



Year 4  
Topic: Sound  
Strand: Physics

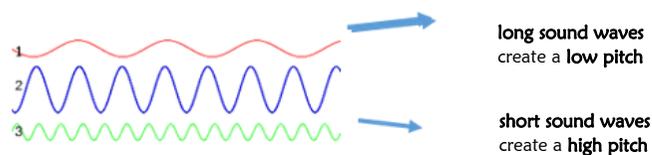
What I should already know.

- Hearing is one of my five senses.
- Sounds can be combined using musical instruments.
- What the word **vibration** means.

Diagrams

Pitch:

- **High pitch** sounds are created by short **sound waves**.
- **Low pitched** sounds are created by long **sound waves**.



Volume:

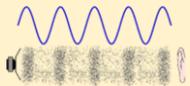
- The closer you are to the **source** of the sound, the **louder** the sound will be.
- The further away you are from the **source** of the sound, the **quieter** the sound will be.



Vocabulary

<b>Amplitude</b>	A measure of the strength of a sound wave.
<b>Decibel</b>	A measure of how loud a sound is.
<b>Electricity</b>	A form of <b>energy</b> that can be carried by wires and is used for heating and lighting, and to provide power for devices. The <b>power</b> from <b>sources</b> such as <b>electricity</b> that makes machines work or provides heat.
<b>Energy</b>	
<b>Frequency</b>	A measure of how many times per second the <b>sound wave</b> cycles.
<b>Medium</b>	Something that makes possible the transfer of <b>energy</b> from one location to another.
<b>Pitch</b>	How <b>high</b> or <b>low</b> a sound is.
<b>Power</b>	<b>Power</b> is energy, especially electricity, that is obtained in large quantities from a fuel <b>source</b> and used to operate lights, heating, and machinery.
<b>Sound waves</b>	Invisible waves that travel through air, water, and solid objects as <b>vibrations</b> .
<b>Source</b>	Where something comes from.
<b>Transmit</b>	To pass from one place or person to Another.
<b>Travel</b>	How something moves around.
<b>Vibrations</b>	Invisible waves that move quickly.
<b>Volume</b>	How <b>loud</b> or <b>quiet</b> a sound is.

What will I know by the end of the unit?

What is a sound?	A thing that can be heard. <u>The object that makes the sound is called the <b>source</b>.</u>
How is a sound made? 	<ul style="list-style-type: none"> <li>• <u>When objects <b>vibrate</b>, a sound is made.</u></li> <li>• The <b>vibration</b> makes the air around the object <b>vibrate</b> and the air <b>vibrations</b> enter your ear. These are called <b>sound waves</b>.</li> <li>• If an object is making a sound, a part of it is <b>vibrating</b>, even if you cannot see the <b>vibrations</b>.</li> </ul>
How do sounds travel?	<ul style="list-style-type: none"> <li>• <u><b>Sound waves</b> travel through a <b>medium</b> (such as air, water, glass, stone, and brick).</u></li> <li>• For example, if somebody is playing music in the room next door, the sound can travel through the bricks in the wall.</li> </ul>
How do we hear sounds?	<ul style="list-style-type: none"> <li>• <u>When an object <b>vibrates</b>, the air around it <b>vibrates</b> too. This <b>vibrating</b> air can also be known as <b>sound waves</b>.</u></li> <li>• The <b>sound waves</b> travel to the ear and make the <b>eardrums vibrate</b>.</li> <li>• Messages are sent to the brain which recognises the <b>vibrations</b> as sounds.</li> </ul> 
How do sounds change?	<p><b>Pitch:</b> The <b>pitch</b> of a sound is how <b>high</b> or <b>low</b> it is. A squeak of mouse has a <b>high pitch</b>. A roar of a lion has a <b>low pitch</b>.</p> <p><b>Volume:</b> The <b>volume</b> of a sound is how <b>loud</b> or <b>quiet</b> it is. When a sound is created by a little amount of <b>energy</b>, a weak <b>sound wave</b> is created which doesn't <b>travel</b> far. This makes a <b>quiet</b> sound. A small tap of a hammer is used with small amounts of <b>energy</b> and so creates a <b>quiet</b> noise. A <b>vibration</b> with lots of <b>energy</b> makes a powerful <b>sound wave</b> and therefore a <b>loud</b> sound. A powerful, smashing tap of a hammer is used with lots of <b>energy</b> and so creates a <b>loud</b> noise.</p>