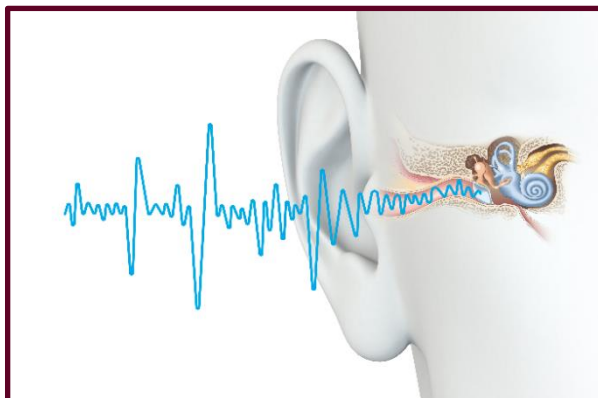


Y4 Science – Sound

How do we hear sounds?

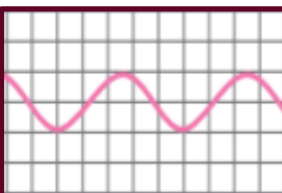
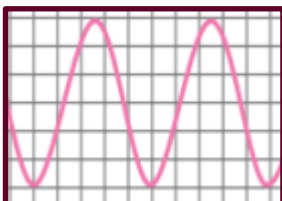
Sound waves can travel through solids, liquids and gases.

Sounds are made when objects vibrate. When an object vibrates, the air around it vibrates too. This vibrating air can also be known as sound waves. The sound waves travel to the ear and make the ear drums vibrate. Messages are sent to the brain which recognises the vibrations as sounds.



The size of the vibration is called the amplitude.

Louder sounds have a large amplitude and quieter sounds have a smaller amplitude.



Pitch

Pitch is a measure of how high or low a sound is. The faster the vibrations of a sound, the higher the pitch. Slower vibrations produce a lower pitched sound.

Blowing a whistle creates a high-pitched sound and a rumble of thunder is low pitched.

Some materials are good at preventing vibrations from sound sources reaching the ears.

These can be used to soundproof (absorb the sound) effectively.



Vocabulary

| | |
|---------------------|--|
| Vibration | A movement backwards and forwards |
| Sound wave | Vibrations travelling from a sound source |
| Source | The beginning; where something comes from |
| Volume | The loudness of a sound |
| Amplitude | The size of a vibration. The larger the amplitude the louder the sound |
| Pitch | How high or low a sound is |
| Ear | An organ used for hearing |
| Soundproof | To prevent sound from passing |
| Absorb sound | To take in sound energy. Absorbent materials have the effect of muffling sound |
| Eardrum | A part of the ear which is a thin, tough layer of tissue that is stretched out like a drum skin. |