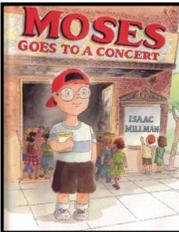
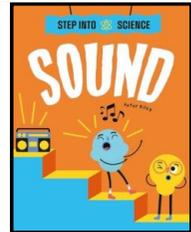
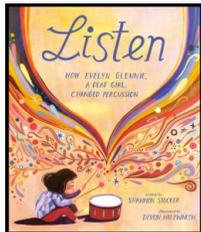
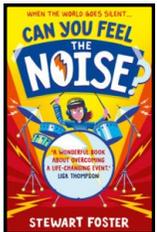
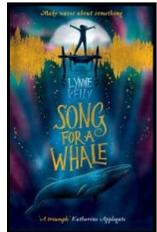


Substantive Knowledge
Sounds can be produced in a variety of ways.
Sounds have the properties of <b>pitch</b> and <b>volume</b> .
When a sound is produced, it spreads out from its source in all direction.
Sound is caused by <b>vibration</b> (objects move rapidly back and forth or up and down).
When objects vibrate, it makes the objects in contact with it also vibrate. This includes the air.
The vibration travels through the air and makes other objects it is in contact with vibrates including your <b>ear drum</b> .
Pitch and volume are caused by how the material vibrates.
The pitch of a sound is caused by how fast an object vibrates. This is called the <b>frequency</b> of vibration. Higher the frequency, higher the pitch.
Smaller objects of tighter strings tend to vibrate with a higher frequency.
The volume of a sound is caused by how big each vibration it. This is called the <b>amplitude</b> of vibration. The bigger the amplitude, the higher the volume.
Sounds get fainter as the distance from the sound source increases.

Disciplinary Knowledge	
Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.	
Taking measurements using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.	
Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.	
Reporting and presenting findings from enquiries, in results, in oral and written forms such as displays and other presentations.	

Significant Scientists	
<p><b>Lord Rayleigh (1842-1919)</b></p>  <p>Lord Rayleigh was an English physical scientist who made fundamental discoveries in the fields of acoustics and optics.</p> <p>His textbook 'The Theory of Sound' (1877) is still used today by acousticians and engineers.</p>	<p><b>Dame Evelyn Glennie (1965-)</b></p>  <p>Dame Evelyn Glennie is a Scottish percussionist who has been deaf from the age of 8.</p> <p>She regularly plays barefoot during live performances and studio recordings to feel the music. Glennie discusses how she feels music in different parts of her body in her TED talk "How To Truly Listen", published in 2003.</p>

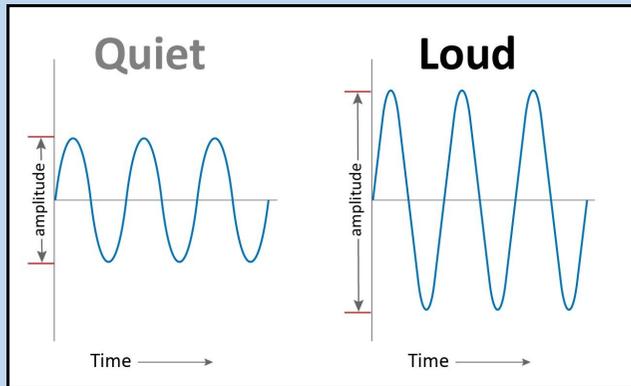
**Interesting Books**

Year 6 Sound - How is sound produced?

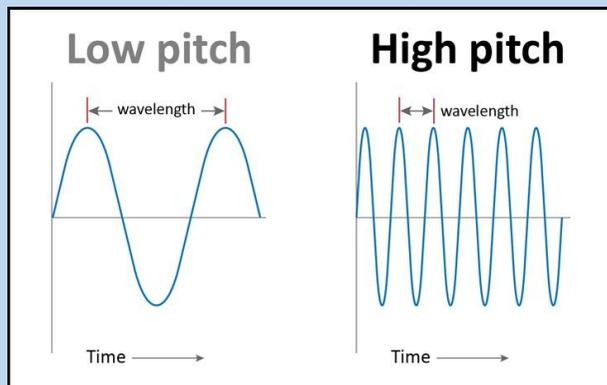
**Volume of a sound**

The volume of a sound is caused by how big each vibration it. This is called the amplitude of vibration. The bigger the amplitude, the higher the volume.



**Pitch of a sound**

The pitch of a sound is caused by how fast an object vibrates. This is called the frequency of vibration. Higher the frequency, higher the pitch. The pitch of a sound is caused by how fast an object vibrates. This is called the frequency of vibration. Higher the frequency, higher the pitch.



**Key Vocabulary**

sound	Vibrations that travel through the air or other medium and can be heard when they reach an animal's ear.
pitch	The rate or frequency of vibrations produced by a sound.
volume	How loud or quiet a sound is.
vibration	To move continuously and rapidly to and fro.
ear drum	A membrane of the middle ear which vibrates in response to sound waves.
frequency	How high or low a sound is determined by the rate at which vibrations occur over a particular period of time.
amplitude	The maximum extent of a vibration.

**How a sound travels**

When a sound is produced it spreads out from its source (the thing that made the sound) in all directions.

