

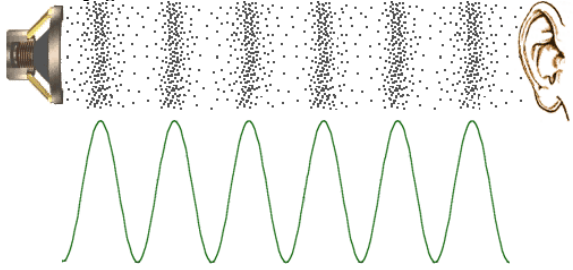
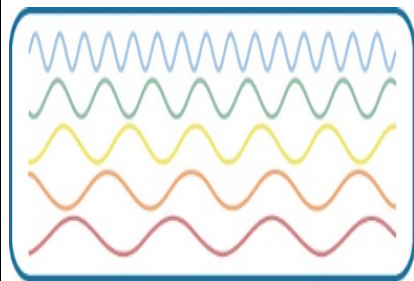
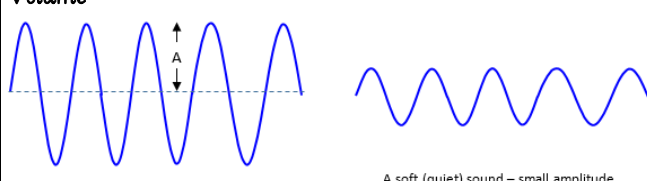
Key Knowledge	
What is a sound?	<ul style="list-style-type: none"> A thing that can be heard. An object that makes a sound is called the source.
How is a sound made?	<ul style="list-style-type: none"> When objects vibrate, a sound is made. The vibration makes the air particles around the object vibrate and the air vibrations enter your ear. These are called sound waves. If an object is making a sound, part of it is vibrating, even if you cannot see the vibrations. 
How do sounds travel?	<ul style="list-style-type: none"> Sound waves travel through a medium (such as air, water, glass, stone, and brick). For example, if somebody is playing music in the room next door, the sound can travel through the bricks in the wall. Sound waves cannot travel through a vacuum because there are no particles to transmit the vibrations.
How do we hear sound?	<ul style="list-style-type: none"> When sound waves travel to the ear, they make the eardrum vibrate. Messages are sent to the brain.
How do sounds change?	<p>Pitch</p> <ul style="list-style-type: none"> Pitch is how high or low a sound is. <ul style="list-style-type: none"> A mouse's squeak has a high pitch. A lion's roar has a low pitch. <p>Volume</p> <ul style="list-style-type: none"> Volume is how loud or quiet a sound is. When a sound is created by a little amount of energy, a weak sound wave is created. This makes a quiet sound. <ul style="list-style-type: none"> A gentle tap of a hammer involves a small amount of energy, so it makes a quiet noise. A vibration with lots of energy makes a strong sound wave and therefore a loud sound. <ul style="list-style-type: none"> A powerful crash of a hammer involves lots of energy, so it makes a loud noise.
How do we measure sound?	<ul style="list-style-type: none"> The amplitude of a sound wave tells us how strong the wave is. The volume is measured in Decibels (dB), which tells us how loud a sound is. Frequency is the number of times per second that the sound wave cycles.

Diagram	
<p>Pitch</p>  <p>High pitch sounds – short sound waves (high frequency).</p> <p>Low pitch sounds – long sound waves (low frequency).</p>	
<p>Volume</p>  <p>A loud sound – large amplitude</p> <p>A soft (quiet) sound – small amplitude</p>	
<p>As a sound wave travels away from the source, it loses some energy, and the amplitude gradually decreases.</p> <ul style="list-style-type: none"> 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. 	

Investigation	
<ul style="list-style-type: none"> Fill identical jars with different volumes of water. Which one make the highest pitch sound when you tap it? Which material would make the best sound defender? How can you investigate this? Make musical instruments using different length strings / elastic bands. How do their pitches differ? 	

Key Vocabulary	
amplitude	A measure of the height of a sound wave .
Decibels (dB)	Units of loudness (volume).
energy	The power from sources such as electricity that makes machines work or provide heat.
frequency	A measure of how many times per second the sound wave cycles.
medium	A substance that makes possible the transfer of energy from one location to another.
pitch	How high or low a sound is
sound waves	Invisible waves that travel through air, water and solid objects as vibrations .
transmit	To pass from one place or person to another
vibration	The rapid back-and-forth motion of an object in this case, the sound source, the particles of the medium the sound is travelling through, the ear drum, etc.
volume	How loud or quiet a sound is.