

Nova's Sound Science Flashcards

Learning objective: To identify how sounds are made, how they travel, and how we hear them.

Read the front of the card and try to recall the answer before checking the back. Use these to test your knowledge of how sound works!

What is the cause of all sounds?

Sounds are caused by vibrations. When an object vibrates, it makes the air around it vibrate too.

What happens to the volume of a sound as you move further away from the source?

The volume decreases, meaning the sound gets quieter the further you are from it.

How does sound travel to our ears?

Sound travels as vibrations through a medium, such as air, water, or solids, until it reaches our ears.

What is 'pitch' in terms of sound?

Pitch describes how high or low a sound is, which depends on how fast the object is vibrating.

Which part of the ear vibrates when sound waves hit it?

The ear drum is a thin layer of skin that vibrates when sound waves reach it.

If an object vibrates very quickly, will the pitch be high or low?

It will have a high pitch.

Does sound travel better through a solid or a gas?

Sound travels best through solids because the particles are packed closely together, making it easier for vibrations to pass along.

What do we call a material that sound cannot travel through?

A vacuum, because there are no particles to carry the vibrations.

True or False: Sound can travel through space.

False. Space is a vacuum with no air or particles, so sound cannot travel through it.

What unit do we use to measure the loudness of a sound?

Decibels (dB).

How can you change the pitch of a stringed instrument?

By changing the tightness, thickness, or length of the string.

What happens to the sound when you strike a drum harder?

The vibrations become larger, making the volume of the sound louder.