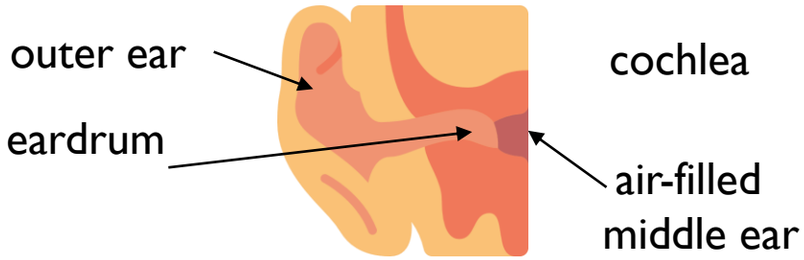
Sound KNOWLEDGE ORGANISER

ESSENTIAL SOUND VOCABULARY	
Ear	The organ used for hearing.
Particle	Tiny parts of matter.
Volume	How loud a sound is.
Cochlea	Sound waves travel from the eardrum to the cochlea which sends messages to the brain.
Distance	The length of space between two points.
Soundproof	Preventing sound from passing.
Eardrum	A thin later of tissue in the ear. Sound waves make the eardrum vibrate.
Vibration	A movement backwards and forwards.
Soundwave	Vibrations travelling from a source of sound.
Amplitude	The size of a vibration. Larger amplitudes mean louder sounds.
Pitch	How high or how low a sound is.
Vacuum	A space with no particles.
Absorb	Take in or soak up substances.
Wavelength	Calculate the distance of a point on one wave and the same point of the next wave.
Solids	Materials that keep their shape unless a force is applied to them.

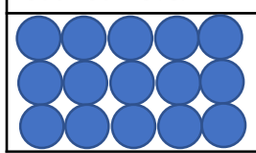
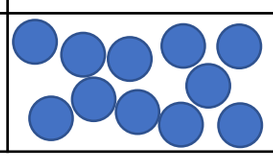
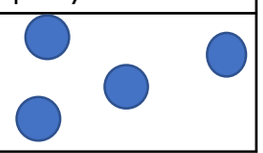
Sound

Sound travels through solids, liquids and gases. It travels as a wave, vibrating particles in the medium it is travelling in. Sound cannot travel through a vacuum (like space) as there are no particles there.



Particles

Sound waves can travel through solids, liquids and gases, they travel fastest through solids and slowest I gases. They travel more easily through solids because the vibrating particles are closer together.

Solid	Liquid	Gas
Particles are very close together. They can vibrate, but not move.	Particles are close together, but can move around easily.	Particles are spread out. They can move around freely and quickly
		

MAKING LINKS TO PREVIOUS LEARNING
GOLDEN VOCABULARY

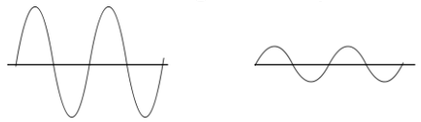
Space	Space is a **vacuum**. As there are no particles, sound cannot travel.
Materials	**Absorbent** materials have the effect of muffling sound. Sound travels faster in some **materials** than others.
Solids, Liquids and Gases	Invisible sound waves travel through solids, liquids and gases as **vibrations**.

How is Sound Made?

- When your hands clap, they vibrate which makes the air particles around them vibrate too.
- Those vibrations transfer to the next particles and so on. It continues until the air particles nearest the ear vibrates. This passes vibrations into the ear.
- Once in the ear, the vibrations hit the eardrum and are passed through to the inner ear.
- Here they are changed into electrical signals which are sent to the brain.

Volume

The size of a vibration is called the amplitude. The louder the sound, the larger the amplitude will be.

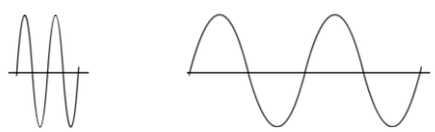


The closer the source of sound is, the louder it will be. Quieter sounds have a smaller amplitude.

Fun fact! Sound travels slower than light, so you often see things after you hear them. You see lightning then you hear thunder.

Pitch

Pitch is how low or how high a sound is. Faster vibrations will have a higher pitch.



The pitch of sounds can be changed in different ways. With stringed instruments, the tighter the string, the higher the pitch of the sound.

Fun fact! Sound travels slower through air than it does through water.