
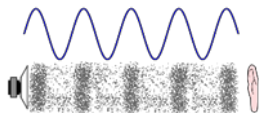


What should I already know?

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

What will I know by the end of the unit?

What is a sound?	A thing that can be heard. The object that makes the sound is called the <b>source</b> .
How is a sound made?	<ul style="list-style-type: none"> <li>• When objects <b>vibrate</b>, a sound is made.</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 vibrations.</li> </ul> 
How do sounds travel?	<ul style="list-style-type: none"> <li>• <b>Sound waves</b> travel through a <b>medium</b> (such as air, water, glass, stone, and brick).</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>• 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>.</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></p> <ul style="list-style-type: none"> <li>• The <b>pitch</b> of a sound is how <b>high</b> or <b>low</b> it is. <ul style="list-style-type: none"> <li>• A squeak of mouse has a <b>high pitch</b>.</li> <li>• A roar of a lion has a <b>low pitch</b>.</li> </ul> </li> </ul> <p><b>Volume:</b></p> <ul style="list-style-type: none"> <li>• The <b>volume</b> of a sound is how <b>loud</b> or <b>quiet</b> it is.</li> <li>• 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. <ul style="list-style-type: none"> <li>• A small tap of a hammer is used with small amounts of <b>energy</b> and so creates a <b>quiet</b> noise.</li> </ul> </li> <li>• A <b>vibration</b> with lots of <b>energy</b> makes a powerful <b>sound wave</b> and therefore a <b>loud</b> sound. <ul style="list-style-type: none"> <li>• A powerful, smashing tap of a hammer is used with lots of <b>energy</b> and so creates a <b>loud</b> noise.</li> </ul> </li> </ul>
How do we measure sound?	<ul style="list-style-type: none"> <li>• <b>Amplitude</b> measures how strong a <b>sound wave</b> is.</li> <li>• <b>Decibels</b> measure how <b>loud</b> a sound is.</li> <li>• <b>Frequency</b> measures the number of times per second that the <b>sound wave</b> cycles.</li> </ul>

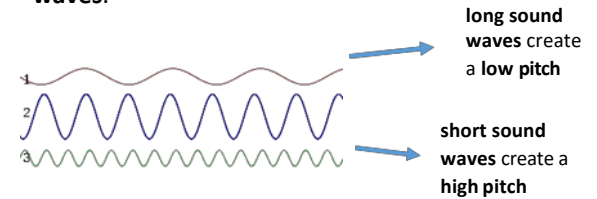
Big Ideas this works towards:

*Energy, which cannot be created or destroyed, comes in many different forms and tends to move away from objects that have lots of it.*

Diagrams

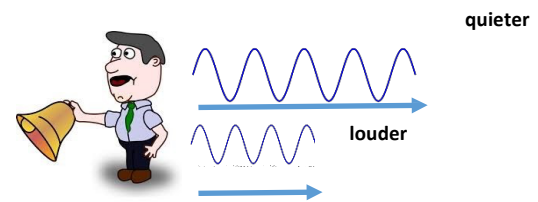
Pitch:

- **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

amplitude	a measure of the strength of a <b>sound wave</b>
decibel	a measure of how loud a sound is
electricity	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
energy	the <b>power</b> from <b>sources</b> such as <b>electricity</b> that makes machines work or provides heat
frequency	a measure of how many times per second the <b>sound wave</b> cycles
medium	something that makes possible the transfer of <b>energy</b> from one location to another
pitch	how <b>high</b> or <b>low</b> a sound is
power	<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
sound waves	invisible waves that travel through air, water, and solid objects as <b>vibrations</b>
source	where something comes from
transmit	to pass from one place or person to another
travel	how something moves around
vibrations	invisible waves that move quickly
volume	how <b>loud</b> or <b>quiet</b> a sound is