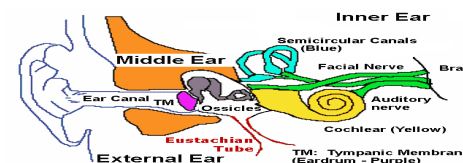
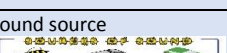


Good Vibrations!



What are the key biological facts that I need to know?

Scientific Fact 1	Scientific Fact 2	Scientific Fact 3	Scientific Fact 4	Scientific Fact 5	Scientific Fact 6
Sound is a form of energy.	In dry air, sound travels at 343 meters per second (768 mph). At this rate, sound will travel one mile in around five seconds.	Sound travels 4 times faster in water (1,482 meters per second) and around 13 times faster through steel (4,512 meters per second).	The voice of a whale can travel up to 800 kilometers (479 miles) through the ocean waters!	Aircrafts that travel faster than the speed of sound, break the sound barrier. This produces a sonic boom.	A sonic boom sounds like a huge explosion and produces a huge white halo!

Key Scientific Vocabulary - words that are related to the topic you are investigating and that must be used in your work	
Word	Definition
faint 	That cannot be clearly seen, heard or smelt.
loud 	Making a lot of noise.
particles 	A very small piece of a material.
pitch 	How high or low a sound is, especially a musical note.
sound source 	The place where sound is generated.
strike 	To hit an instrument hard or with force.
vibrate 	To move or make something move from side to side very quickly and with small movements.
Volume	The amount of sound that is produced by a television, radio, etc.

Sticky Knowledge- what we want you to know at the end of the unit To know that our senses helps us explore the world around us.	
To know what sound is	- sounds are made when objects vibrate - these vibrations enter the ear and are heard as sound
To know how sound travels	- sound travels as waves of energy (vibration) into our ears - the vibrations travel through the air or another medium (solid, liquid or gas) to the ear
To know why some sounds are loud and other are quiet	- if the vibrations are strong, then the sound is loud - if the vibrations are weak, then the sound is quiet - sound becomes fainter when you travel further away from the source
To know what the pitch is and how it changes	- sound changes depending on how fast or slow an object vibrates to make sound waves - pitch is the quality of a sound (high or low) and depends on the speed of the vibrations - different materials produce different pitches - if an object vibrates quickly we hear a high-pitched sound - if an object vibrates slowly we hear a low-pitched sound
To know how musical instruments make sounds	- sounds can be made by twanging a string or an elastic band, blowing down a pipe, or banging something together, and scraping or shaking something - these instruments produce vibrations which can then be heard
To know how a string telephone works	- when you speak into the cup, the back of the cup vibrates - these vibration move into the string, like a push on a slinky; the sound waves, or vibrations, move through the string so you can hear the sound in the other cup

The scientific skills that you will be learning to use to answer the scientific questions	
What is science?	Science is the exciting study of the nature and behaviour of natural things and the knowledge that we obtain about them. We ask questions that need answers. In order to answer these questions successfully, you will learn to use all these skills.
Recording findings using diagrams:	With support, you will be recording the data and results of investigations using scientific diagrams and labels
Can I draw and label a diagram to show how sound travels from its source to the ear?	
Using evidence to answer questions:	You will be using straightforward scientific evidence to answer questions or to support your findings.
Reporting on findings from enquires:	With support, you will be reporting on your findings from enquiries, so that you are starting to draw conclusions.
Making systematic observations:	You will be making systematic and careful observations and, where appropriate, taking accurate measurements.
Noticing patterns:	Pattern-seeking enquiries involve you making measurements or observations to explore situations where there are variables that you cannot easily control.
Fair testing:	Fair tests involve making systematic changes and analysing



data to identify how one variable influences another.