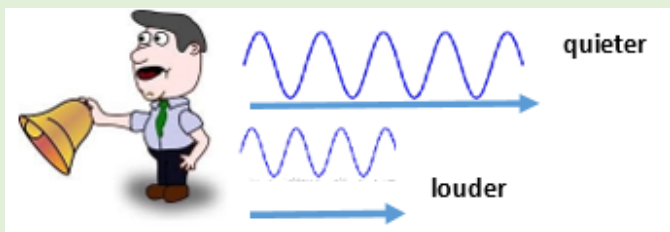
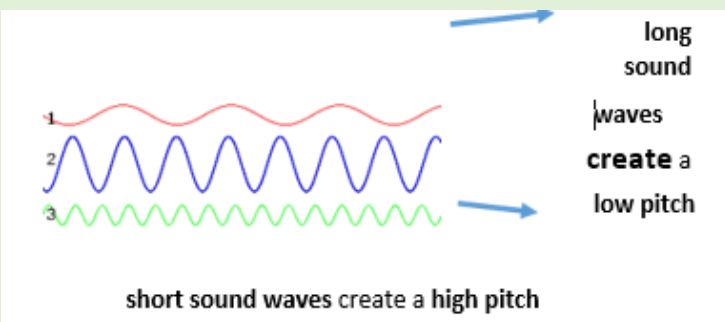


**What should I already know?**

- 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?**

- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that vibrations from sounds travel through a medium to the ear.
- Find patterns between the pitch of a sound and features of the object that produced it.
- Find patterns between the volume of a sound and the strength of the vibrations that produced it.
- Recognise that sounds get fainter as the distance from the sound source increases.



**Vocabulary**

<b>vibrating</b>	Sound is caused by the vibration of a medium (usually air) and it travels in waves.
<b>pitch</b>	A high sound has a high pitch and a low sound has a low pitch. A tight drum skin gives a higher pitched sound than a loose drum skin.
<b>volume</b>	Volume is the perception of loudness from sound wave. The higher the intensity of a sound, the louder it is in our ears, and the higher volume it has.
<b>insulation</b>	Protecting something by surrounding it with material that reduces or prevents the transmission of sound.
<b>Outer, middle and inner ear</b>	The ear is made up of three different sections: the outer ear, the middle ear, and the inner ear. These parts all work together so you can hear and process sounds.
<b>cochlea</b>	The cochlea looks like a spiral-shaped snail shell deep in your ear. It plays an important part in helping you hear.
<b>auditory</b>	Auditory is close in meaning to acoustic, but auditory usually refers more to hearing than to sound.
<b>frequency</b>	Frequency is measured as the number of wave cycles that occur in one second.
<b>hammer</b>	The ear has little bones called ossicles that help you hear. They are called the hammer (malleus), anvil (incus), and stirrup (stapes). They make sound louder.

**Assessment – What expected looks like**

I have experienced a range of hands-on exploration activities that have helped me to understand how sounds are produced by vibrations which can travel through different mediums to the ear. I can consistently demonstrate the use of the key vocabulary and can talk about how the features of an object affect the pitch of the sound produced and how the strength of the vibration affects the volume. I have been given the opportunity to use this knowledge during different activities. I have successfully decided how to take measurements using a data logger to provide evidence that sounds get fainter as the distance from the sound source increases.

**Sticky Knowledge**

- Sound travels with a speed of 767 miles per hour but it cannot travel through a vacuum.
- Sound comes from vibrations. These vibrations create sound waves which move through mediums such as air and water before reaching our ears.
- Dogs can hear sounds at a higher frequency than humans.
- Our ear drums vibrate in a similar way to the original source of the vibration, allowing us to hear many different sounds.
- When traveling through water, sound moves four times faster than when it travels through air.
- Sound is used by many animals to detect danger, warning them of possible attacks before they happen.

- The loud noise you create by cracking a whip occurs because the tip is moving so fast it breaks the speed of sound!

