

Lesson 8.1

Sound Wave Activities

NEW BEDFORD WHALING MUSEUM

WHALES

GIANTS OF THE OCEAN

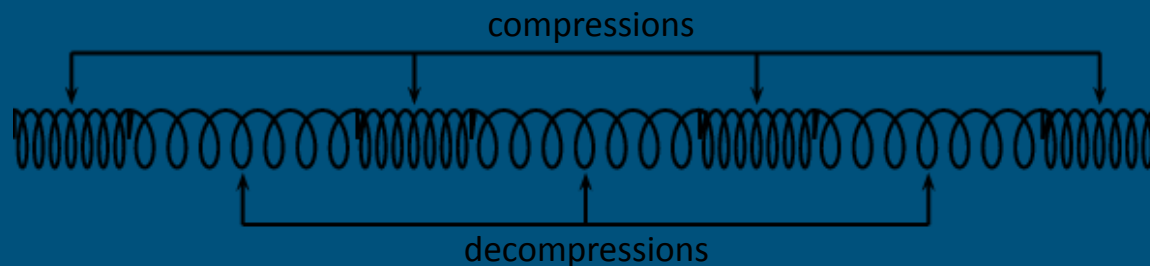


Important Vocabulary

- **Absorption** The process in which a substance (e.g. medium) takes up the energy of the sound moving through it.
- **Compressional wave** A wave that moves by compression, like a sound wave.
- **Compression** The region where or when particles are pushed closer together in a medium, such as in a sound wave.
- **Decompression** The region in a compressional wave where the particles are farthest apart.
- **Echo** The repeating of a sound caused by reflection of sound waves off a surface.
- **Energy** The ability to perform work.
- **Medium** A material (solid, liquid, or gas) through which a wave can travel.
- **Reflection** When sound traveling through one medium comes into contact with another medium and bounces off in another direction.
- **Sound** A form of energy that is associated with vibrations of matter.
- **Transmit** To send sound waves through a medium.
- **Vibrate** To move rapidly back and forth.
- **Wave** A transfer of energy as it travels away from the energy source.

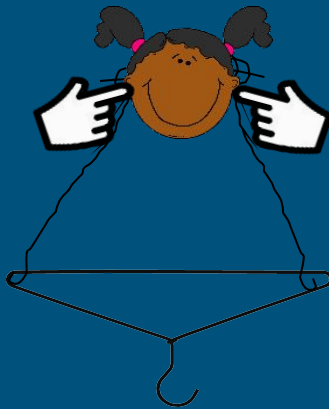
What are Sound Waves?

- Sound is something we hear, and sometimes feel. But, how does it move from source to receiver?
- Sound moves in waves
- To be precise, sound moves as compressional waves. [Examples of Compressional Waves](#)
- Sound is a disturbance in a medium. The medium can be solid, liquid or air. There is no sound in space, because space is a vacuum – it lacks a medium to transmit the sound energy.
- The source of the sound creates the disturbance. That energy moves through the molecules in a medium in the method shown in the animations in the hyperlink you just viewed.
- When you speak, the air that comes out of your mouth creates a disturbance in the air molecules around you. That sound energy moves toward a receiver, such as someone's ears.
- The energy gets passed from molecule to molecule (very quickly).



Sounds Are Made By Vibrations

- Introduction: Touch the side of your throat and say 'aah'. Write down your answers to both parts of Question 1 on the [student sheet](#).
- Activity: Students listen and feel vibrations move through air and solid. Answer questions 2 and 3 on the student sheet. Follow up by responding to the Think About It questions.



Sounds Are Made By Vibrations

This activity will help you to see a sound wave.

- Teachers: Follow the directions provided for Activity 2 in the [Facilitator's Guide](#) or in the [video](#).
- Students: Respond to the questions on the [student sheet](#).

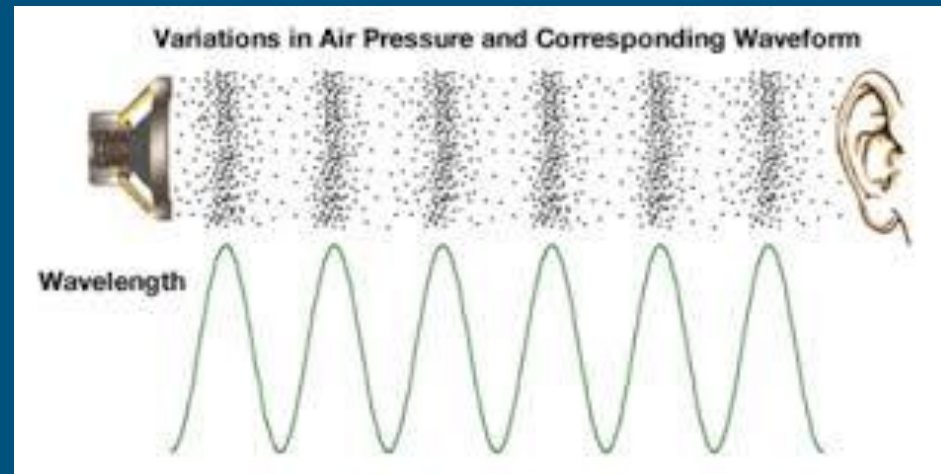


Image from myscienceschool.org