# LO: To identify how sounds are made, associating some of them with something vibrating

I can identify how sounds are made

I understand that sounds are made with something vibrating

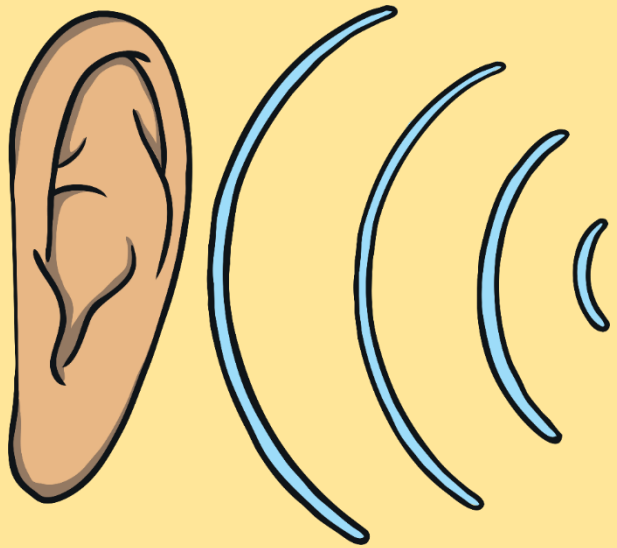
I can explore how sounds are made

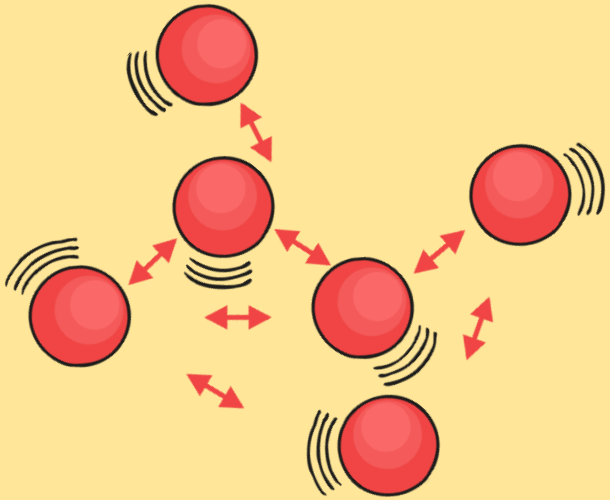
# Sound waves

- Like light, sound travels through the air in waves.
- Sound is made by air molecules vibrating.
- When you clap your hands, the air around your hands shakes. This is the air molecules vibrating.
- The vibration of the air molecules around the hands, shake the molecules next to them and so on, until the air molecules in the ear are vibrating.

<u>Glossary</u>

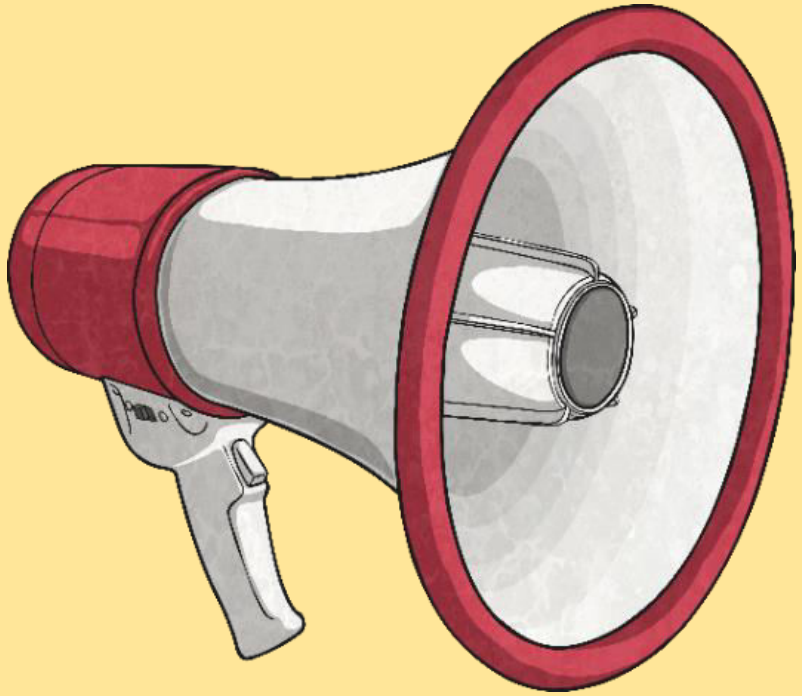
- Vibrating – shake quickly back and forth.





# Have you ever felt a speaker when the sound is on?

## It vibrates



Watch how the cymbal vibrates in this video clip.

https://www.youtube.com/watch?v=QAlvdmQAEQ4

Press your fingers to your throat and talk to a friend.

Can you feel the vibrations in your throat?

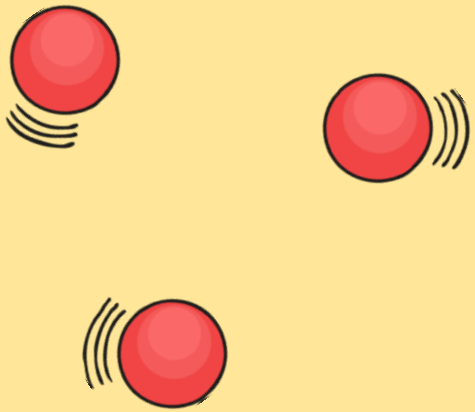
Put some grains of rice on a drum and gently strike the drum.

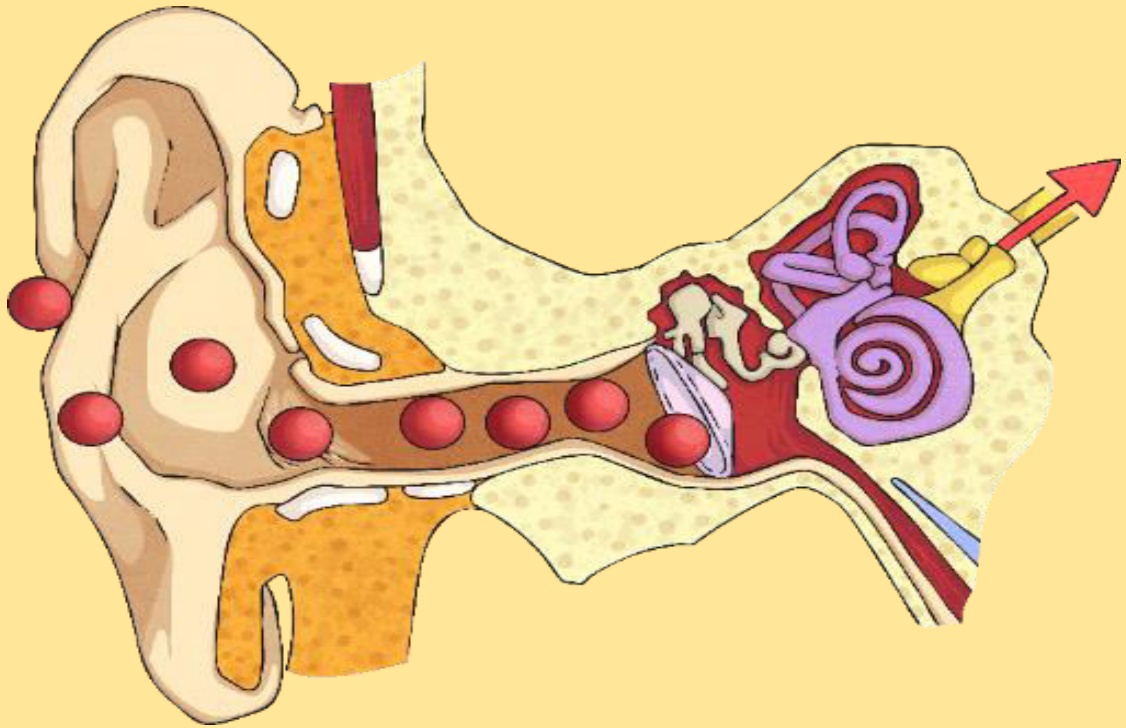
What happens? Why?

The **vibrations** from the drum cause the rice to dance around.

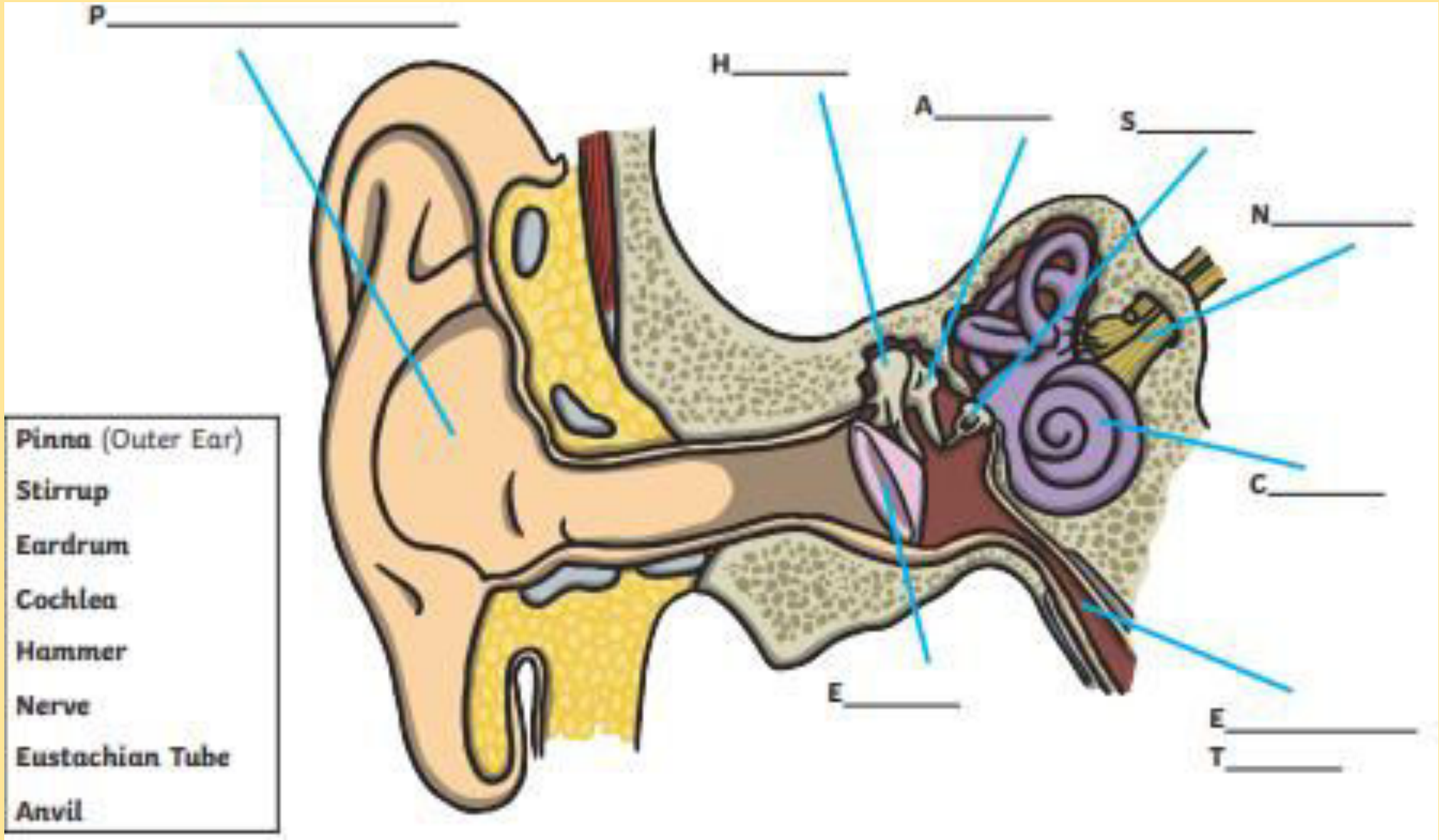
It is these vibrations that let us hear the sound of the drum

When air molecules inside the ear vibrate, they shake tiny hairs on the insides of the ears.
The hairs are connected to nerves under the skin.
These nerves send messages to your brain to tell you that you heard
a noise.





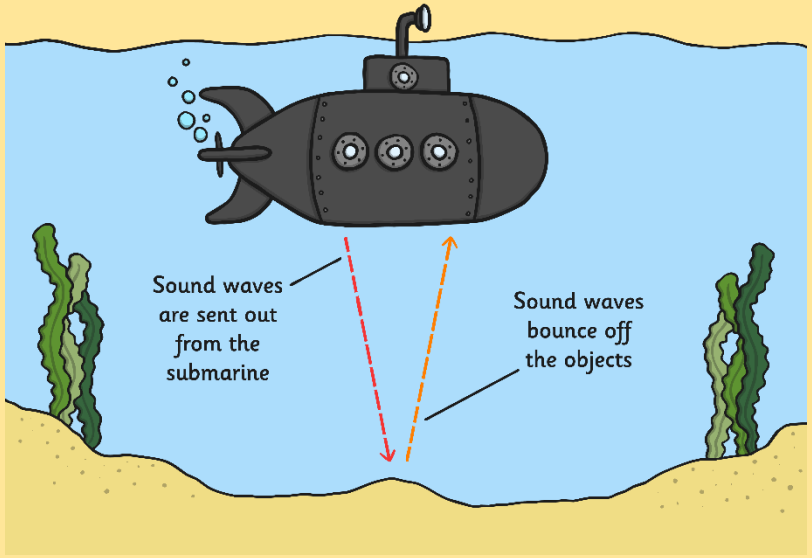
# Label the worksheet to find out the names of parts of the ear



Sound needs molecules to move. It is impossible for sound to travel in space.

Sound doesn't have to move through air. It can travel through water or metal.

In fact, sound travels faster through water and solids than it does through air.




Sound travels much slower than light, whether in air or in water.

**Light travels at 186,000 miles per second.**
**Sound travels at 770 miles per hour.**

You often hear things after you see them, for example you see the lightning before you hear the thunder.

**Thought bubble:** Why do you think sound travels faster through solids and liquids, than gases?

HINT: Think about how close the molecules are to each other.

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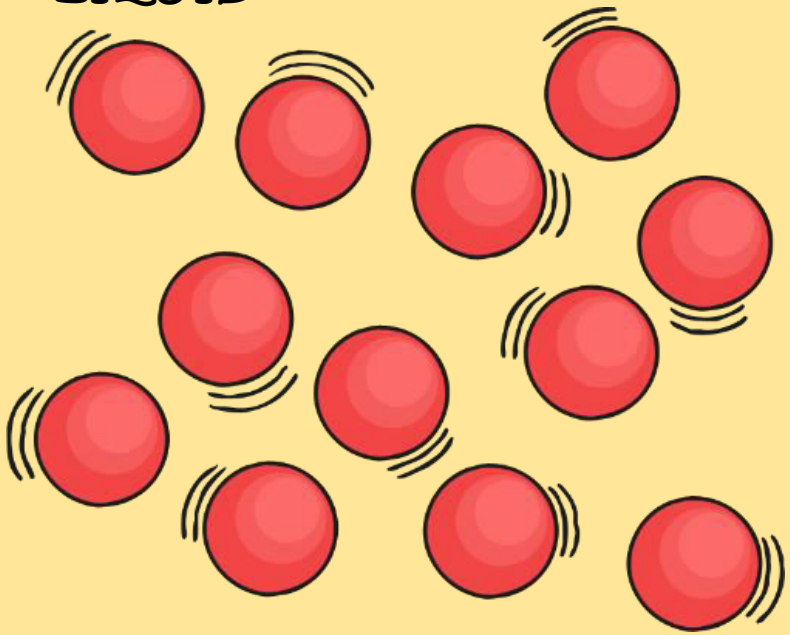

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