

Knowledge Organiser



Year 4, Summer 2: Sound
Science Strand: Physics
Whole School Topic:
Express Yourself

Key Vocabulary

pitch	How high or low a sound is.
sound	A thing that can be heard.
source	The object that makes the sound.
vibration	Invisible waves that move quickly.
volume	How loud or quiet a sound is.

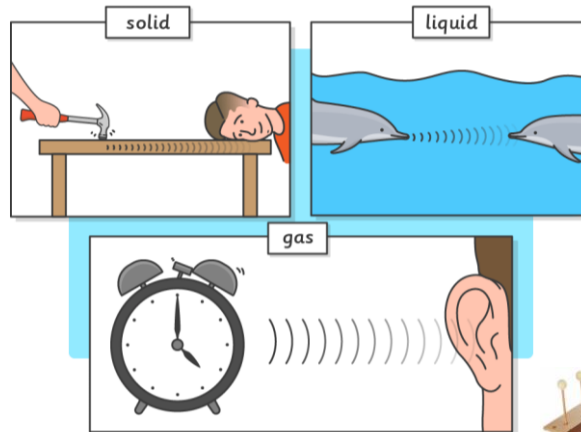
Scientific Enquiry Approaches that we can use this term:



What will I know about sound by the end of this topic?

- A sound produces vibrations which travel through a medium from the source to our ears.
- Different mediums such as solids, liquids and gases can carry sound.
- Sound cannot travel through a vacuum (an area empty of matter)
- Vibrations cause parts of our body inside our ears to vibrate, allowing us to hear sound.
- Sounds decrease in volume as you move away from the source.

What can sound travel through?



Insulating sound



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

How do sounds change?

The volume of a sound depends on the size of vibrations.



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

If we blow a trumpet with a lot of energy, we make a louder sound.

Volume

The closer we are to a sound source, the louder it will be. The further away from the source, the fainter the sound will be.

How do we hear sound?



1. When an object vibrates, the air around it vibrates too. This vibrating air can also be known as sound waves.

2. The sound waves travel to the ear and make the eardrums vibrate.

3. Messages are sent to the brain which recognises the vibrations as sound.

Pitch

Smaller objects usually produce higher pitched sounds.



The longer bars on a xylophone make a low pitch sound and the shorter bars make a high pitch sound.

