

Read About Sound

DEFINITION OF SOUND

Sound is caused by vibrations that travel through the air. These vibrations can cause other things to vibrate, too. We hear sound with our sense of hearing, which is made possible by our ears.

To better understand how sound works...

LET'S BREAK IT DOWN!

Instruments make vibrations.

When you play an instrument such as a guitar, you are causing vibrations that make sound. The guitar strings move back and forth really fast when you pluck them.



Your voice makes vibrations.

If you place your hand on your throat and hum, you can feel the vibrations of your vocal cords. Your vocal cords vibrate to make sound.

It's hard to see vibrations.

You can't always see sound waves because they are vibrating so fast. Placing a vibrating tuning fork in water can help you see the vibrations.

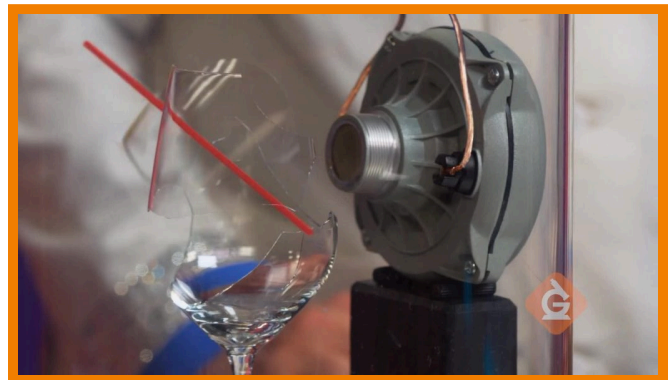


Sound makes some objects vibrate.

Loud sounds can make other things move. If you place sprinkles on a flat surface near a speaker, the sprinkles will vibrate.

Some very loud sounds cause strong vibrations.

Some sound vibrations are so strong they can even break glass! A very loud and deep sound caused this glass to break.



SOUND VOCABULARY

Vibrating

Moving back and forth really fast.

Sound Wave

A vibration that travels through the air.

Sound

A noise we can hear.

Hearing

Using our ears to listen to sound.

Vocal cords

Part of your throat that vibrates when you talk or sing.

Eardrum

Part of the inside of your ear that allows you to hear vibrations.

QUESTIONS ABOUT SOUND

Why can't we always see vibrations that sounds make?

They can happen really fast, sometimes thousands of times each second.

If we can't see vibrations, how do we know they are happening?

We can make vibrations visible in many ways such as using a tuning fork and putting it in water. You can also feel your own throat while humming or putting paint inside a speaker. You can also film things vibrating with a special slow motion camera.

Why do we feel vibrations when we hum?

When your vocal cords vibrate, they make sound. Anytime you speak, your vocal cords are vibrating. The shape of your tongue and mouth also help you make different sounds.

How do different guitar strings make different sounds?

Different strings have different thicknesses. This effects how fast the string vibrates which changes the sound.

Why do drums sound different than cymbals?

They vibrate differently because they are made of different materials. Different sized drums can also make different sounds depending on how fast they vibrate.

How can a loud speaker cause things around it to vibrate?

The speaker makes the air around it vibrate. When a loud sound moves through the air it makes other objects near it vibrate, too.
