



Year 4: Super Sonologists

1. Terms	Definitions
Sonologist	A person that studies sound.
Vibrations	Waves of energy
Amplitude	The size of a vibration.
Sound waves	Sound waves are formed by objects vibrating . They can travel (move) through gas, liquids and solids. They make a pattern in the air disturbing air particles which makes sound.
Medium	The gas, liquid or solid that transports the sound. The medium that sound travels through will affect the speed.
Volume	How loud or how quiet/faint a sound is.
Pitch	How high or low a sound is.
Faint	Very quiet, because there are weaker vibrations.
Loud	This is caused by stronger vibrations.
Sound insulator	A material which blocks sound effectively.
Decibels	How sound is measured
Sound –level meter	Equipment used to measure sound. It has a microphone for picking up sound and then turns it into an electrical signal.

4. Music



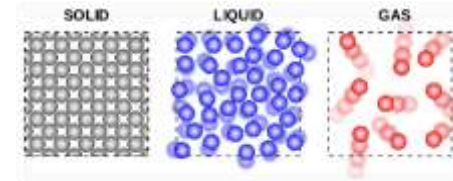
- You can change the **pitch** of a sound in different ways.
- If you are playing a xylophone, hitting the smaller bars will cause faster vibrations, so there will be a higher pitch.
- Hitting the larger bars will cause slower vibrations, so there will be a lower pitch.

3. Volume and Pitch

- The **volume** of the sound depends on the strength of vibrations.
- Sound waves decrease as they **travel** through a medium, so sounds decrease in volume as you move away from the source.
- Pitch** is affected by features of objects producing the sounds. For example, smaller objects usually produce higher pitched sounds.

2. Vibrations

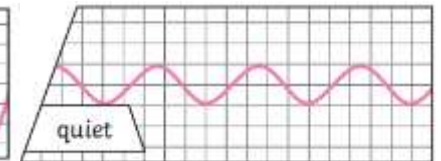
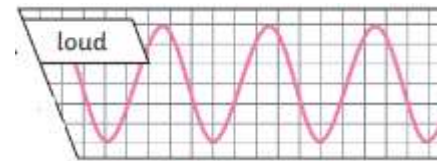
- A sound produces **vibrations**.
- Vibrations travel through a medium from the source to our ears.
- Different **mediums**, such as solids, liquids and gases, can carry sound.
- Sound waves travel in all directions from the source.
- Sound **travels** easier in a solid, because the particles vibrate against each other.



The **vibrations** cause parts of our ears to vibrate, allowing us to hear the sound. The vibrations hit the ear drum, then move to the middle and then inner ear. They are then changed to an electrical signal, which is sent to your brain.



Louder sounds have a larger amplitude, whereas quieter sounds have a smaller amplitude.



A whistle being blown = high-pitched sound.

A rumble of thunder = low-pitched sound

