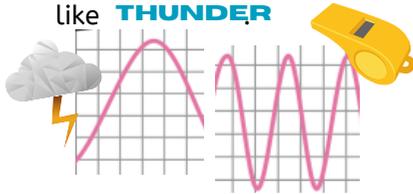




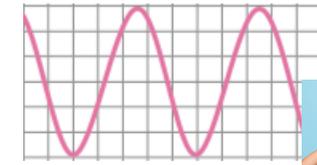
slower **vibrations**  
= lower **pitch**  
like **THUNDER**



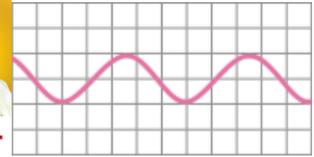
faster **vibrations**  
= higher **pitch**  
like a **WHISTLE**

Pitch is a measure of how **HIGH** or **LOW** a sound is.

Sound is a type of energy. Sounds are created by **vibrations**. The louder the sound, the **BIGGER** the vibration.

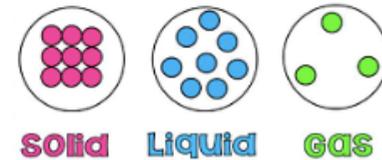


**LOUD**



**QUIET**

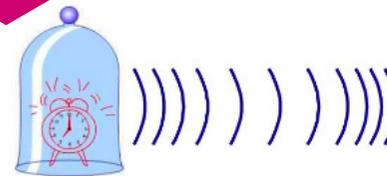
The vibration makes the air around the object vibrate and the air vibrations enter your ear. You hear them as sounds.



**SOLID**   **LIQUID**   **GAS**

You cannot always see the vibrations, but if something is making a sound, some part of it is always vibrating.

Sound can travel through solids, liquids and gases. It travels as **Waves** vibrating the particles of the medium it is travelling through.



**vacuum pump on**



Just like space, sound cannot travel through a vacuum because there are no particles to carry the vibrations.

The sound **cannot** be heard

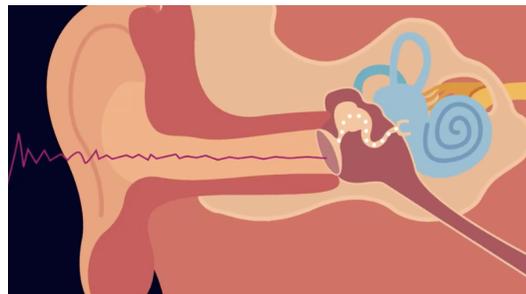


There is **NO** sound in space!



We hear because air particles closest to your ear vibrate, passing the vibrations into your ear.

Inside your ear, the vibrations **HIT** the eardrum and are then passed to the middle and then inner ear. They are then changed into electrical signals and sent to your brain.



# Glossary

**Absorb** - to take in sound energy; absorbent materials can muffle sound

**Amplitude** - the size of a vibration

**Eardrum** - a part of the ear which is a thin, tough layer of tissue that is stretched out like a drum skin.

**Pitch** - how low or high a sound is

**Particles** - solids, liquids and gases are made of particles. They are so small that we cannot see them

**Sound wave** - vibrations travelling from a sound source

**Vacuum** - a space where there is nothing; there are no particles in a vacuum

**Vibration** - a movement backwards and forwards

**Volume** - the loudness of a sound

# Year 4 Sound



Autumn 1