

How Waves Travel Through Mediums

Name: _____

Use the [video](#) to help answer the questions below.

Sound Waves

Sound is a form of _____. Sound needs a _____ for its propagation (to be heard). Sound waves can travel in three basic mediums. _____ such as air, _____ such as water, or _____ like wood or metal. During a thunderstorm, a person will see the lightning before they hear the thunder. This happens because _____ travels faster in air.

Sound Through Liquids



Sound travels **faster** in water.

Explain in your own words why sound travels faster in water than air.

Sound Through Solids

Sound waves travel even _____ or faster through solid things like wood or metal. Since the particles in a solid are _____ packed, sound waves travel the _____ in this medium.

During the sound experiment, the sound waves traveled better through the solid _____ that the student placed his ear on. This proved that sound waves travel faster in _____ objects than through _____ such as air.

Sound cannot travel in space because there is no _____ such as air or any other matter. The term _____ is used to describe a situation where no medium is present.

Fill In the Chart

Medium	States of Matter	Speed (m/s)

How Light Waves Travel

Refraction is when light _____ when it travels from one _____ to another. Refraction is caused by a _____ in speed from one medium to another. When light hits a more dense medium the light will have a _____ speed. Light travels _____ in less dense materials.

Explain in your own words why the pencil looks bent when it is in water

