

Week of October 5, 2015

Monday

October 5, 2015

Do Now: Monday

1. Write down your homework.
(Leave your agenda out and open)
2. Put your name, student # & class on your
“Do Now” worksheet



3. Write down 2 facts you heard from the video.

Stations



18:00

Station 1: Gizmo

- Put your name, student # & class on your packet.
- Before going on Gizmo, complete the Prior Knowledge Questions
- Once logged onto Gizmo, Complete the Gizmo Warm-Up
Do not go any farther

Materials Needed:
1 Chromebook / Pair
Gizmos – Packet
Pencil

Station 2: Foldable

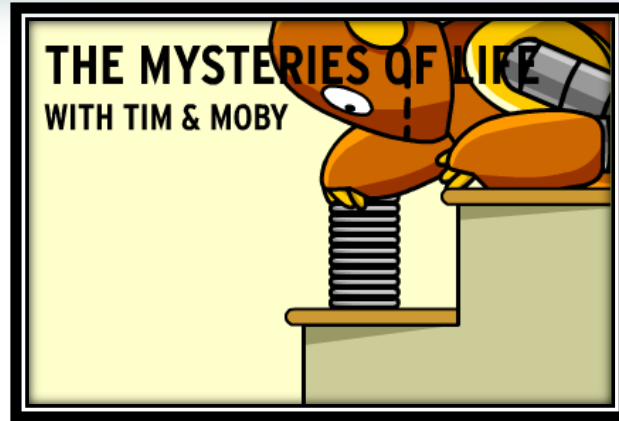
- Organize papers in Binder
- Complete the Crest Portion of your Foldable

Materials Needed:
Binder
Foldable
Colored Pencils
Pencil

Tuesday

October 6, 2015

Do Now: Tuesday



- 1. Write down 2 new facts that you heard or noticed this time.**
- 2. List 3 ways waves may effect your life.**

Stations



Station 1: Gizmo

- Log into Gizmo
- Complete Activity A: Measuring Waves

Materials Needed:
1 Chromebook / Pair
Gizmos – Packet
Pencil

Station 2: Foldable

- Complete the rest of your foldable of your Foldable

Materials Needed:
Foldable
Vocabulary Sheet
Colored Pencils
Pencil

Wednesday

October 7, 2015

Do Now: Wednesday

- 1. Read the article about the sport of surfing.**
- 2. How is surfing connected to our study of waves?**

Stations



Station 1: Gizmo

- Gizmos: www.explorellearning.com
- Complete Activity B: Wave Dynamics

Materials Needed:
1 Chromebook / Pair
Gizmos – Packet
Pencil

Station 2: Foldable

- Finish Foldable and Turn in with Filled out Rubric
- Complete Practice Sheet

Materials Needed:
Foldable
Colored Pencils
Rubric
Practice Sheet
Pencil

Thursday

October 8, 2015

Do Now: Thursday

How would you teach a 4th grader what the crest and trough of a wave is?



Stations



Station 1: Gizmo

- Gizmos: www.explorellearning.com
- Complete Activity C: Combined Waves
- Make sure all assignments are complete for Gizmos

Materials Needed:
1 Chromebook / Pair
Gizmos – Packet
Pencil

Station 2: Vocabulary

- Finish Practice Worksheet from yesterday
- Complete the Frayer Vocabulary Chart
- Definitions have already been filled in. Use your knowledge from Gizmos to help with examples.

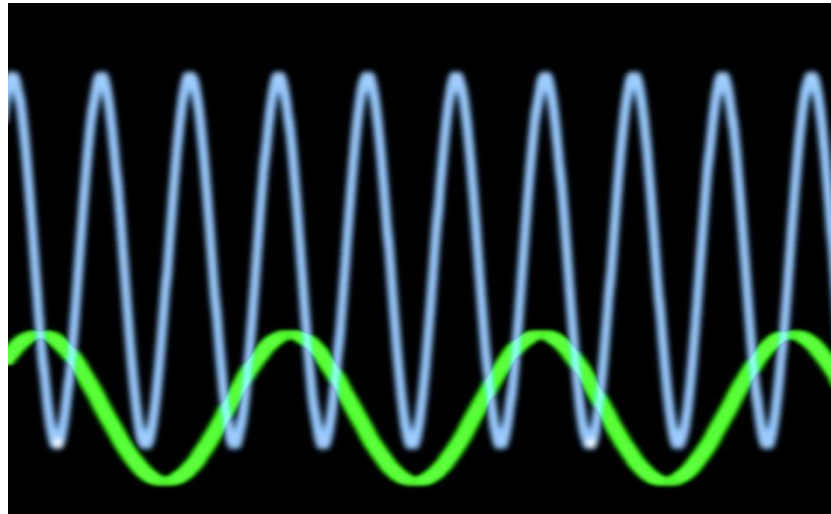
Materials Needed:
Pencil
Practice Worksheet
Vocabulary Chart

Friday

October 9, 2015

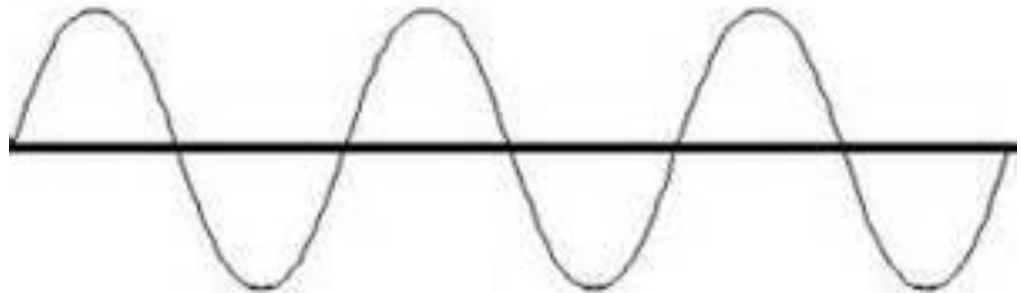
Do Now: Friday

- 1. How can you compare the different parts of a wave?
(Create your own trick to remember them.)**



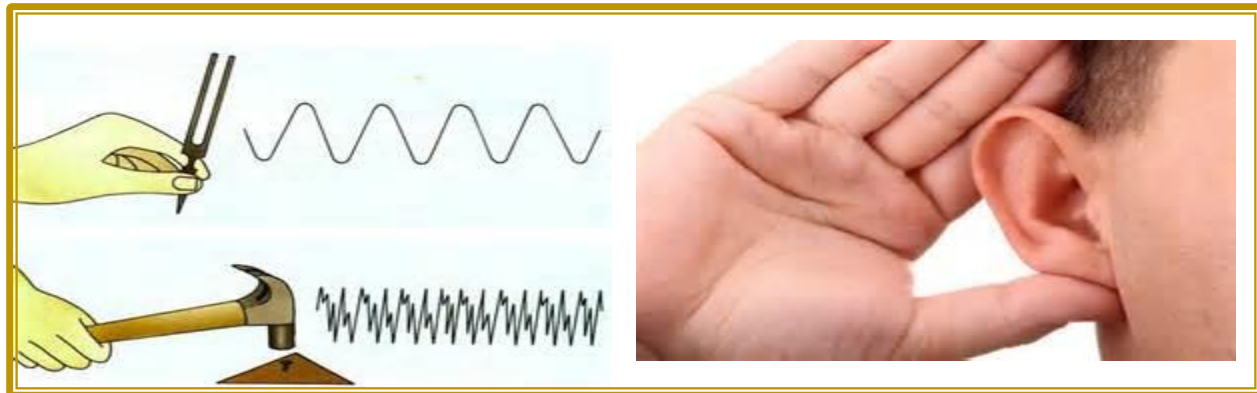
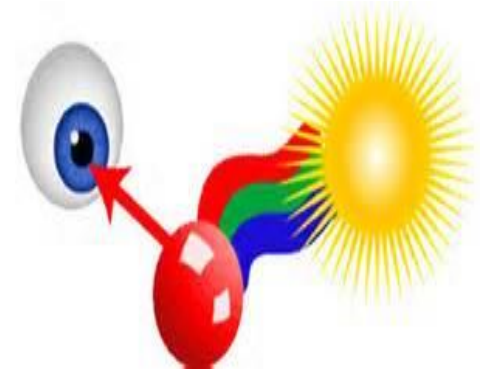
What is a Wave?

A wave is any disturbance that transfers energy through matter or space.

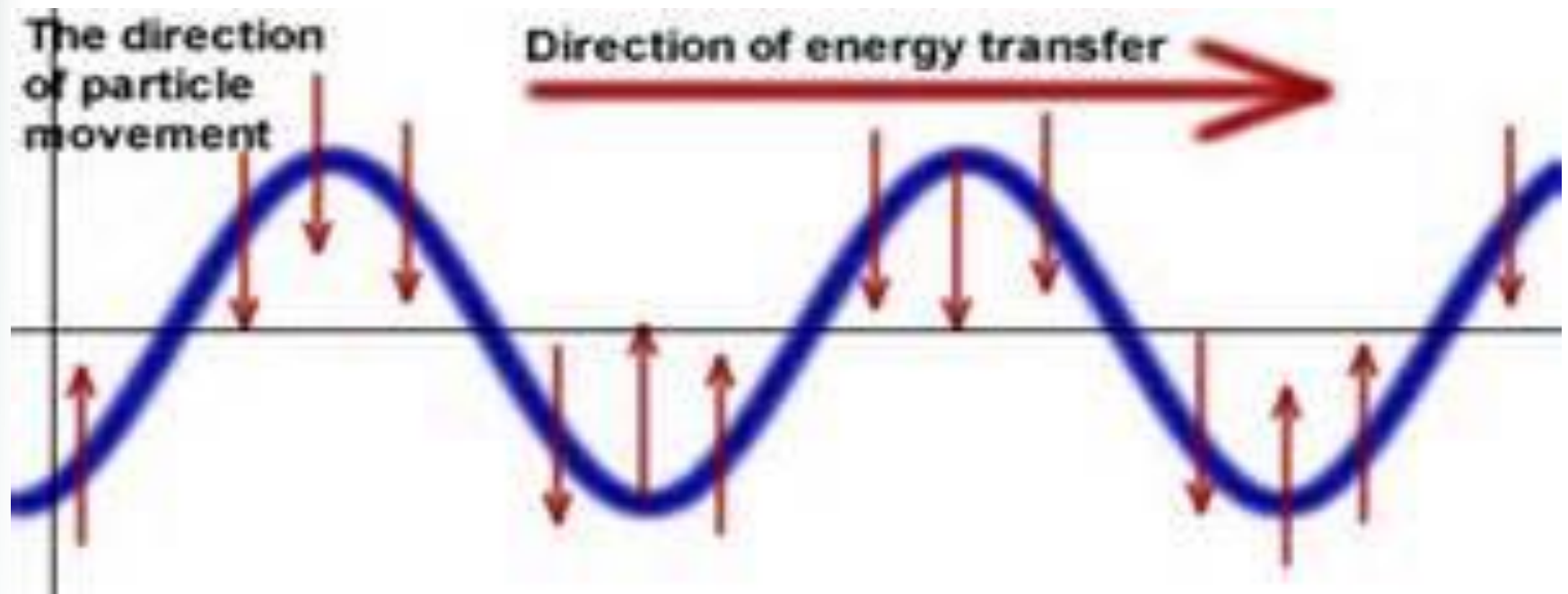




Waves are created when a source creates a vibration.



Waves are moving energy!



The energy causes materials to vibrate.

**Waves only
carry energy,
not matter!**



How do waves travel?

The matter through which a wave travels is called a MEDIUM.



The sound produced by the bell cannot be heard since sound cannot travel through a vacuum.

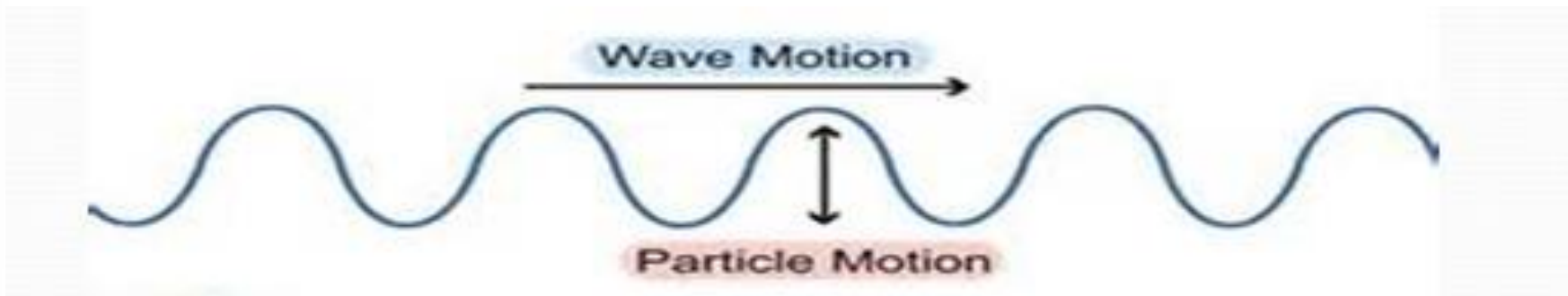


The salt water is the medium for the waves

Transverse Waves:

waves in which the particles vibrate in an up and down motion

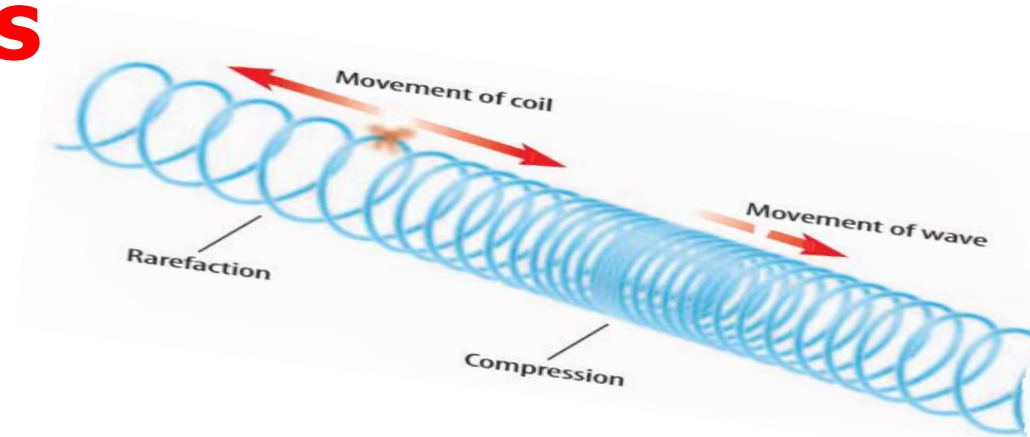
ex: light waves



Longitudinal Waves:

waves in which the particles
vibrate back and forth in
compressional pulses

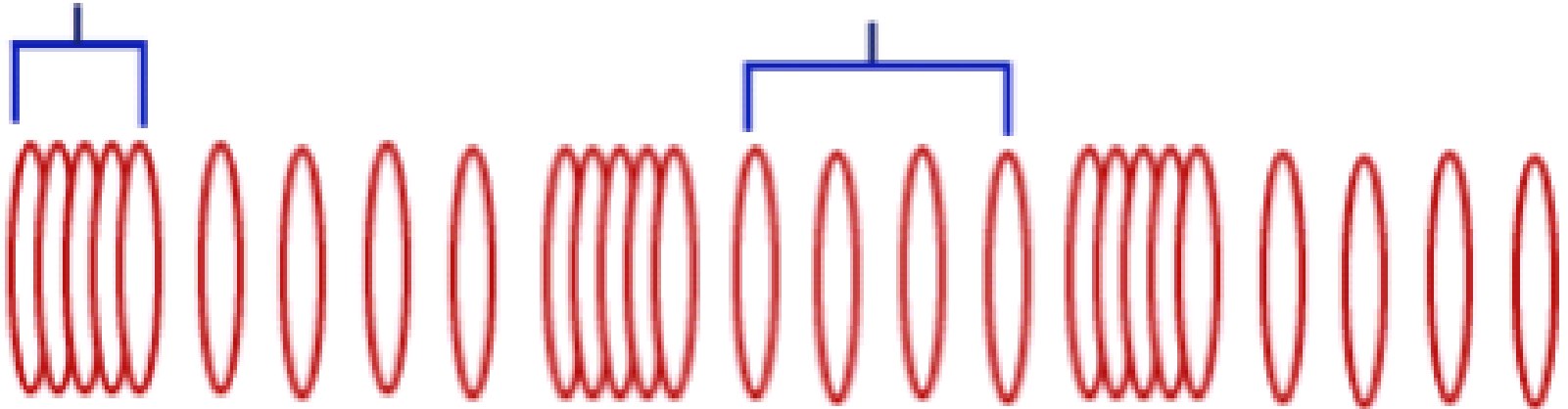
ex: sound waves



Longitudinal Wave

Compression

rarefaction



Types of Waves

Waves can also be classified on if they need a medium or don't need a medium to travel...

Mechanical Waves

Mechanical Waves need a medium to travel through.

Examples of Mechanical Waves:

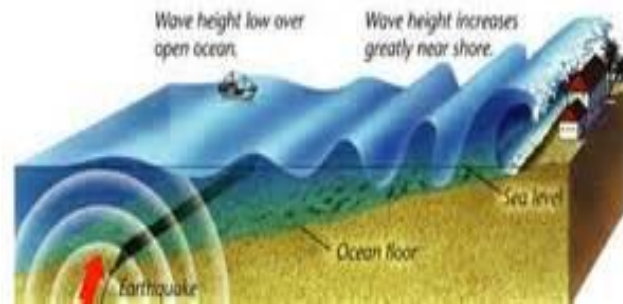
sound

water

ropes

earthquakes

tsunami waves



Mechanical Waves can be either Transverse or Longitudinal

Electromagnetic Waves

Electromagnetic Waves do NOT need a medium to travel through.

Examples of Electromagnetic Waves:

x-rays

radio waves

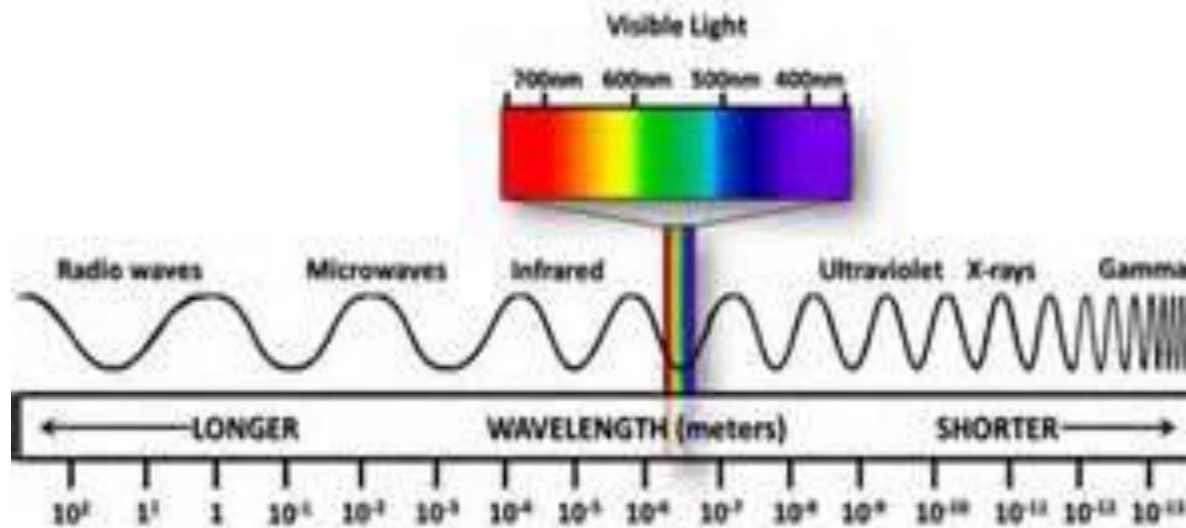
infrared radiation

microwaves

visible light



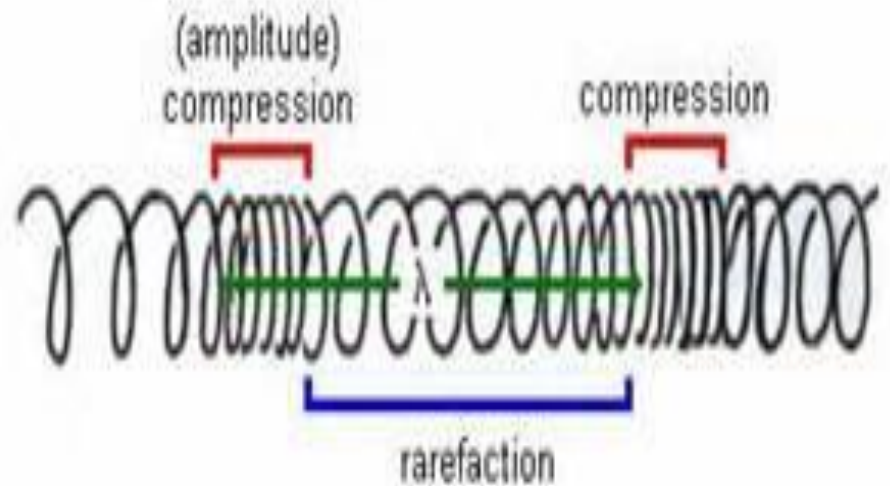
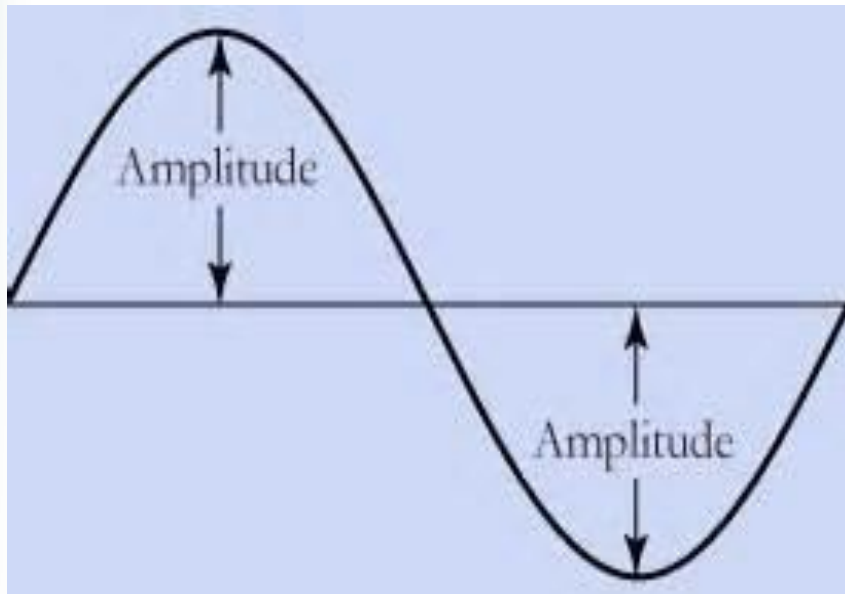
Electromagnetic Waves



Electromagnetic Waves are ALWAYS transverse waves.

Amplitude

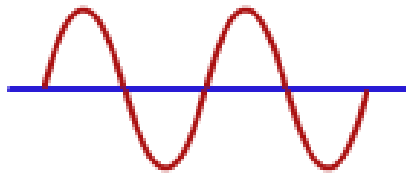
Amplitude = wave height



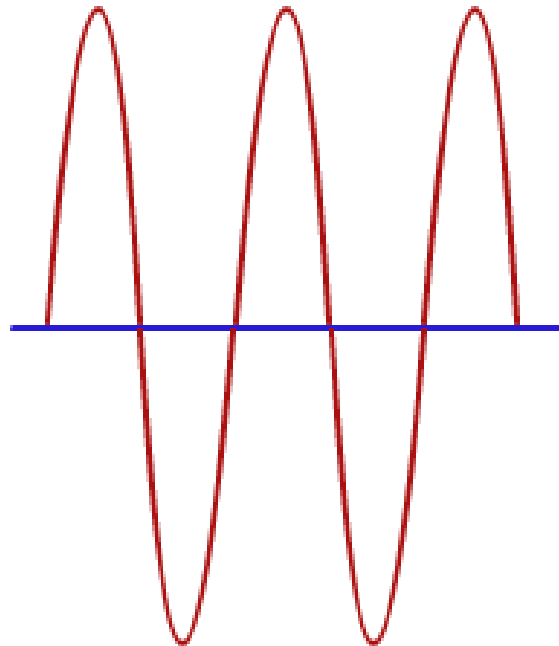
Amplitude

larger amplitude = more energy

Low Energy Wave



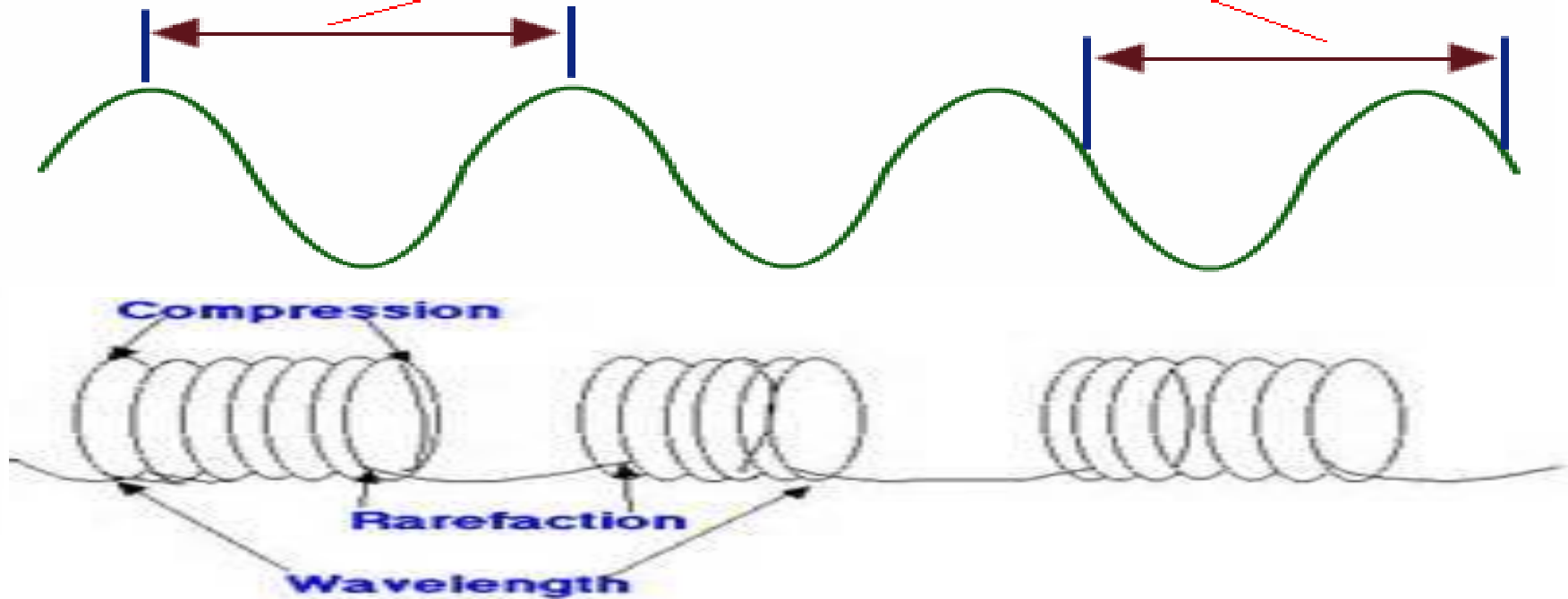
High Energy Wave



Wavelength

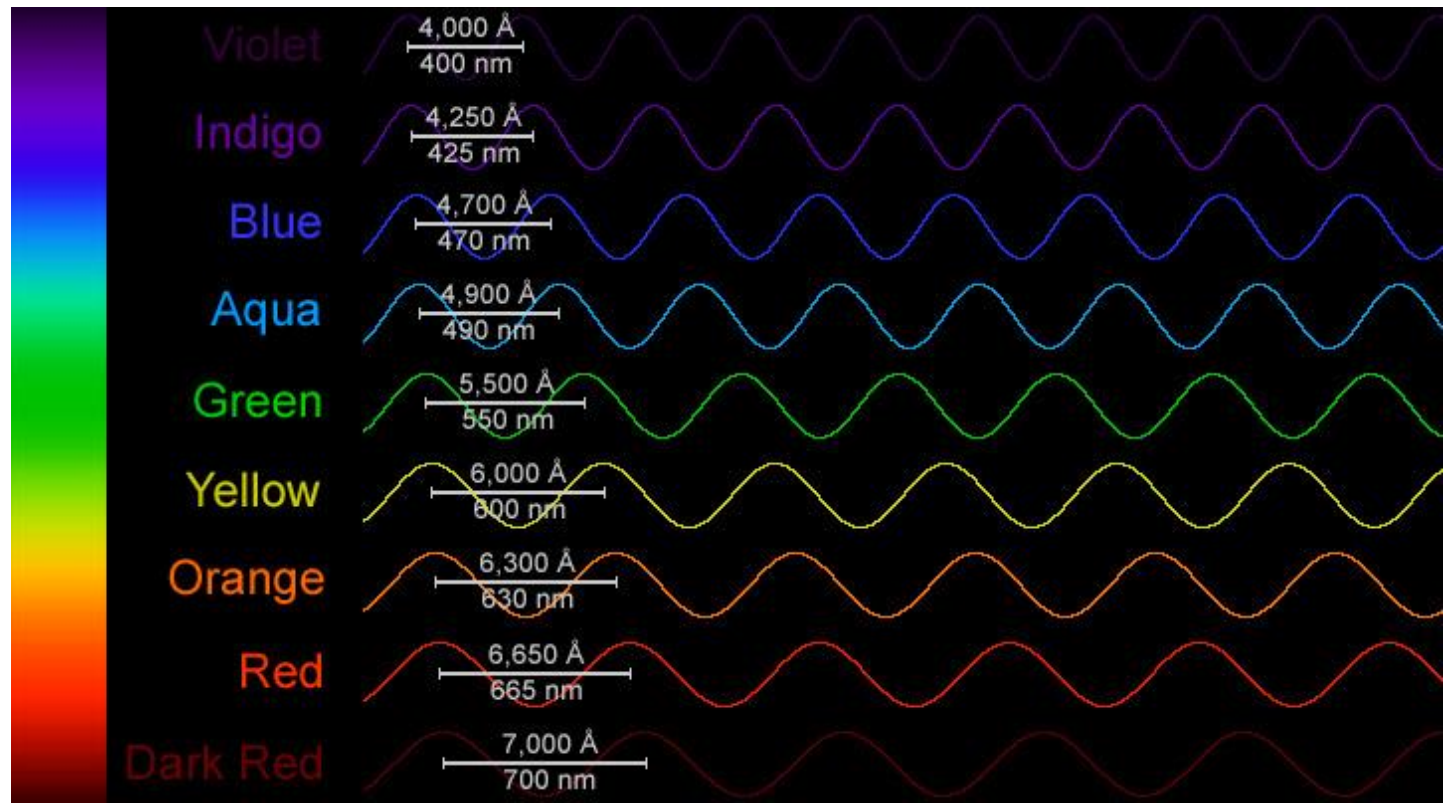
Wavelength = distance between 2 crests or troughs

The wavelength can be measured from any point to the identical point on the next wave



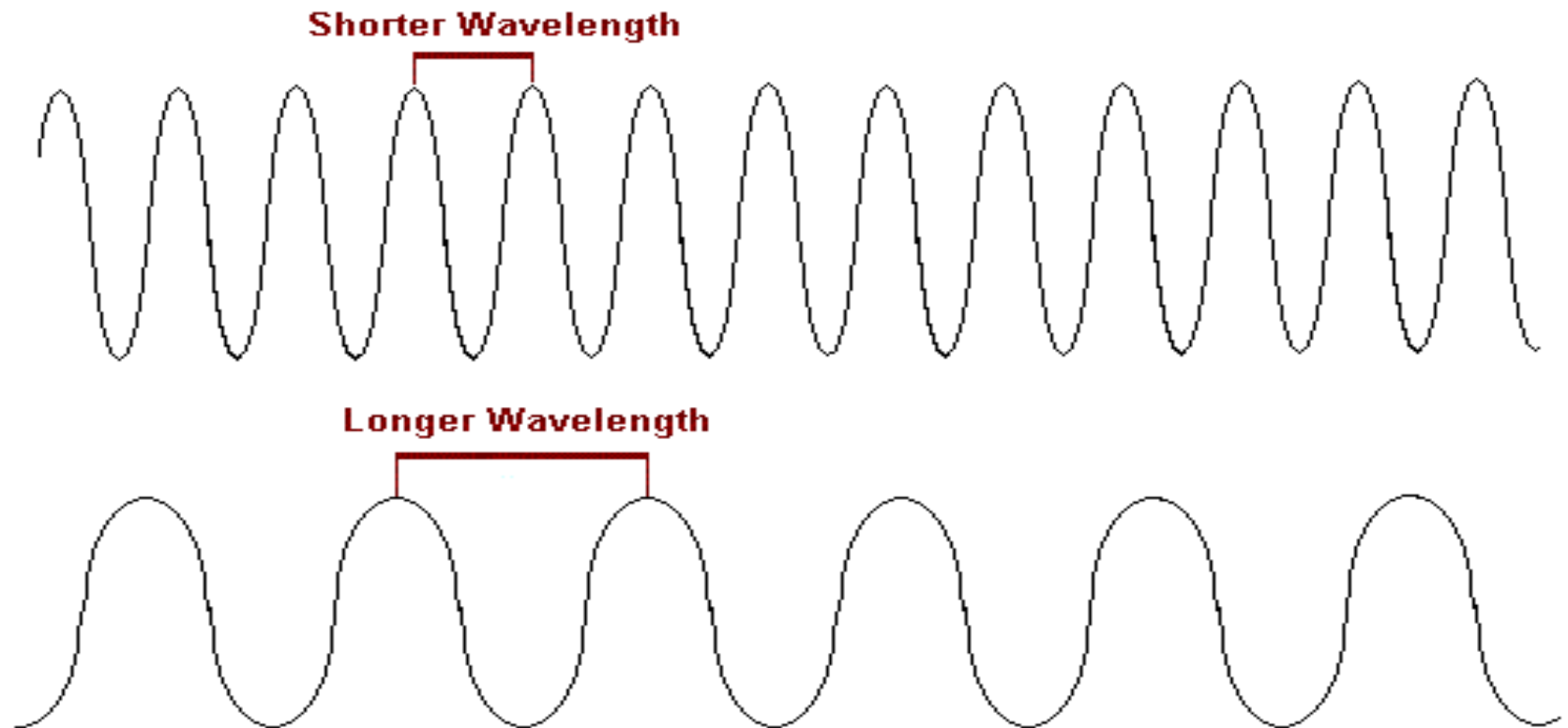
Wavelength

The human eyes can detect electromagnetic waves with a wavelength between 400 and 700 nanometers



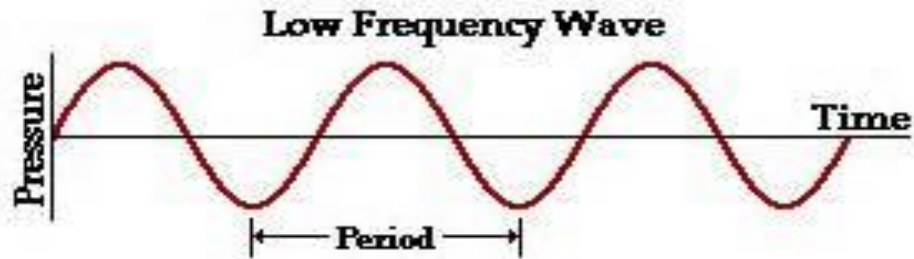
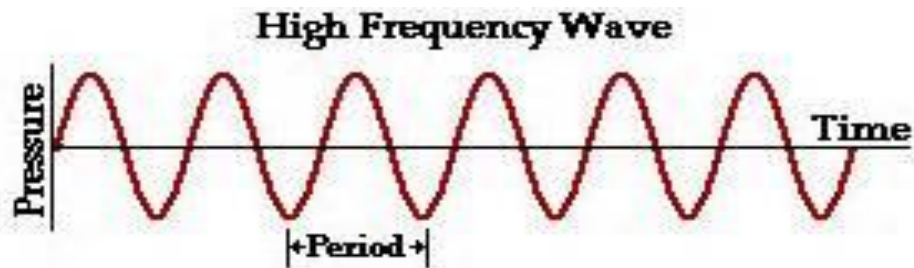
Wavelength

shorter wave length = more energy

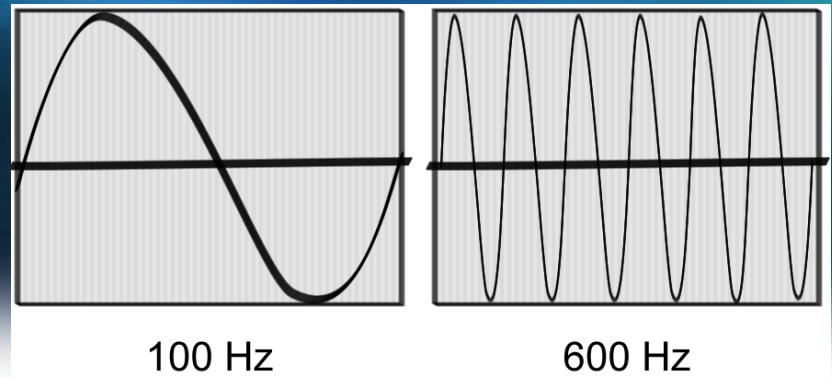


Frequency (Hertz/Hz)

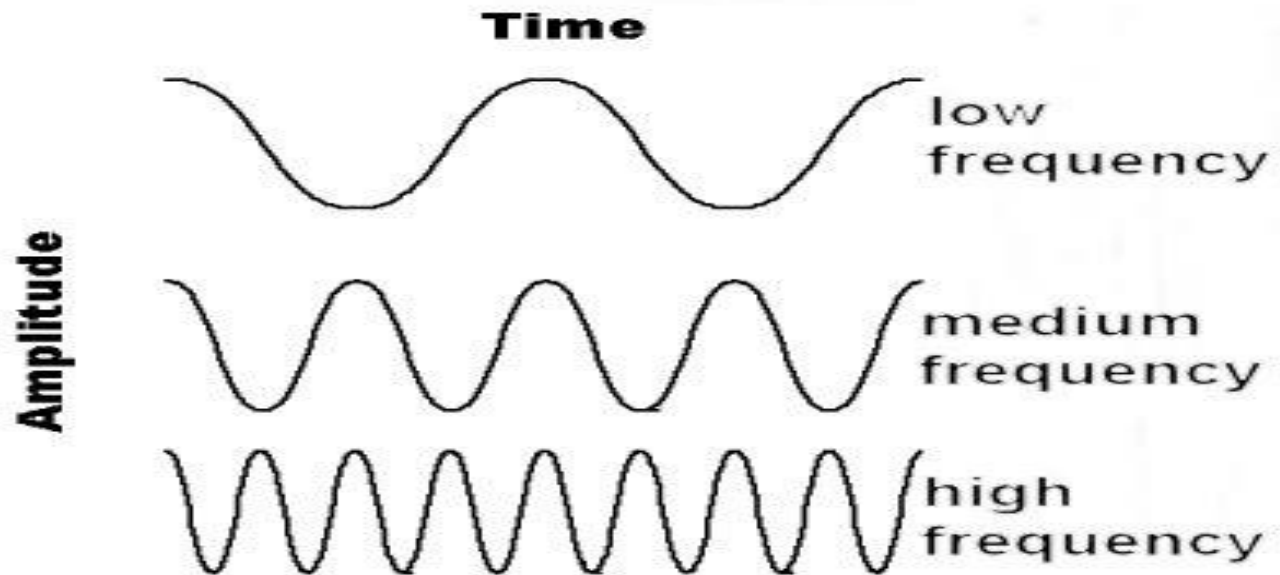
Frequency = the number of waves that pass by a point each second



Frequency



higher frequency = more energy



Wave Speed

Wave Speed = speed at which waves travel through a medium

