

Key Learning

Pupils should be taught to:

- *identify how sounds are made, associating some of them with something vibrating
- ♣ recognise that vibrations from sounds 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 source increases

Science: SOUND ROSES Yr 3 / 4 AUT 1 2026



Morda CE Primary School

Key Knowledge

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



Inside your **ear**, the **vibrations** hit the **eardrum** and are then passed to the middle and then the inner **ear**. They are then changed into electrical signals and sent to your brain. Your brain tells you that you are hearing a sound.



Key Knowledge

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.



Key Scientific Vocabulary

Key Vocabulary

vibration	A quick movement back and forth.
sound wave	Vibrations travelling from a sound source.
volume	The loudness of a sound.
amplitude	The size of a vibration . A larger amplitude = a louder sound.
pitch	How low or high a sound is.

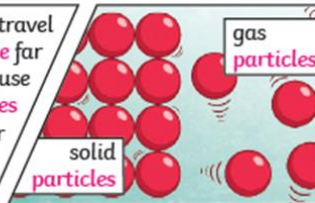
Pitch is a measure of how high or low a sound is. A whistle being blown creates a high-pitched sound. A rumble of thunder is an example of a low-pitched sound.



You can change the **pitch** of a sound in different ways depending on the type of instrument you are playing.

For example, if you are playing a xylophone, striking the smaller bars with the beater causes faster **vibrations** and so a higher **pitched** note. Striking the larger bars causes slower **vibrations** and produces a lower note.

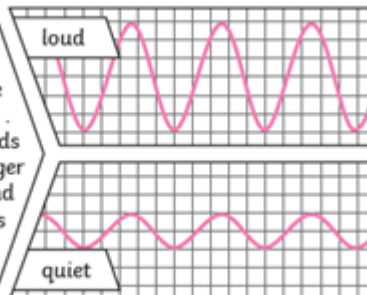
Sound energy can travel from **particle to particle** far easier in a solid because the **vibrating particles** are closer together than in other states of matter.



If you throw a stone in a pond, it will produce ripples. As the ripples spread out across the pond, they become smaller. When sound **vibrations** spread out over a **distance**, the sound becomes quieter, just like ripples in a pond.



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



Key Vocabulary

ear	An organ used for hearing.
particles	Solids, liquids and gases are made of particles . They are so small we are unable to see them.
distance	A measurement of length between two points.
soundproof	To prevent sound from passing through.
absorb sound	To take in sound energy. Absorbent materials have the effect of muffling sound.
vacuum	A space where there is nothing. There are no particles in a vacuum.
eardrum	A part of the ear which is a thin, tough layer of tissue that is stretched out like a drum skin. It separates the outer ear from the middle and inner ear . Sound waves make the eardrum vibrate .

Enquiry Types

To identify how sounds are made, associating some of them with something vibrating.

To find patterns between the volume of a sound and the strength of the vibrations that produced it.

To recognise that vibrations from sounds travel through a medium to the ear.

To explore how high and low sounds are created.

To find patterns between the pitch of a sound and features of the object that produced it.

To recognise that sounds get fainter as the distance from the sound source increases.

To investigate the best material for absorbing sound.

Common Misconceptions

The volume and pitch of a sound are the same thing.

Sound can only travel through air and not through solids and liquids.

Sound can travel through a vacuum, such as space.

Sound can be produced without using any materials.

Hitting an object harder changes the pitch of the sound produced.

Sound is slowed down by physical obstructions.

Sound gets quieter as it travels further because it has 'faded out' or run out of 'energy'.