UNIT 2: MAY THE NET FORCE BE WITH YOU!

Upon completion of this unit, the student should be able to:

1. Describe what is meant by the term "force" and what factors determine it.
2. State and apply Newton's first two laws of motion.
3. Describe what is meant by the term "inertia" and what factors determine it.
4. Describe the factors which affect acceleration. Carry out calculations involving these factors from given data, and apply the result to calculate displacement, velocity, or elapsed time for an object in motion.
5. Construct displacement-time and velocity-time graphs from collected data for a moving object, and use the graphs to describe the motion of the object and to explain any changes in the object's motion.
6. Contrast mass and weight and their units in the metric system.
7. Define what is meant by the term "friction" and describe the two types. State factors which affect the force of friction and the coefficient of friction.
8. For an object sliding at constant velocity on a horizontal surface, describe the relationship among friction force, coefficient of friction, and normal force, and calculate each from given data.

Reference: Holt Physics (Serway/Faughn), Chapter 4

Homework: Problem set

Labs: Factors of Acceleration, Who Pushed that Speeding Truck?, Push that Cart!, Friction, Balloons & Bottles (take home lab)