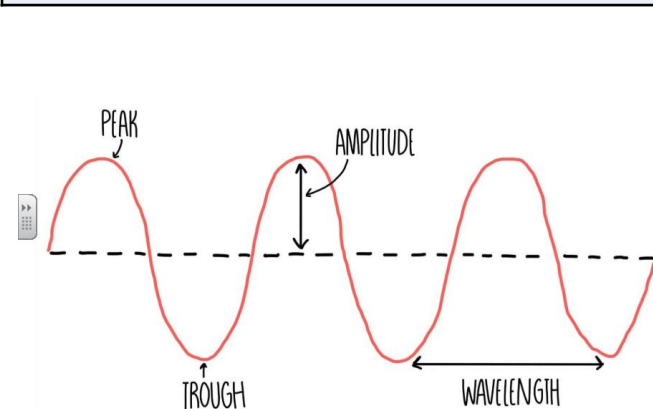


The Science of Sound Knowledge Organiser

Learning Objectives	Core Knowledge
To identify how sounds are made.	Sound is energy produced by vibrations from a sound source. Sound travels in waves through a medium, such as a solid, liquid or gas, to our ears.
To learn about we hear sounds.	When energy is put into a sound source, it starts to vibrate, quickly moving back and forth. These vibrations disturb the tiny particles of the medium that is close by, such as air, and they start to vibrate. They collide with the air particles next to them and pass the vibration energy along in sound waves. The sound waves enter the ear, they make the eardrum vibrate. These vibrations pass through small bones called ossicles and are turned into electrical signals in the spiral-shaped cochlea.
To learn about pitch and how it is measured.	The pitch of a sound is how high or low it is. Pitch is measured in units called (Hz). Humans can hear between 20 and 20,000 Hz. However, dogs can hear higher-pitched sounds. Fast vibrations produce high-pitched sounds. Slow vibrations produce low-pitched sounds.
To learn what volume is and how the strengths of the vibrations are produced.	The volume of a sound is how loud it is. It is measured in units called decibels (dB). The larger the force of energy put into the sound source, the louder the volume; the smaller the force, the quieter the volume. Distance also affects volume. The nearer the sound source, the louder the volume. The further away the sound source, the quieter the volume.



Glossary

Eardrum	A thin layer of tissue inside the ear where vibrations pass through.
Ossicles	Three tiny, linked bones inside the ear through which vibrations pass.
Medium	A material, such as a solid, liquid or gas, that transfers energy from one place to another
Cochlea	The spiral-shaped part inside the inner ear that turns vibrations into electrical signals
Vibrate	To quickly move back and forth repeatedly.