

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 Travels

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