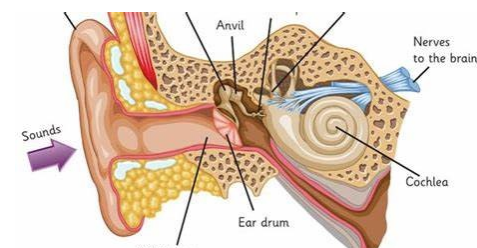
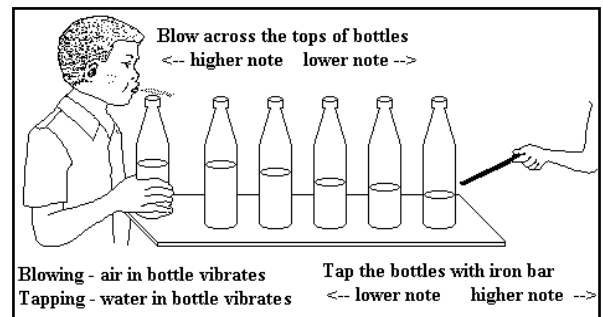
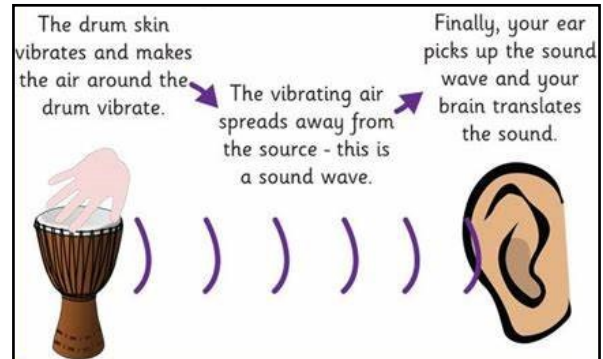





Science Focus:	Sound	Year 4	Autumn Term 1
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Key Vocabulary	
Spelling	Definition
ear	The organ of hearing and balance in humans and other vertebrates.
hear	to take in through the ear
Insulator (sound)	Material that is used to stop the passage of sound from one conductor to another.
percussion	Musical instruments played by striking with the hand or with a stick or beater, or by shaking, including drums, cymbals, xylophones, gongs, bells, and rattles.
pitch	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.
vibration	Something moving continuously, very quickly.
volume	The volume of a sound is how loud or quiet the sound is.

Key Knowledge	
Sound	
What is a sound?	A sound is a noise that can be heard by an animal or a human.
How is a sound made?	A sound is caused by a vibration. Sometimes you can feel the vibration, but most of the time it is not obvious.
How do sounds travel?	Sounds can travel through: <ul style="list-style-type: none"> Air (E.g. when the sound travels from the television speaker to your ear) Through an object or material (e.g. when you can hear the television through the wall)
How do we hear the vibrations?	The vibrating air hits our ear drums and makes them vibrate. The vibrations are then turned into recognisable sounds by our brains. 



Changing Sounds	
How can I change the volume of a sound?	<ul style="list-style-type: none"> Change the distance: if you are close to a sound, it will be louder. If you are further away, it will be quieter. Change the strength of the vibration. A nail hit hard with a hammer will make a strong vibration, which means it will make a loud sound. A nail hit gently with a hammer will make a weak vibration, which means it will make a quiet sound.
How can I change the pitch of a sound?	<p>The shorter the vibrating object, the higher the pitch of the sound.</p> <p>The longer the vibrating object, the lower the pitch of the sound.</p> <p>With string instruments, the tighter the string, the higher the pitch of the sound.</p>

Insulating Sounds	
Why do we need to insulate sounds?	Ears are delicate and need to be looked after. They can easily be damaged by very loud sounds especially if over a long time.
How can sounds be insulated?	 <p>Sound is a vibration – it needs something to pass on these vibrations (unlike light, which can pass through a vacuum). Some materials allow sound to pass through them very easily, especially hard rigid ones like metals. Other materials, especially soft ones like cotton wool, absorb sound.</p>