WHAT YOU KNOW… Worksheet

1. What is a phenomenon?

A fact or situation that is observed to exist or happen.

1. Give me an example of phenomenon that we discussed in class:

Weather, tornadoes, volcano eruptions, thunderstorms, etc.

1. How is phenomena in the known universe described by?

Mathematical concept of waves

1. What is the definition of a wave?

The motion of a disturbance between two points

1. Give me an example of Mechanical waves. Do they need a medium to travel?

Sound waves, air waves, earthquake waves, rope waves and tsunami waves. Yes, they need a medium to travel through.

1. Give me an example of electromagnetic waves? Do they need a medium to travel?

Light, microwaves, x-rays, ultraviolet rays, and radio waves. No, this type of waves doesn’t require a medium.

1. What causes waves to occur? Give me an example of a mechanical and electromagnetic waves.

Mechanical waves

Occur because of vibration of some kind

1. Sound waves originate from vibrations of air molecules.
2. Earthquake waves that occur by the movement of the tectonic plates or volcanoes eruptions.

Electromagnetic waves

Electromagnetic waves occur by the electrical charge.

1. microwave
2. radio waves
3. x-rays
4. UV rays
5. Do waves transport mass?

Waves do not carry matter along with them from one point to another. They only transport energy.

1. Define propagate.

To spread and promote widely.

1. How are electromagnetic waves classified?

Electromagnetic waves are classified by frequency or wavelength.

1. What happens to the sound wave in our telephone cup experiment when holding the string?

You minimized the vibration therefore reducing the sound wave. If you noticed the sound was lessen then when you don’t hold the string.

1. How does the sound transfer through the cups when we used the telephone cups?

The air molecules in the cup vibrate when you speak in it then the bottom of the cup vibrates which makes the string vibrates which makes the bottom of the second cup vibrate. Then the air molecules of the second cup vibrate till the sound reaches the other person’s ear.

1. What happens when you give the string some slack?

The string does not vibrate as well so sound can’t travel through it.