**Study Guide Physical Science – Exam #1**

* Give a brief synopsis of how physical scientists study the world.
* List the many types of sciences that involve physical science.
* Determine the difference between a scientific theory and a scientific law.
* Determine the frame of reference used to describe motion.
* Know the difference between speed and velocity.
* Determine the speed of an object.
* Analyze a graph to determine the speed of an object.
* List the common SI units of measurement and common prefixes used in the SI system.
* Distinguish mass, volume, and density from one another.
* Understand how an object speeds up, slows down, or how it changes directions.
* Determine how much an object speeds up or slows down.
* Know the differences and similarities between weight and mass.
* Understand why objects fall to the ground when dropped.
* Explain the relationship between free-fall acceleration and mass.
* Explain why a projectile will follow a curved path.
* List common SI units of measurement and common prefixes used in the SI system.
* Determine what the distance is and the total length traveled of an object, and understand that displacement is the net change in position.
* Understand that velocity gives the rate of motion and its direction, whereas speed gives only the rate of motion.
* Calculate whether the average velocity is positive if the displacement is in the positive or negative if the displacement is in the negative direction.
* Describe the following laws: Newton’s 1st, 2nd, 3rd law, gravity, friction
* Define matter and give examples for matter and non-matter.
* Understand the different state of matter.
* Summarize how matter is everything that takes up space and has mass.
* Understand that all matter is made up of small particles (atoms).
* Describe the relationship between pressure and fluid.
* Explain what a pascal is.

Vocab:

* Science
* Technology
* Law
* Theory
* Motion
* Frame of Reference
* Displacement
* Speed
* Velocity
* Mass
* Length
* Volume
* Temperature
* Metric System
* Interia
* Weight
* Free Fall
* Terminal Velocity
* Projectile Motion
* Acceleration
* Matter
* Atoms
* Freezing
* Melting
* Sublimation
* Evaporation
* Condensation
* Forces
* Pressure
* Fluid
* Pascal
* Newton’s Laws