**Motion Test Study Guide**

**Test Layout:**

The test will be a combination of multiple choice, short answer, and some picture problems. It is worth 100 points, and will be completed in 1 class period.

**Definitions:** Students should be able to define the following words:

 Motion

 Relative motion

 Distance

 Displacement

Speed

 Velocity

 Instantaneous speed

 Average speed

 Acceleration (positive, negative, and a change of direction)

**Concepts:** Students should understand that

* Displacement is the shortest distance between two places
* At times displacement may be 0 (if an object ends right where it started)
* Speed is a relationship between distance and time and is measured in $\frac{m}{s}$
* ***Speed = distance/time* *Time = distance/speed Distance = speed x time***
* An object's acceleration can be positive, negative, or 0.
* An object accelerates when at a constant speed if it changes direction
* Acceleration is equal to $\frac{v\_{f}-v\_{i}}{t}$ and is a rate of a rate
* Acceleration is measured in $\frac{m}{s^{2}}$

**Graphing:** Students should be able to interpret speed and velocity graphs



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