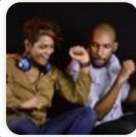




Lesson Sequence



1. How are sounds made?

How do vibrations travel from a medium to the ear?



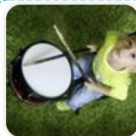
2. Can I explore sound insulations?



3. Can I explore volume?



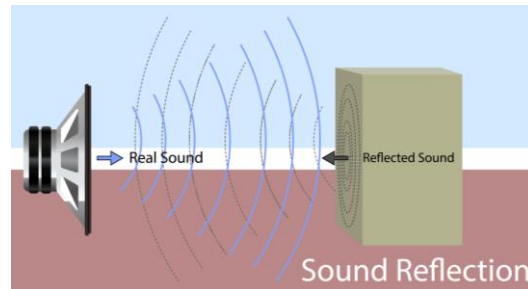
4. Can I explore pitch?



5. Can I explore sounds from near and far?

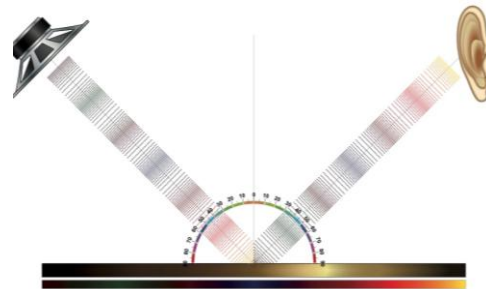
How sounds are made and travel

When objects vibrate, a sound is made. The vibration makes the air around the object vibrate and the air vibrations enter your ear. These are called sound waves. If an object is making a sound, a part of it is vibrating, even if you cannot see the vibrations. Sound waves travel through a medium (such as air, water, glass, stone, and brick).



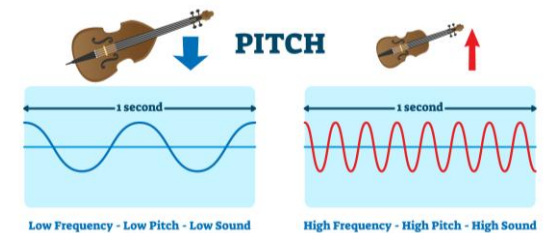
How do we hear?

The sound waves travel to the ear and make the eardrums vibrate. Messages are sent to the brain which recognises the vibrations as sounds.



Pitch

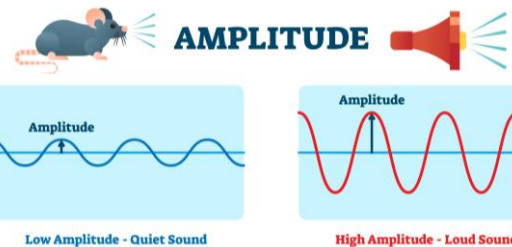
The pitch of a sound is how high or low it is. A squeak of mouse has a high pitch A roar of a lion has a low pitch.



A high pitch sound is made because it has a high frequency. The sound source vibrates many times a second.

Volume

The volume of a sound is how loud or quiet it is. Quieter sounds have a smaller amplitude and less energy (smaller vibrations) and louder sounds have a bigger amplitude and more energy. The closer we are to a sound source the louder it will be. A train arriving at a station sounds loud. The further away from a sound the fainter it will be. A train in the distance sounds quieter.

















Unit Rocket Words: Year 4 - Sound



Rocket Words

| | | |
|--|--------------|--|
|  | Vibration | Particles moving very quickly |
|  | Medium | A substance such as air, water or a solid |
|  | Source | The start of something |
|  | Energy | The power to make something work, move or grow |
|  | Materials | Anything used in making something or building |
|  | Reflect | Bounce back from a surface |
|  | Volume | How loud or quiet a sound is |
|  | Decibels | The unit to measure loudness |
|  | Pitch | How high or low a sound is |
|  | Instruments | Objects used to play music |
|  | Particles | Tiny pieces that make up something larger |
|  | Sound source | The object that started the sound |



| How does sound travel? | before | after |
|---------------------------|--------|-------|
| In a curvy line | | |
| In a straight line | | |
| As a series of vibrations | | |
| By making a noise | | |

| The volume of sound is measured in... | before | after |
|---------------------------------------|--------|-------|
| decibels | | |
| centimetres | | |
| kilograms | | |
| miles | | |

| Sounds gets louder... (tick 2) | before | after |
|--|--------|-------|
| as we move further away from the source | | |
| as we move closer to the source | | |
| the less energy there is when creating the sound | | |
| the more energy there is when creating the sound | | |

| The origin of the sound is called the... | before | after |
|--|--------|-------|
| noise | | |
| source | | |
| vibration | | |
| frequency | | |

| The pitch of a sound describes... | before | after |
|-----------------------------------|--------|-------|
| how fast or slow a sound is | | |
| how loud or quiet a sound is | | |
| how low or high a sound is | | |

| When a sound hits the ear... | before | after |
|------------------------------|--------|-------|
| nothing vibrates | | |
| the eardrums vibrate | | |
| the whole ear vibrates | | |
| the brain vibrates | | |

Sound can travel through...

| | Before | After |
|------------------|--------|-------|
| the air | | |
| water | | |
| the floor | | |
| all of the above | | |

A pupil blows through two different length straws. Which statement is true

| | Before | After |
|---|--------|-------|
| The shorter straw will make a higher-pitched sound. | | |
| The shorter straw will make a louder sound. | | |
| The longer straw will make a higher-pitched sound. | | |
| The longer straw will make a louder sound. | | |