



## Physical Science - Course Syllabus

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### Description:

This course is designed to provide students the necessary skills to have a richer knowledge base in physical science. In addition to basic physical science concepts, this course also includes the more abstract concepts such as the conceptualization of the structure of atoms, motion and forces, the conservation of energy and matter, the action/reaction principle, and wave behavior. In this course, students also investigate physical science concepts through engaging Virtual Labs.

**Textbook:** Physical Science - Excel Education Systems, Inc. – 2021 ©

### Course objectives:

- \* Using the kinetic theory, describe the behavior of solids, liquids, and gases.
- \* Explain how energy is conserved during chemical reactions.
- \* Describe the properties of acids and bases.
- \* Make calculations involving speed, distance, time, slope, velocities, and acceleration.
- \* Explain and apply Newton's Laws of Motion.
- \* Describe concepts of physical science, such as: atomic models, simple machines, force, electromagnetism, buoyancy, work and energy, waves, light, and electricity.

### Contents:

#### Semester A

Module 1: Intro to Physical Science  
Module 2: Measurement Tools in Science  
Module 3: The Nature of Matter  
Module 4: Atomic and Quantum Theory  
Module 5: Basics of Chemistry  
Module 6: Chemical Equations and Reactions  
Module 7: Chemical Solutions  
Module 8: Acids and Bases  
Module 9: Nuclear Chemistry

#### Semester B

Module 10: Physics Basics  
Module 11: Newtonian Physics  
Module 12: Physical Forces  
Module 13: Machines  
Module 14: Energy  
Module 15: Thermodynamics  
Module 16: Waves  
Module 17: Light  
Module 18: Electricity

### Grading Scale

A = 90-100%  
B = 80-89%  
C = 70-79%  
D = 60-69%  
F = under 59%

### Grade Weighting

Quizzes..... 70%  
Mid-Term/Final Exams.... 30%  
100%