

Chapter 11 Lesson 1

Welcome To 7th grade Life Science!

Mrs. Winters

Materials Needed

Today

Please take these materials out of your backpack.

- Pencil
- Blank sheet of paper for a lab!

Hot Sync

Tuesday 3/25/14

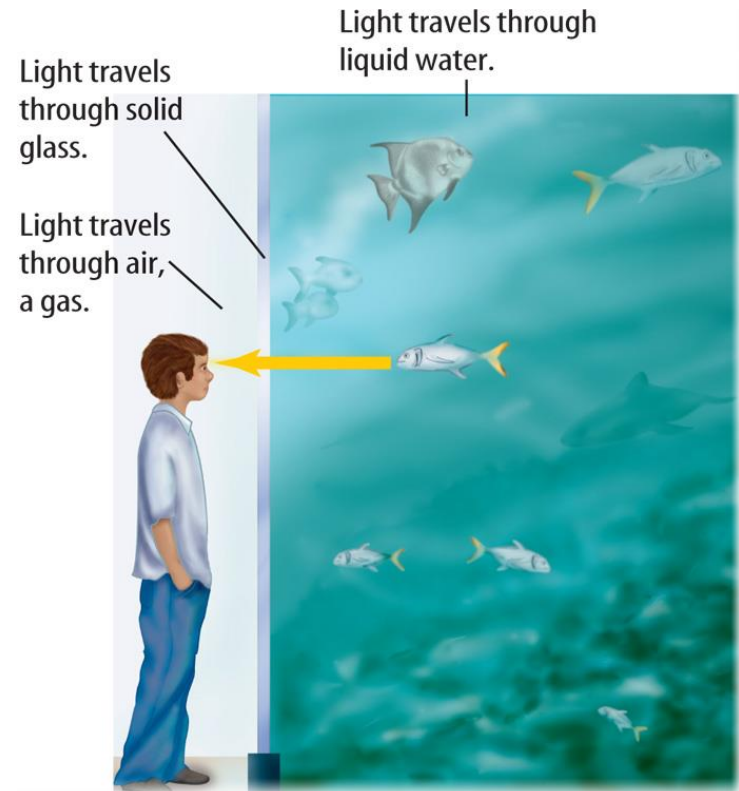
Write a paragraph about what you know about light! (5 sentences)

Slinky Lab Introduction

- Waves are everywhere! They occur all over the natural world.

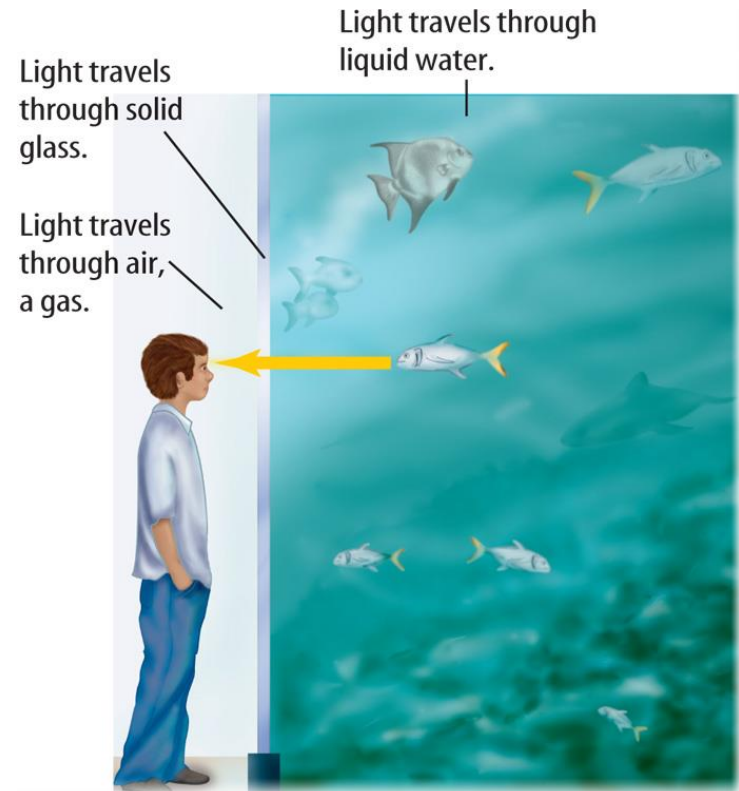
Electromagnetic Waves

- The substance through which a wave moves is called the **medium**.
- Light is an electromagnetic wave, which is a type of wave that can travel in empty space as well as in matter.



Electromagnetic Waves

- The substance through which a wave moves is called the **medium**.
- Light Media List:



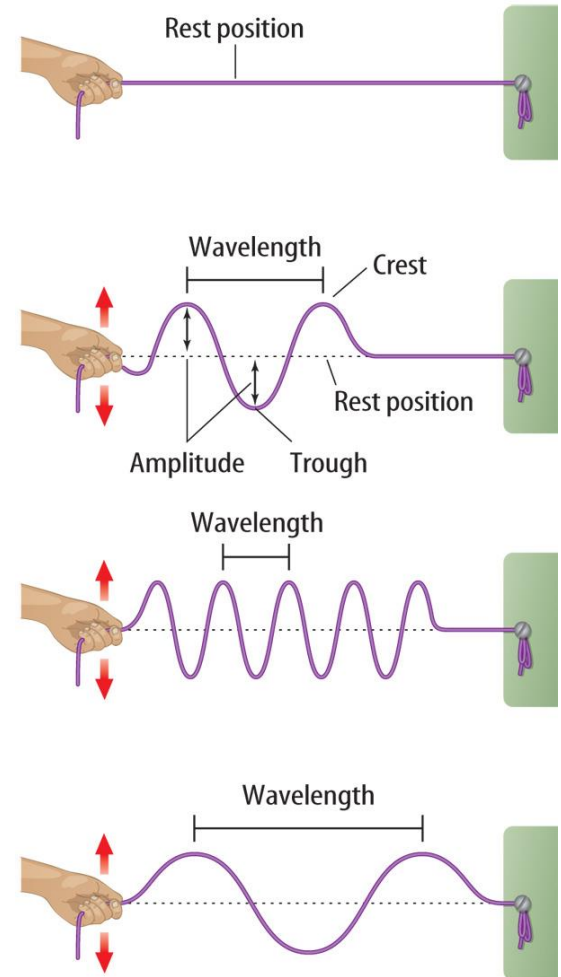
- Pulse: an energy disturbance in a medium that moves along in a wave.



Parts of a Wave



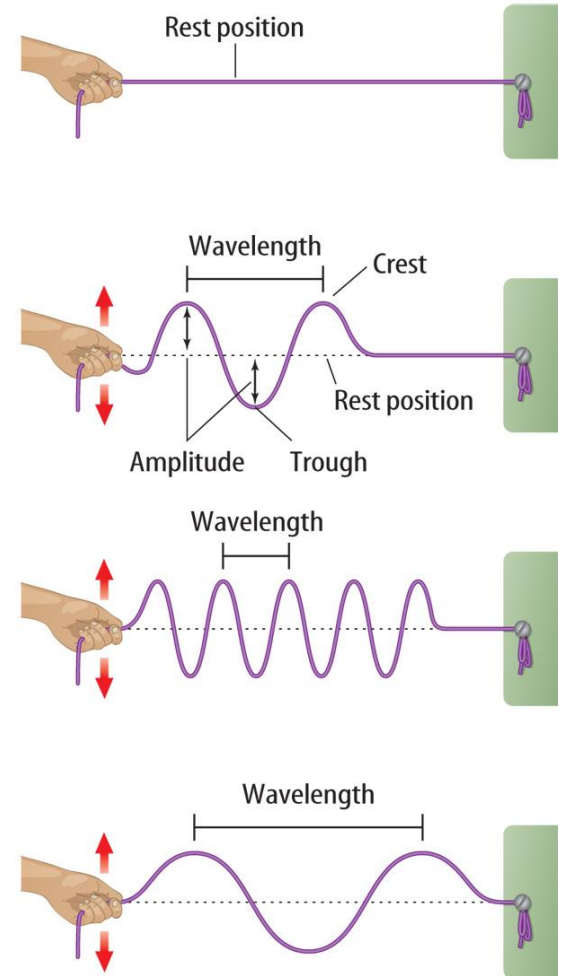
- The distance between any two crests of any two troughs is the **wavelength**.
- The length of a single wave
- **Amplitude** The maximum amount a disturbance is from a wave's starting position.



Frequency and Wavelength



- The **frequency** of a wave is the number of wavelengths that pass a given point in one second.
- As the frequency of a wave increases, wavelength decreases.



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Write the definitions of Pulse, wavelength, amplitude, and Frequency. (4 points!)

Prism Mini Lab...

- Procedure: We will take the prism out in the sun light and allow the light to pass through the prism onto a white sheet of paper.
- Observation:
- Question: Why does the light go in white and out different colors?
- Hypothesis:

11.1 What is light?

LESSON Vocabulary

-  wavelength
-  frequency
-  medium
-  electromagnetic spectrum



Light Transfers Energy

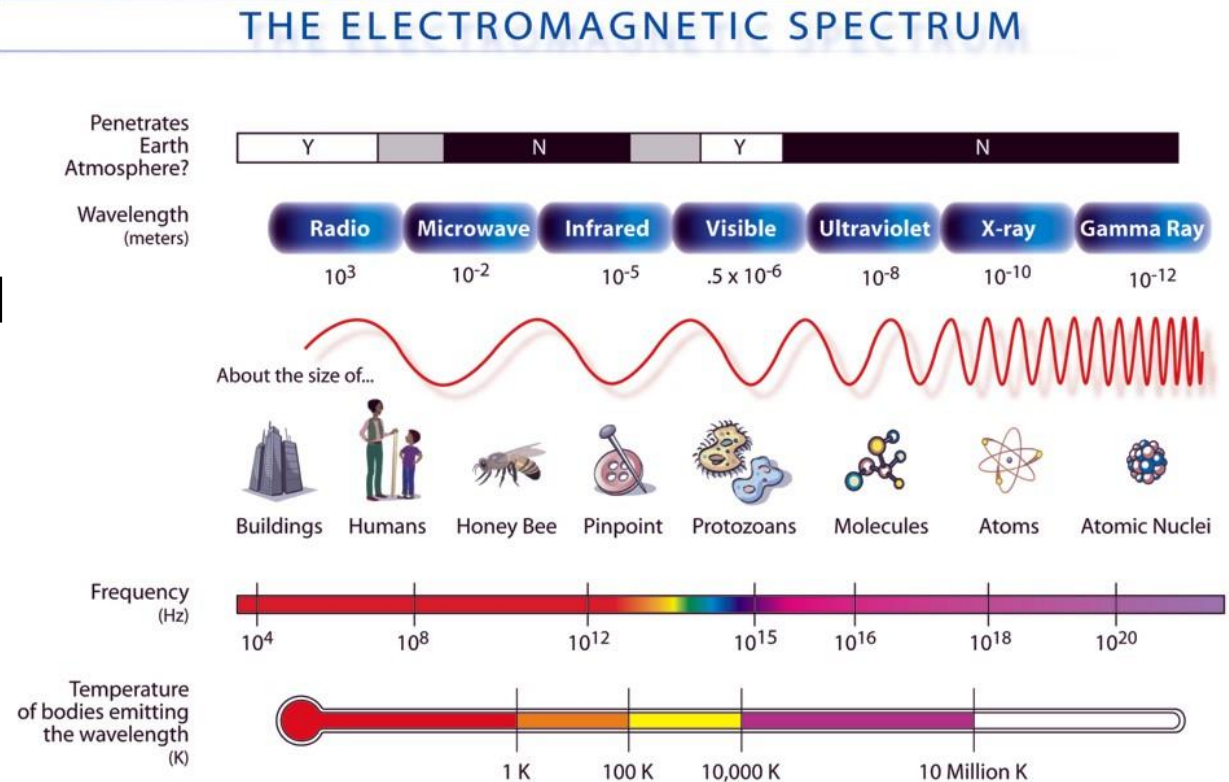
- Similar to water waves, light waves also carry energy from place to place.



A Range of Wavelengths

- It is arranged in order, from those with the longest wavelengths to those with the shortest wavelengths.

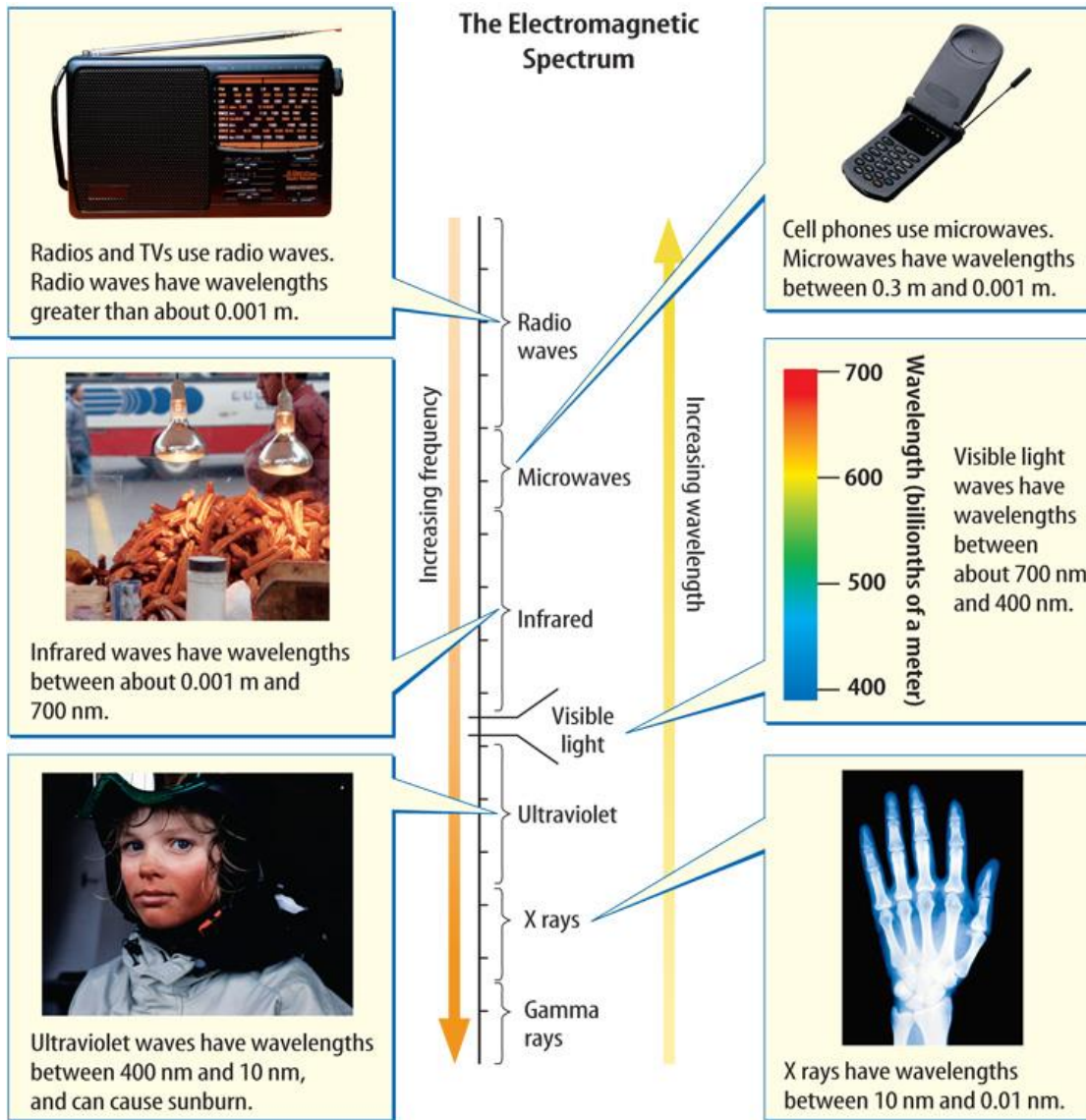
Frequency increases as wavelength decreases, and is arranged in order of increasing frequency.



Visible Light

- The visible light spectrum is the range of electromagnetic waves human eyes can detect.
- Visible light wavelengths are measured in nanometers (nm).
- The wavelengths range from 700 nm to 400 nm.





Mini lab: Bending Light Stimulation



Resources

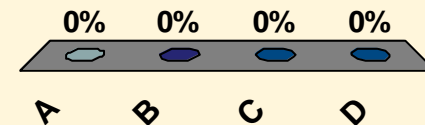


LESSON 1 Review



What is the amplitude of a wave?

- A distance from crest to crest
- B distance from crest to trough
- C** distance from crest to resting position
- D wavelength x frequency



Resources

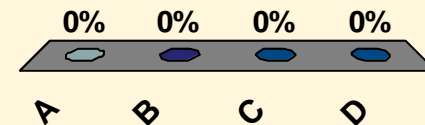


LESSON 1 Review



What is a wavelength?

- A the distance from crest to trough
- B the distance from crest to the rest position
- C** the distance from crest to crest
- D the opposite of frequency



Resources

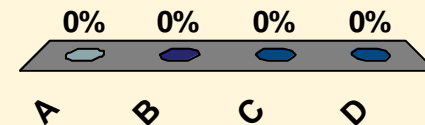


LESSON 1 Review



What is the term for the substance through which a wave moves?

- A medium
- B substrate
- C water
- D vacuum



Resources

