




Year 4 Knowledge Organiser- Sound (Physics)

Sound is a type of energy. Sounds are created by vibrations. The louder the sound the bigger the vibrations.		
Key Vocabulary.		Sound Energy
vibration	A movement backwards and forwards.	<p>Sound can travel through solids, liquids and gases. Sound travels as a wave vibrating the particles it is travelling through.</p> <p>When you clap your hands, the air around your hands shakes. This is the air molecules vi</p>  <p>The vibration of the air molecules around the hands, shake the molecules next to them and so on, until the air molecules in the ear are vibrating.</p>  <p>When air molecules inside the ear vibrate, they shake tiny hairs on the insides of the ears. These nerves send messages to your brain to tell you heard a noise.</p> 
sound wave	Vibrations travelling from a sound source.	
volume	How loud a sound is.	
amplitude	The size of a vibration. A larger amplitude means a louder sound.	
pitch	How low or high a sound is.	
ear	An organ used for hearing.	
particles	Solids, liquids and gases are made of particles. They are so small we can't see them.	
soundproof	Stops sound passing.	
ear drum	A part of the ear made of thin skin. When sound waves pass they make the skin vibrate.	
tone	A sound of definite pitch and vibration	
absorb sound	To take in sound energy.	

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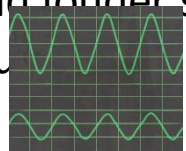
Loud and Quiet

The **louder the sound, the bigger the vibration**. If you were to put rice on a drum the rice grains vibrate more when you hit the drum harder, creating a louder sound.



The **size of the vibration is called the amplitude**.

Quieter sounds have a smaller amplitude, and louder sounds have a bigger amplitude.



Higher and Lower

The **pitch** of a sound is how **high** or **low** the sound is. A high sound has a **high pitch** and a low sound has a **low pitch**.

The thickness of a string is related to its pitch. If two strings are the same length, the thicker string will have a lower pitch than the thinner string. The tension of a string is also related to its pitch.

Amplitude is a measure of how loud or quiet a sound is, and pitch is a measure of how high or low a sound is.

