



What should I already know?

- I have five senses and one of them is hearing. We hear sound with our ears.
- Musical instruments make sounds.

How sounds are made

Sounds are made when an object **vibrates**.
If an object is not **vibrating**, it will not make a sound.
Vibrations and sounds can be made in different ways.

How vibrations travel

Sounds are heard when **vibrations** travel from the object through a **medium** to our ear.
A **medium** can be a solid, a liquid, or a gas.
Sound cannot be heard in outer space as there is no air, therefore no medium for sound to travel through.

Louder and quieter sounds

Large vibrations create loud sounds.
Small vibrations create quiet sounds.
The **volume** of a sound can be changed.

Distance from sounds

The **volume** of a sound depends on the **distance** from the **sound source**.
The greater the distance from the **sound source**, the quieter the sound.

Talk like a scientist

- I think this... because...
- I know this, so I think...
- This will happen because...
- What do you think?
- What will happen if...?

Scientists

We are scientists. We ask questions about our world and technology and then explore and discover the answers with the aim of making the world a better place.

Pitch

Different objects produce different **pitch** sounds when they **vibrate**.
Changing the length of the vibrating object can affect the **pitch of the sound** it produces.



The ear

When **sound** reaches our ears, the **eardrum** inside the ear **vibrates**, allowing us to hear.

Technical vocabulary

vibrations	Vibrations are when an object moves very fast from side to side
object	An object is a thing that is not alive
medium	Something for sounds to travel through such as a solid, liquid or gas
sound waves	Vibrations travel in sound waves which spread out in all directions
volume	The volume of a sound is how loud or quiet it is.
absorb	To soak up or take in
sound insulator	A sound insulator does not allow sound to pass through it easily.
pitch	Pitch describes how high or low a sound is
sound source	An object that vibrates to make a sound is called a sound source
evaluate	To evaluate is to think about what you did and suggest any changes or improvements

Working scientifically

Scientists carry out investigations to find out which materials are good sound insulators.
A comparative test compares one event with another.



Pattern seeking enquiry

Enquiry means to investigate something to find out more.
Pattern seeking is when scientists look for patterns in data to answer their questions.

