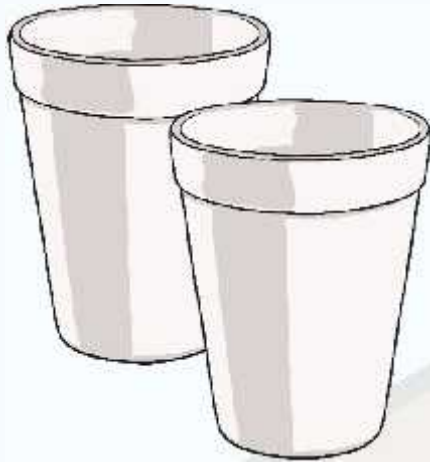
When we speak or sing, the vibrations travel from our throats into the air.

People who are near us hear by turning the vibrations into sounds that their brains understand – like someone's words or a horn beeping.

What's interesting is, you can't see sound coming, you can sometimes feel it, but how do we catch it?

Let's  
find  
out...

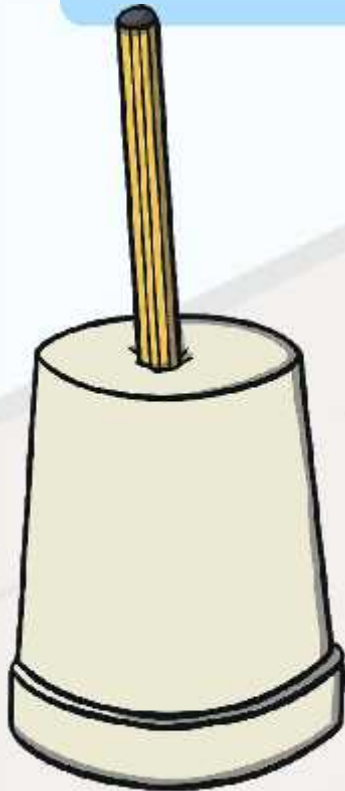
# What You Need



- 2 paper/plastic cups
- A sharp pencil
- String
- A ruler
- Scissors

# What to Do

- 1 Using your sharp pencil, put a whole in the bottom of the cup. Be careful not to prick your finger!



- 2 Next, use your ruler and scissors to cut a length of string 60cm long.

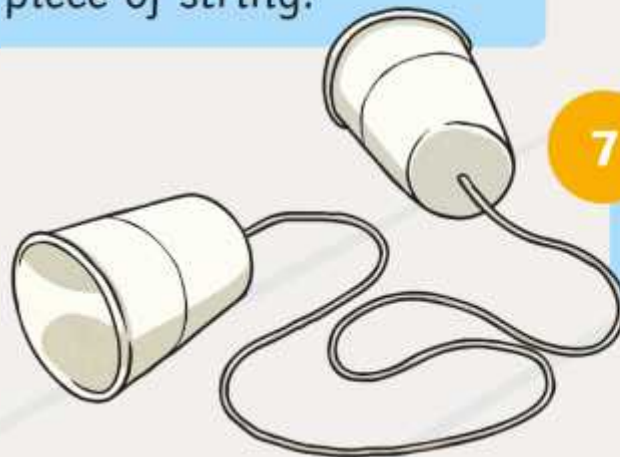


- 3 Put one end of the string through the hole you have made in the cup.

**4** Once you have this done, pull it through a little further – not all the way through or you'll have to start over again!  
Tie a knot in the end.

**5** Pull the end opposite the knot until the knot reaches the base of the cup.

**6** Now repeat this all again with another cup using the same piece of string.



**7** You should have two cups attached together by one piece of string.

**8** Now, with your partner, decide who will be the listener and who will be the talker.

**9** The listener will place the cup tight to their ear.  
The talker will pull the string tight and speak into the cup with their normal talking voice.

**10** Could you hear what your partner said?  
Now switch roles!



# Something to Think About...

What do you think is happening?

What happens if you let the string go slack?

What happens if you move the cup further from your ear?

What happens if you move the cup further from your mouth when talking?

How are we catching sound?



# Here's What's Happening...

When you speak into the cup, the sound or vibrations we make are being 'caught' in the first cup.

These same sound or vibrations travel down the string and enter the second cup placed close to our ear. The sounds caught in this cup then travel into our ear and we can hear what our partner has said!



When you let the string go slack, the vibrations don't travel very well and we can't hear the sounds at the other end.

When we move the first cup further away from our mouth, the sound doesn't get caught very well in the first cup, and not all of the vibrations then travel down the string.

When we move the second cup further away from our ear, not all of the vibrations that travelled down the string get passed into our ear and we can't hear the sounds very well.



