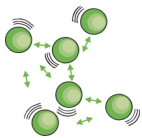


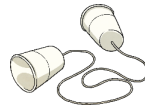


### Key Vocabulary

sound	Something you can hear or that can be heard. We hear sound with our ears.
sound source	A source is producing sound when some part of it is vibrating.
vibrations	Sounds are made when something vibrates. This means it moves quickly backwards and forwards.
pitch	How high or low a sound is.
volume	How loud or quiet a sound is.
sound insulation	A material which blocks sound effectively.



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.



### Measuring Sound: Volume

The volume (loudness) of a sound depends on the size of the vibrations.

Sound volume is measured in bels. We commonly measure sounds audible to humans in decibels, dB (one-tenth of a bel).

The closer we are to the sound source the louder it will be.



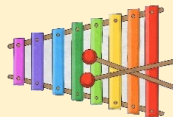
A train arriving at a station sounds loud.

The further away from the sound source the fainter it will be.

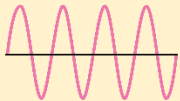
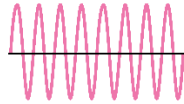
A train in the distance sounds quieter.



### Pitch



The shorter bars on the xylophone make higher sounds.



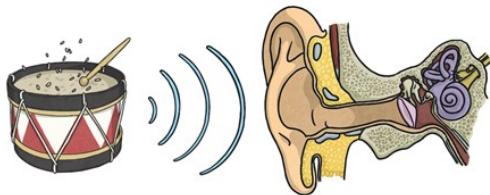
The longer bars on the xylophone make a lower sound.

### How do we hear sound?

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

1 Banging the drum produces vibrations

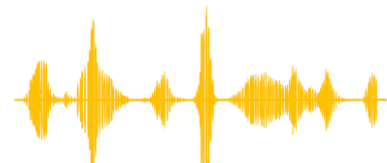
3 The vibrations cause parts of our ear to vibrate. This allows us to hear the sound.



2 The sound travels through the air to the ear

### How are sounds different?

Sounds can have different pitches, frequencies, wavelengths, and amplitudes, so they sound different to our ears.



### Insulating Sound

We can wear ear defenders to protect our ears from very loud sounds.