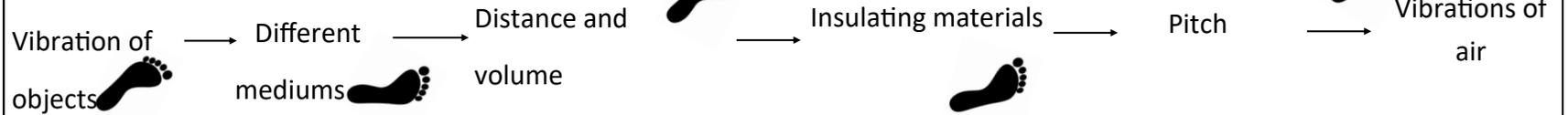


# SOUND

## LEARNING JOURNEY



## KEY VOCABULARY

### Mild

sound

hear

loud

high

volume

pitch

instruments

molecules / particles

### Warm

insulate

frequency

tuning fork

soundproof

### Spicy

amplitude

medium

ear drum

quiet

low

faint

vibration

wave

amplify

wavelength

transmit

acoustics

## SOURCES OF SOUND

The drum skin vibrates and makes the air around the drum vibrate.



The vibrating air spreads away from the source - this is a sound wave.

Finally, your ear picks up the sound wave and your brain translates the sound.



## KEY FACTS

Like light, sound travels through the air in **waves**.

Sound is made by air **molecules** vibrating.

Sound can travel through and bend around many **objects**, including water.

Sound travels faster through **solids** and **liquids** than gases because the molecules are closer together.

- When an object moves it creates a **vibration**.
- Vibrations move **air molecules** around.
- These moving molecules are constantly bumping into each other.
- Our ears can pick up these “molecule-vibrations” as **sound**.
- **Fast**-moving particles create a **high** sound, while slow ones are low-sounding.

## INTERESTING FACTS

Our ears vibrate in a similar way to the original source of the vibration, allowing us to hear many **different** sounds.

**Dogs** can hear sound at a higher frequency than humans, allowing them to hear noises that we can't.

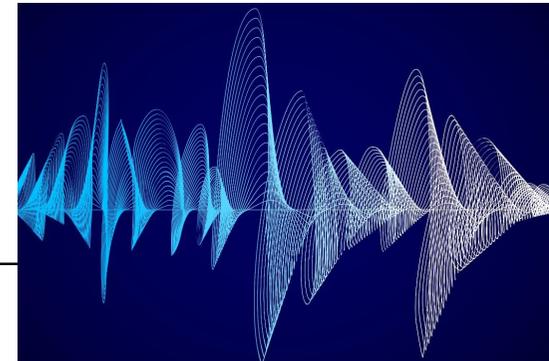
The speed of sound is around **767 miles** per hour (1,230 km/hr).

The loud noise you create by cracking a whip occurs because the tip is moving so fast it breaks the **speed of sound!**

When travelling through **water**, sound moves around **4 times faster** than when it travels through air.

It is impossible for sound to travel in **space** because there are no molecules to move.

The scientific study of sound waves is known as **acoustics**.



Y4 NC Statements:

Pupils should be taught to:

- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that vibrations from sound travel through a medium to the ear.
- Find patterns between the pitch of a sound and features of the object that produced it.
- Find patterns between the volume of a sound and the strength of the vibrations that produced it.
- Recognise that sounds get fainter as the distance from the sound increases.

ART	DT	Outdoor Learning Opportunities
		Investigations outside