

Key Vocabulary

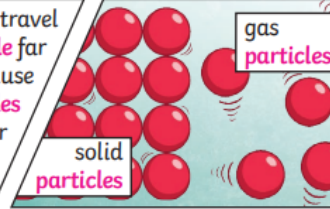
|                     |  |
|---------------------|--|
| <b>vibration</b>    | A quick movement back and forth  |
| <b>Sound wave</b>   | Vibrations travelling from a sound source  |
| <b>volume</b>       | The loudness of a sound  |
| <b>amplitude</b>    | The size of the vibration<br>A larger amplitude = a larger sound                               |
| <b>pitch</b>        | How high or low a sound is   |
| <b>ear</b>          | Natural solid material that is moved and dropped off in a new place by water or wind e.g. sand |
| <b>particles</b>    | Solids, liquids and gases are made of particles. They are so small we are unable to see them.  |
| <b>distance</b>     | A measurement of length between two points.  |
| <b>soundproof</b>   | To prevent sound from passing through  |
| <b>Absorb sound</b> | To take inn sound energy. Absobent materials have the effect of muffling sound.                |
| <b>Vacuum</b>       | A space where there is nothing.  |
| <b>eardrum</b>      | A part of the ear that vibrates when sound waves reach it.                                     |

Key knowledge

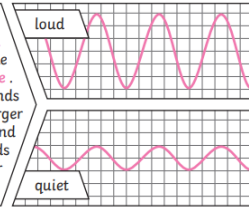
Sound is a type of energy. Sounds are created by vibrations. The louder the sound the bigger the vibration.

Sound can travel through solids, liquids and gases. Sound travels as a **wave**, **vibrating** the **particles** in the medium it is travelling in. Sound cannot travel through a **vacuum**.

Sound energy can travel from **particle to particle** far easier in a solid because the **vibrating particles** are closer together than in other states of matter.



The size of the **vibration** is called the **amplitude**. Louder sounds have a larger **amplitude**, and quieter sounds have a smaller **amplitude**.



When you hit the drum, the drum skin **vibrates**. This makes the air **particles** closest to the drum start to **vibrate** as well.



The **vibrations** then pass to the next air **particle**, then the next, then the next. This carries on until the air **particles** closest to your ear **vibrate**, passing the **vibrations** into your **ear**.



**Pitch** is a measure of how high or low a sound is. A whistle being blown creates a high-**pitched** sound. A rumble of thunder is an example of a low-**pitched** sound.



Investigation

- How does the sound travel through my telephone?
- What have I changed on my telephone?
- Does my telephone always work?
- What stops my telephone from working?
- How can I make my telephone work better?

Famous Scientists

- Galileo Galilei
- Christian Doppler
- Charles Henry Turner
- Alexander Bell



I will be able to

- Identify how sounds are made and link it to something vibrating
- Understand that vibrations from sound travel though a medium to the ear
- Find patterns between the pitch of a sound and features
- Find patterns between the volume of a sound and the strength of the vibrations that it produces
- Recognise that sounds get fainter the further away you are from the sound