

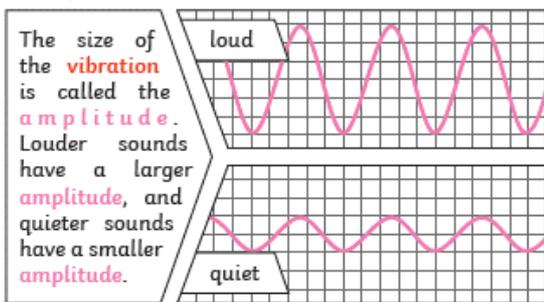
Topic:	Sound	Year:	4	Term:	Autumn 1
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Key Knowledge

Sounds are made when objects **vibrate**. The vibration makes the air around vibrate, and the air vibrations enter your ear. Our brain hears the vibrations and turns this into a sound.

When a sound is created by a little amount of energy, a weak sound wave is created which doesn't travel far. This makes a quiet sound.

A vibration with lots of energy makes a powerful sound wave and therefore a loud sound.



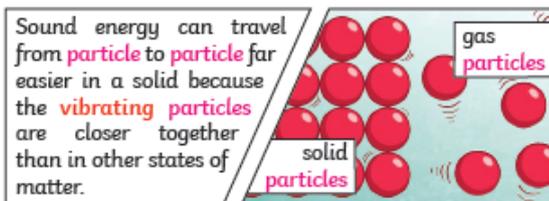
The closer you are to the source of the sound, the louder the sound will be.

The further away you are from the source of the sound, the quieter the sound will be.

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.



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 travels much slower than light, whether in air or in water. You often hear things after you see them, for example lightning before you hear the thunder.

Key Vocabulary

Vibration: a movement backwards and forwards.

Sound Wave: vibrations travelling from a sound source.

Volume: The loudness of a sound.

Amplitude: The size of a vibration.

Pitch: How low or high a sound is.

Particles: Solids, liquids and gases are made of particles. They are so small we are unable to see them.

Noise Pollution: is any disturbing or unwanted sound that interferes or harms humans or wildlife.

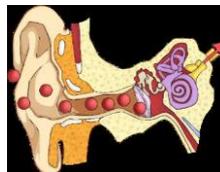
Soundproof: To prevent sound from passing.

Insulate: Material that stops sound passing through

Loud: **Quiet:** **Air:** **Ear:** **Instrument:**

String: **Percussion:** **Brass:** **Woodwind:**

The Ear



When air molecules inside the ear vibrate, they hit the eardrum and are passed to the middle and inner ear. They shake the hairs on the insides of the ears. The hairs are connected to nerves under the skin. These nerves send messages to your brain to tell you that you heard a noise.

Hearing Loss - Sometimes, the vibrations may not be carried properly by the bones in the middle ear, or the ear canal is blocked so the vibrations do not make it to the ear drum. - An inner ear problem means that sound arrives at the cochlear, but is not passed on to the hearing nerve. - Alternatively, the hearing nerve may not be passing information on.

Sources

<https://www.bbc.co.uk/bitesize/topics/zgffr82>

<https://www.dkfindout.com/uk/science/sound/>

<https://www.bbc.co.uk/teach/class-clips-video/music--science-ks2-what-is-sound/zbnmhbk>