**Study Guide: Unit 00: Introduction**

* Look at ALL notes and handouts
* Review Quiz questions
* Review Text and Vocab

By the end of this unit you should be able to:

* Solve equations using the speed formula and acceleration formula.
* Effectively perform dimensional analysis.
* Understand and be able to explain the motion of an object when you look at position-time graph, velocity-time graph, and acceleration time-graph.

Chapter 1:

Section 1

Three aspects of physics

Matter and energy

Scale of a system

How to investigate systems

 Scientific Method\*\*

 Experiment

 Control Variable

 Experimental Variable

 Independent Variable

 Dependent Variable

 Hypothesis

Section 2

Distance

 Units

Quantitative vs. Qualitative Measurements

English System vs. Metric

Time

 2 ways to tell time

 Units

 What axis is it on?

Dimensional Analysis (Converting Units)

Distance vs. time graph

Section 3

Speed

Units for Speed

Constant speed

Formula v=d t=d d=tv

 t t

Chapter 2:

Section 2

Acceleration

Units for Acceleration

Deceleration

a = Vf-Vi

 T

t = Vf-Vi

 a

Vf = Vi + at

Section 4

Position vs. Time graph

 What does the slope represent?

 What does the curve on this graph represent?

Velocity vs. Time graph

 What does the slope represent?

 What does positive and negative represent on this graph?

Acceleration vs. Time

 How do you show constant acceleration on this graph?

Systems

What is a system?

Terms to know and be able to use: open system, closed system, boundaries, outputs, inputs, interactions, system, & components

Be able to give an example of a system