St John's Primary School: Science knowledge organisers

Year group: Year 4

Science focus: Sound

Key knowledge:

Hearing sounds	
What is sound?	A noise that van be heard by someone.
How is sound made?	It can be obvious: Such as a drill hitting a brick wall repeatedly. It can be less obvious: Such as blowing over the opening of a bottle to create a vibration to produce a noise.
How does sound travel?	This can be in two ways: Through the air (from a TV speaker across the room into your ears). Through an object/ material (if someone moves furniture around upstairs, the sound can travel through the floor).
How do we hear vibrations?	Vibrations hit our ear drums and make them vibrate. The vibration is picked up by our brains and converted into sounds we recognise.
Changing sounds	
Volume	The closer to a sound source, the louder it will appear. The further away from a sound source, the quieter it will appear. The more energy given to the vibration will cause the sound to be louder e.g. hitting a hammer on a desk.
Pitch	The shorter the vibrating object, the higher the pitch will be. The longer the vibrating object, the lower the pitch will be.

Key concepts:

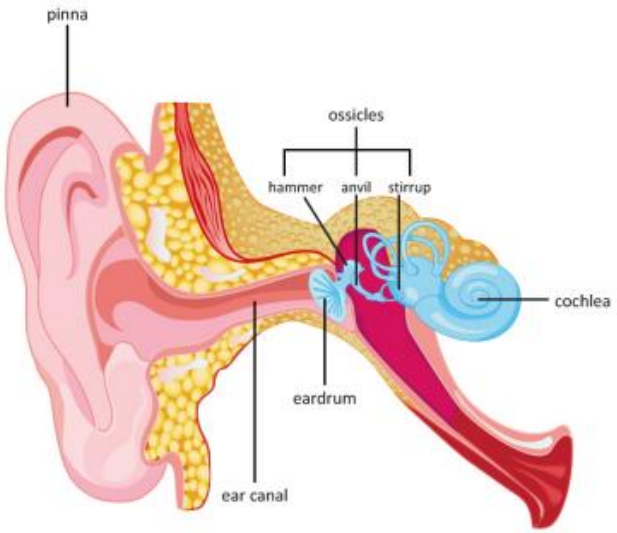
Investigating	Measuring
Observing	

Key vocabulary:

Absorb	To take in or reduce the effect
Decibel (dB)	A unit for measuring the loudness of sound
Instrument	A device used to make music
Insulator	A material used to stop sound, heat or electricity from passing through it
Pitch	The measure of how high or low a sound is
Vibration	A quick, back and forth movement
Volume	The measure of how loud or quiet a sound is

Diagrams:

Vibrations hit our ear drums and make them vibrate



Possible experiences:

Use instruments to experiment with pitch and volume.

Use one object (such as a saucepan) to create a scale of sounds by manipulating it.

Experiment with a tin or paper cup telephone.