

LO: to investigate sound.

Where does sound come from?

Watch this video.

https://www.youtube.com/watch?v=XnTYb8k_EIY

What do you see?



The tuning fork is vibrating (when something feels a little bit shaky).

We can see these vibrations as they spread out across the water, like ripples on a pond.

Does anyone know what these are called?

Sound waves.

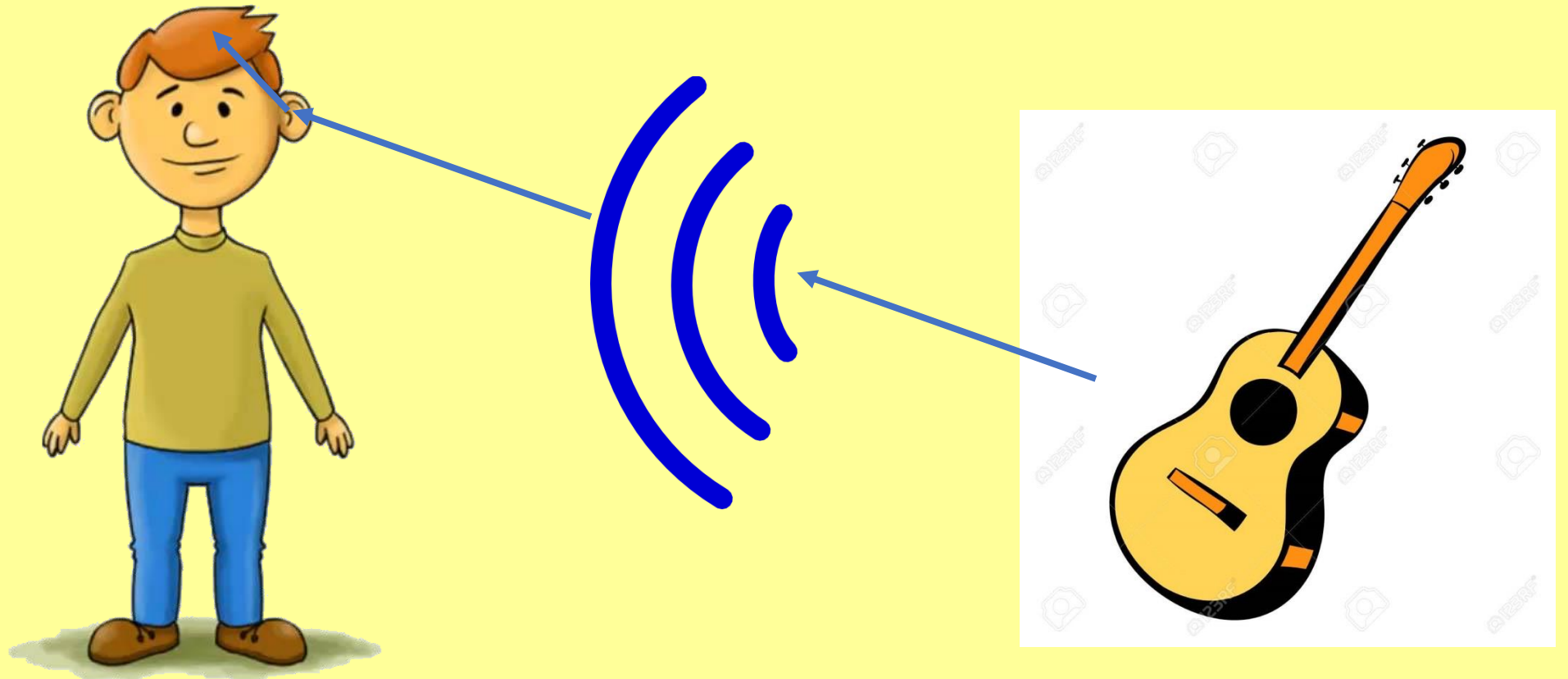
When we talk or make a sound, the same thing is happening.

Sound waves are invisible because they are moving through the air.



Put your hand on your neck, make a humming sound. What can you feel?

This is just like an ear. Our ear hears sound waves and then sends them to our brain. This is how we hear sounds.



Now, I want you to put your ear against a solid surface e.g. whiteboard or table and start tapping on the object. What is the sound like?


Now, I want you to take your ear away from the object and start tapping on it. What is the sound like?

Which is the loudest?

When our ear is against the object, it is much louder.

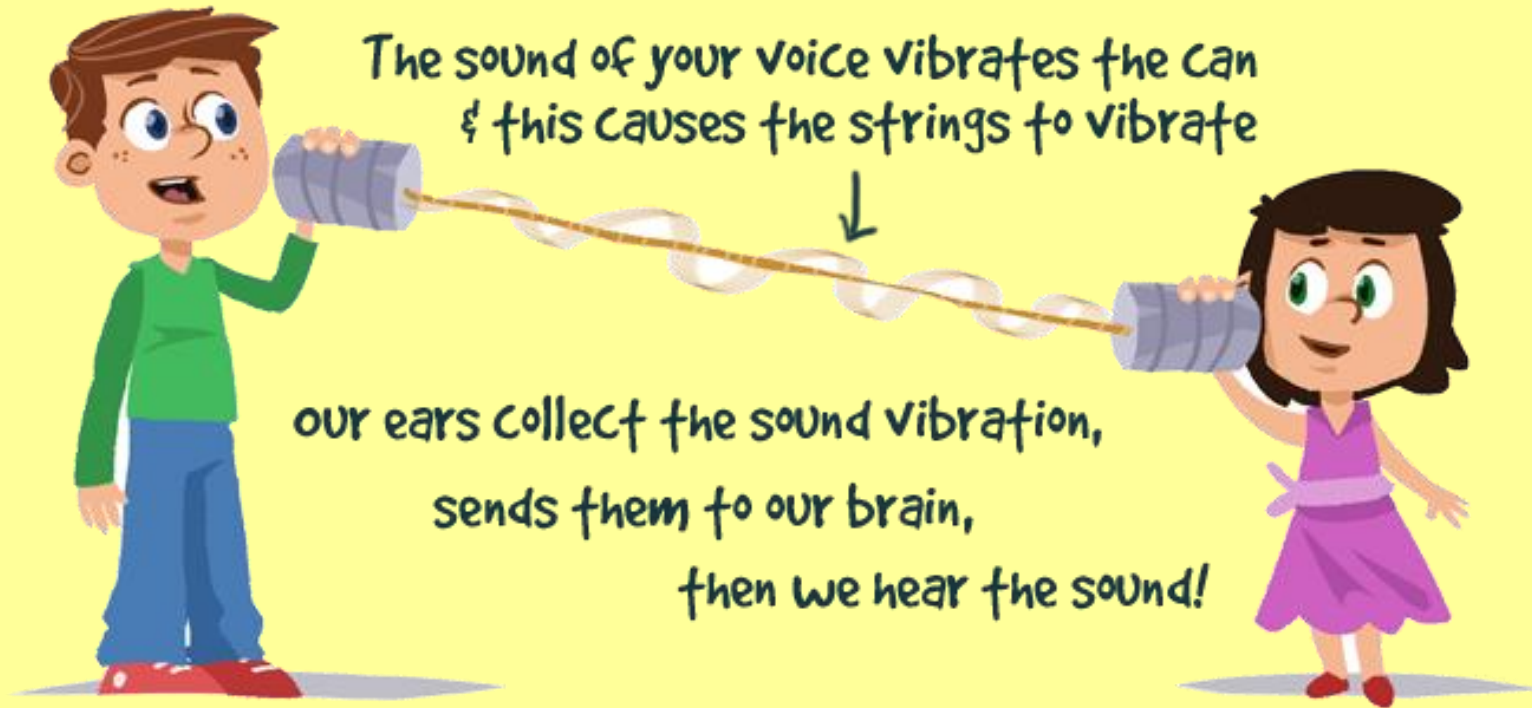
This is because the sound travels better through a solid (the whiteboard) than it does a gas (air).

Here are a few sound experiments that you could do at home so that you could see the effect of sound waves. Try and describe the sound after each experiment.
Have fun!



It sounds very loud.

Try and make this telephone with string and plastic cups or cardboard cups.





You Need:

1. A Long Piece of String
2. 2 Spoons of Different Sizes
3. A Pencil

What to do:

1. Take the string and tie it around the spoon so the spoon is in the middle of the string.
2. Take the two long pieces on either side and the children hold them up to their ears.
3. Then tap on the spoon with the pencil. Hitting the spoon with the pencil causes the spoon to vibrate.

Have the children try the other spoons.

- How do the sounds compare?

Try different lengths of string.

- What does that do to the sounds?



You Need:

1. Two Paper Towel Tubes
2. Pan

To Do:

1. Prop the pan up on a table so it is vertical.
2. Take one paper towel tube and place it on the table, angled a bit but aimed at the pan.
3. Take the other paper towel and have it angled the opposite way, also aimed at the pan.
4. Have the children put their ear to one of the tubes while you talk softly into the other. You can hear what is said through the other tube!



What has happened?

The sound waves you create by speaking travel through the tube is hitting the pan plate, bounces off the pan and then travels back through the other tube. You are hearing the echo.

You Need:

1. Big Bowl
2. Plastic Wrap
3. Uncooked Rice
4. Metal Pan
5. Metal Spoon

To Do:

1. Put the plastic wrap tightly over the bowl. (One sheet, as tight as you can get it.)
2. Put about 1 teaspoon of rice on the plastic.
3. Then hold the metal pan close to the bowl and have your child hit it with the spoon. The harder they hit it the better.
4. The rice will dance!



What is happening is that the pan vibrates, creating a sound wave. This wave goes through the air and this causes the plastic wrap to vibrate so that rice starts dancing!

