

Year 4: Sound Knowledge Mat

Subject Specific Vocabulary		Working Scientifically	Sticky Knowledge about Sound
vibrating	Sound is caused by the vibration of a medium (usually air) and it travels in waves.	❑ Asking relevant questions and using different types of scientific enquiries to answer them ❑ Setting up simple practical enquiries, comparative and fair tests ❑ Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions ❑ Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ❑ Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ❑ Using straightforward scientific evidence to answer questions or support their findings	❑ Sound travels with a speed of 767 miles per hour but it cannot travel through a vacuum.
pitch	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.		❑ Sound comes from vibrations. These vibrations create sound waves which move through mediums such as air and water before reaching our ears.
volume	Volume is the perception of loudness from the intensity of a sound wave. The higher the intensity of a sound, the louder it is perceived in our ears, and the higher volume it has.		❑ Dogs can hear sounds at a higher frequency than humans.
insulation	Protecting something by surrounding it with material that reduces or prevents the transmission of sound.		❑ Our ear drums vibrate in a similar way to the original source of the vibration, allowing us to hear many different sounds.
outer, middle and inner ear	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.		❑ When traveling through water, sound moves four times faster than when it travels through air.
cochlea	The cochlea looks like a spiral-shaped snail shell deep in your ear. It plays an important part in helping you hear.		❑ Sound is used by many animals to detect danger, warning them of possible attacks before they happen.
auditory	Auditory is close in meaning to acoustic, but auditory usually refers more to hearing than to sound.		❑ The loud noise you create by cracking a whip occurs because the tip is moving so fast it breaks the speed of sound!
frequency	Frequency is measured as the number of wave cycles that occur in one second.		
hammer	The ear has little bones called ossicles that help you hear. They are called the hammer (malleus), anvil (incus), and stirrup (stapes). They amplify the sound or make it louder.		