**Motion Poster**

**Instructions**: Create a poster according to the following directions. Wherever possible use charts, graphs, pictures, drawings, and graphic organizers to display your information. Make your poster as colorful as possible.

**Group 1** – Vector vs. Scalar Quantities. Include the following points on your poster.

* The definition of time, distance, position, displacement, scalar quantity, and vector quantity.
* Create a two column, three row table. Use two headings: scalar quantity and vector quantity. Then list three examples of each.
* When making a graph to what axis does the independent variable belong? The dependent variable? Create and label a blank graph including that information.
* What is meant by the term “scale” as it applies to a graph?

**Group 2** – Speed vs. Velocity. Include the following points on your poster.

* The definition of speed, velocity, instantaneous speed/velocity, average speed/velocity, constant speed/velocity.
* The speed/velocity equation with units.
* Create a table/chart to show the similarities and differences between speed and velocity.
* Example calculation with all work shown.
* Example units of speed/velocity.
* Which one is scalar and which is a vector.

**Group 3** – Acceleration. Include the following points on your poster.

* The definition of acceleration, deceleration, constant acceleration, increasing/decreasing acceleration.
* The acceleration equation with units.
* Is acceleration scalar or vector.
* Example calculation with all work shown
* Example units of acceleration.

**Group 4** – Distance (position) vs. Time Graphs. Include the following information on your poster.

* Example graph from your notes, labeled with colors.
* Definition of slope.
* What variable is on the x-axis? What variable is on the Y-axis?
* What does a steep/shallow slope mean on a distance v. time graph?
* What does a horizontal, linear, and exponential pattern mean on a distance vs. time graph?
* What does a negative slope mean? What does a positive slope mean? (on a distance vs. time graph)

**Group 5** – Speed (velocity) vs. Time Graphs. Include the following information on your poster.

* Example graph from notes, labeled with colors.
* Definition of slope.
* What variable is on the x-axis? What variable is on the Y-axis?
* What does a steep/shallow slope mean on a speed vs. time graph?
* What does a horizontal, linear, and exponential pattern mean on a speed vs. time graph?
* What does a negative slop mean? What does a positive slope mean? (on a speed vs. time graph)