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Key Vocabulary:



- **Sound** - An energy that is made by vibrations



- **Source** - Where something originates from



- **Vibrate** - Continuously moving back and forth



- **Vibration** - The rapid back-and-forth movement of physical particles, as a reaction to different forces.



- **Travel** - Moving from one place to another



- **Pitch** - How high or low a sound is



- **Volume** - - Invisible waves that move quickly



- **Faint** - A light, weak sound



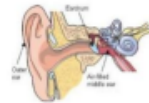
- **Loud** - A high volume of sound.



- **Insulation** - The act of covering something to stop heat, sound, or electricity from escaping or entering.

Sound travels to the ear

- Sounds are made when objects vibrate.
- The vibration makes the air around vibrate, and the air vibrations enter your ear.



- Our brain hears the vibrations and turns this into a sound.

How Sound is Made?

Sound travels through the air in waves.

- When you clap your hands, the air around your hands shakes. This is the air molecules vibrating.



- When air molecules inside the ear vibrate, they shake tiny hairs on the insides of the ears. The hairs are connected to nerves under the skin.
- These nerves send messages to your brain to tell you that you heard a noise.

Core 4

How Does Sound Travel ?

- Sound can travel through solids, liquids, and gases.
- Sound travels as a wave, vibrating the particles in the medium it is travelling in.
- Sound travels much slower than light, whether in air or in water. You often hear things after you see them, for example, you see the lightning before you hear the thunder.



Key Scientist - Alexander Graham Bell

Scottish born scientist (1847) who invented the telephone in 1876 at the age of 29. He formed the Bell Telephone Company in 1887.



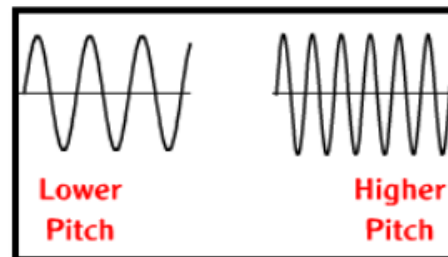
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SCIENCE – Sound

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Link Big Question: How does sound travel?

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Link to previous or current units – Electricity

Key Facts/ Stats

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1. The louder the sound, the bigger the vibration. The closer you are to the source of a sound, the louder the sound will be. The size of the vibration is called the amplitude. Quieter sounds have a smaller amplitude, and louder sounds have a bigger amplitude.
2. Pitch of A Sound The shorter the object the higher the pitch. The longer the object the lower the pitch. With stringed instruments, the tighter the string the higher the pitch of the sound
3. Absorbing Sounds If you lived near a noisy building site, you would not want to hear the machines! You would need to find a way to absorb the sounds, so your house remained quiet and peaceful. This is called soundproofing, insulating the sound.
4. Dogs can hear much higher sounds than humans, and bats and dolphins can hear sounds much lower than humans.