Energy Unit Study Guide

Make sure you know and understand the following:

Thermal Energy –

Electromagnetic Energy –

Heat Transfer –

Kinetic Energy–

Transfer of Energy methods –

Potential Energy –

Law of Conservation of Energy –

Electromagnetic Spectrum –

Thermal energy always flows from to .

If a bucket of water is sitting on a high bookshelf, what type of energy does it have? What force will acting on it while it sits on the shelf and if it falls off the shelf?

What type of energy change takes place in the cells of your body when you want to go run?

Draw a diagram showing a rubber band being stretched and then let go. Label the energy.

Draw a yo-yo going up and down. Label the potential and kinetic energy.

Be able to explain the Law of Conservation of Energy.

What are renewable and non-renewable energy sources? What are examples of each?

**What are the 5 main types of energy?**

Draw a wind turbine and label the energy conversions. Be able to explain how the energy transfers.

Fill in the parts of the electromagnetic spectrum. Draw how the wavelengths change.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |

Be able to explain the difference between conductors and insulators.

Know the difference between the following. Draw a picture if you need it.

Conduction

 Convection

radiation

Be able to explain how a thermal energy is transferred using the following vocabulary – conduction, convection, radiation, insulation, conductor.