Lesson 2: Sound Energy

What is sound?

Sound is the movement of energy by vibrations through substances in the form of waves.
Discovery Education Video:

**Sound Waves**

Sound waves must travel through a medium.

This medium can be solid, liquid, or gas.
Wavelength and Frequency

Wavelength is the measurement of a wave from crest to crest or from trough to trough.

Frequency describes how often the particles of a medium vibrate when sound waves pass through the medium.

Smaller wavelength = higher frequency

Longer wavelength = lower frequency
Frequency is measured in Hertz.

1Hz = 1 Vibration per Second

Humans can hear sounds in the range of 20Hz to 20,000Hz.

Many animals can hear sounds with much higher frequencies.

Frequency determines the pitch of a sound.

Pitch determines how we hear the sound.

“Find the Musical Note”
Amplitude

Amplitude is the height of a wave. It measures to the crest or trough of a wave.

Amplitude determines how loud a sound is.

Larger Amplitude = Louder Sound
Sound Energy: Key Questions

1. What is sound? How does it travel?

2. Does the medium have an effect on sound? Explain.

3. What factors of sound waves affect what we hear? Explain.