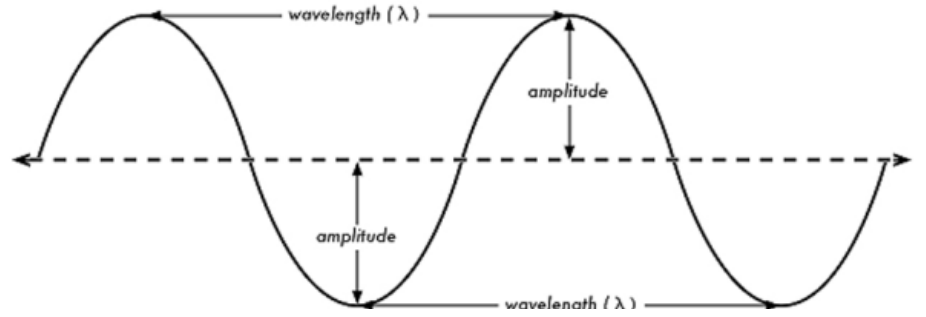


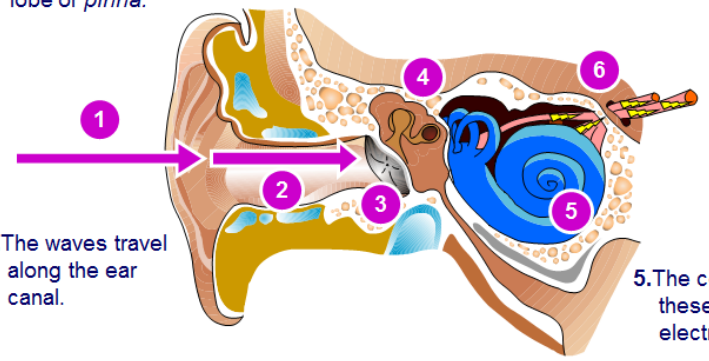
# Science: Sound Knowledge Organiser

Year 8 - Term 1

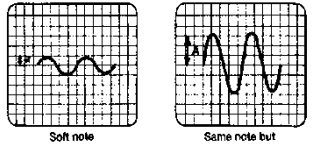
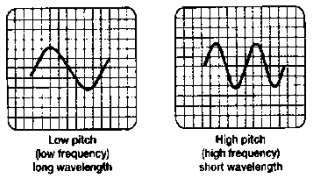
Amplitude	The height of a wave. It tells you the loudness of a sound
Frequency	The number of waves which pass a point every second. A high frequency sound has a high pitch
Wavelength	Distance from peak to peak of a wave
Decibels	Unit measuring the intensity of sound. (Loudness of sound)
Hertz(Hz)	The unit for measuring frequency (one wave per sec = 1Hz.)
Auditory range	Humans can hear from 20 Hz to 20,000 Hz (20 kHz)
Noise	Noise is unwanted sound.
Oscilloscope	A device which can be used to visualise a sound wave
Ear drum	A membrane at the end of the ear canal that vibrates when sound reaches it
The Ossicles	Tiny bones in the inner ear that passes sound vibrations from the ear drum to the cochlea
Cochlea	The part of the ear that converts sound waves to electrical impulses that go to the brain
Echolocation	The use of sound waves to detect objects at a distance. Used by bats and submarines.
Speed	Speed (m/s) = distance ÷ time



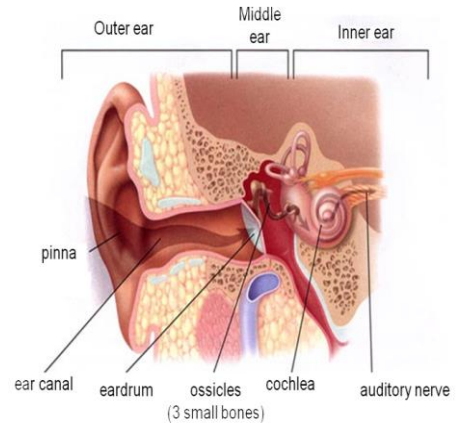
- 1. Sound waves are collected by the ear lobe or pinna.
- 6. The auditory nerve takes the signals to the brain.



- 2. The waves travel along the ear canal.
- 3. The waves make the ear drum vibrate.
- 4. The small bones (ossicles) amplify the vibrations.
- 5. The cochlea turns these into electrical signals.



Low amplitude High amplitude



Description	Explanation
<b>The sound cant travel through a vacuum</b>	There are no particles to pass on the vibrations in a <b>vacuum</b>
<b>Sound can travel, but it is slow (330 m/s)</b>	Because the <b>gas</b> particles are spread out it is difficult to pass along the vibrations.
<b>Sound travels well (1500 m/s)</b>	The slightly touching <b>liquid</b> particles pass along the vibrations easily
<b>Sound travels brilliantly (5000 m/s)</b>	Because all of the <b>solid</b> particles are touching, the sound vibrations are very easily passed on.