



Year Three and Four		Topic – Sound	Term: Autumn 2
Building on Prior Knowledge	Future learning	Key vocabulary	
Explore how things work. (Nursery - Sound) Describe what they see, hear and feel whilst outside. (Reception - Sound) Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (Y1 - Animals, including humans)	Waves on water as undulations which travel through water with transverse motion; these waves can be reflected, and add or cancel – superposition. (KS3) Frequencies of sound waves, measured in Hertz (Hz); echoes, reflection and absorption of sound. (KS3) Sound needs a medium to travel, the speed of sound in air, in water, in solids. (KS3) Sound produced by vibrations of objects, in loud speakers, detected by their effects on microphone diaphragm and the ear drum; sound waves are longitudinal. (KS3) Auditory range of humans and animals. (KS3) Pressure waves transferring energy; use for cleaning and physiotherapy by ultra-sound. (KS3) Waves transferring information for conversion to electrical signals by microphone. (KS3)	Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation	
Knowledge		Working Scientifically	
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.		Finding patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses. They might make ear muffs from a variety of different materials to investigate /test which provides the best insulation against sound. They could make [create/invent/design] and play their own instruments by using what they have found out about pitch and volume. This unit provides an ideal opportunity for using data logging equipment to detect/measure and compare sounds	

**Key Learning**

A sound produces vibrations which travel through a medium from the source to our ears. Different mediums such as solids, liquids and gases can carry sound, but sound cannot travel through a vacuum (an area empty of matter). The vibrations cause parts of our body inside our ears to vibrate, allowing us to hear (sense) the sound.

The loudness (volume) of the sound depends on the strength (size) of vibrations which decreases as they travel through the medium. Therefore, sounds decrease in volume as you move away from the source. A sound insulator is a material which blocks sound effectively.

Pitch is the highness or lowness of a sound and is affected by features of objects producing the sounds. For example, smaller objects usually produce higher pitched sounds.