

The Symphony of Sound with Nova the Owl

Tune into the vibrations: Explore the science of the world around you!

- **How is sound created?** Every sound starts with a vibration, which is a rapid back-and-forth movement of an object.
- **How does sound travel?** Sound travels as an invisible wave through a medium, such as air, water, or solids, until it reaches our ears.
- **What is pitch?** Pitch describes how high or low a sound is, which depends on how fast the source of the sound is vibrating.
- **How do we hear?** Our ears catch sound vibrations and funnel them down the ear canal to the eardrum, which vibrates to send signals to the brain.
- **Does volume change?** Yes, volume is the loudness of a sound, which changes depending on the size of the vibration; larger vibrations create louder sounds.

Did you know? Did you know? Sound cannot travel through a vacuum, such as outer space! Because there are no particles in space to carry the vibrations, it is completely silent, even if a giant star were to explode. Nova the Owl needs air, water, or solid objects to hear the wonders of the night sky.

Key vocabulary: vibration · medium · volume · pitch · sound waves · ear canal · decibel