Physical Systems, Semester 1 Curriculum Map

Month	4 weeks	4 weeks	5 weeks	5 weeks
Unit Name	**Scientific Method** **CPO Ch. 1** II.1.A-B, VII, VIII	**Speed and Acceleration** **CPO Ch. 2** II.1.A-B, VII, VIII	**Force and Motion** **CPO Ch. 3** II.1.B-C, II.2.A-B, II.2.D-E, VII, VIII	**Work, Energy, and Simple Machines** **CPO Ch. 4 & 5** 1.2.A-B, I.2.F, II.2.A, II.2.F
Essential Questions	How can the tools of the scientific method help us understand physical systems?	What is speed and how is it measured?	What is the relationship between force, mass, and acceleration?	What is energy and how does it apply to work?
Content	• Measurement • Metric system • Graphing • Experimental Design • Scientific Tools and Technologies	• Scientific Model • Acceleration • Speed • Time • Distance	• Newton's Laws • Inertia • Gravity • Weight vs. Mass • Law of Universal • Gravitation • Friction • Momentum	• Simple Machines • Mechanical Advantage • Efficiency • Forms of Energy • Potential Energy • Kinetic Energy • Law of Conservation of Energy
Skills	• Students will demonstrate use of rulers, stop watches, and graphs. • Identify independent variables, dependent variables. • Interpret scientific investigation using scientific method. • Demonstrate proper lab techniques.	• Collect and analyze data using scientific equipment. • Calculate the speed of motion and create graphs that represent collected data. • Measure and calculate the acceleration of an object.	• Compare the motion of two objects. • Identify and describe the forces acting on an object. • Describe the effect of the change in mass of an object on the inertia of that object.	• Describe the relationship between work, applied net force and the distance an object moves. • Relate kinetic energy to an object's mass and its velocity. • Distinguish between examples of kinetic and potential energy. • Compare the efficiency of simple machines.

Assessments	CPO Black line Masters Lab 1.1 Lab 1.2 CPO Skill Sheet 1 CPO Skill Builder Intern, System of Measurement. Interpreting graph Lab Report Format Making graphs Scientific processes Written Quizzes & Tests	CPO Black Line Masters Lab 2.1 CPO Skill Sheet 1-2 CPO Skill Builder Solving Equations Written Quizzes & Tests	CPO Black Line Masters Lab 3.1 Lab 3.2 CPO Skill Sheet 3-A 3-B 3-C 3-D Poster Board Presentation Written Quizzes & Tests	CPO Black Line Masters Lab 4.1 Lab 4.2 Lab 4.3 Lab 5.2 CPO Skill Sheet 4-A 4-B 5-A 5-B 5-C Written Quizzes & Tests