CURIOUS
SCIENCE

HAMSTER LESSON
#0000025

Discover what vibrates.

Connect motion and sound.



Vibrations make sound.

Motion and sound waves shown schematically.

TRY IT TODAY

Hum gently. Feel the vibration in your throat.

1. ❓ What moves when you hear a sound?
2. 🙋 A sound source vibrates: it moves back and forth. These vibrations can make nearby air vibrate, carrying sound to your ears.
3. ⏳ The invention of the tuning fork is generally credited to musician John Shore in 1711. Its vibrating metal prongs produce a steady tone that musicians can use as a reference.
4. 💡 Hum gently and lightly touch the front of your throat. Notice the vibration while you hum and how it stops when you stop. Your vocal folds vibrate to produce your voice.
5. 🔍 Faster vibrations usually mean a higher pitch; larger vibrations usually make a louder sound. Pitch and loudness describe different qualities. A high note can be quiet.
6. 🌎 A guitar string, a drumhead, and the cone of a loudspeaker all vibrate. Studying their motion helps explain the music and speech we hear in God’s orderly creation.
7. 🎯 Compare a low hum with a higher hum at a comfortable volume. Feel the vibration gently at your throat, then listen to a quiet sound nearby and identify what is vibrating. Explain how sound reaches your ears.

References · Smithsonian · Tuning forks · Science Buddies · Sound and vibration · NIDCD · How do we hear?
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