

## Motion And Forces: Objectives and Vocabulary

By referring to the various handouts, notes, lab activities and homework covered during this unit, then at the end of this unit of study, each student should be able to:

1. Calculate and determine the speed, time or distance of an object given two of the three variables: Distance, speed or time.
2. Know what acceleration is and be able to calculate acceleration as well as the change in velocity and elapsed time.
3. Know what is gravity and what two things does the gravitational force between two objects depend on.
4. Explain Newton's First Law of Motion and how it is used to explain how the world around us works.
5. Know the difference between instantaneous, constant and average speed.
6. When given a data table, graph the independent and dependent data using proper graph procedures. ( such as scale, interval, labeling of axis, best fit line if appropriate )
7. Given a graph be able to properly read the graph and estimate between points by interpolation and beyond points by extrapolation.

### Vocabulary:

Matter	Energy	Mechanics
Motion	Frame of reference	Speed
Average speed	Instantaneous speed	Velocity
Deceleration	Acceleration	Gravity
Force	Friction	Extrapolation
Interpolation	Force	Net force
Balancing forces	Friction	Inertia
Weight	Mass	Newton's