

Prerequisite courses: none

Grade level: 9-12

Course Description

Students will learn fundamental concepts of Physical Science while developing strategies in general scientific skills and practices. Topics will include energy and motion, properties and applications of waves, structures of elements on the periodic table, physical and chemical reactions, and the properties of matter.

This course is part of the Exceptional Students Course Suite, designed for high school students working three or more grade levels behind. The Exceptional Students courses are ideal for students whose IEPs allow them to earn credit for below-grade-level coursework.

Course Objectives

Students will meet the following goals in this course.

- Describe the concept of force.
- Explain Newton's third law of motion and how it relates to action and reaction forces.
- Use mathematical representations to show relationships among the frequency, wavelength, and speed of waves traveling in various media.
- Describe resonance and sound quality.
- Identify the masses, locations, and charges of protons, neutrons, and electrons.
- Determine an element's symbol, atomic number, and mass number from the periodic table.
- Explain how and why matter is conserved during a physical change.

Student Expectations

This course requires the same level of commitment from students as a traditional classroom course. Students are expected to spend approximately 5–7 hours per week online on:

- interactive lessons, which include a mixture of instructional videos and tasks.
- assignments, in which they apply and extend learning in each lesson.
- assessments, including quizzes, tests, and cumulative exams.

Communication

Teachers will communicate with students regularly through discussions, emails, chats, and system announcements. Students will also communicate with classmates, either via online tools or face to face, to collaborate, ask and answer questions in peer groups, and develop speaking and listening skills.

Physical Science Essentials

Grading Policy

Students will be graded on work completed online and work submitted electronically to the teacher. The weighting for each category of graded activity is listed below.

| Grading Category | Weight |
|------------------|--------|
| Assignments | 20% |
| Lesson quizzes | 30% |
| Unit tests | 30% |
| Cumulative exams | 20% |

Scope and Sequence

When students log on to Imagine Edgenuity, they can view the entire course map—an interactive scope and sequence of all topics under study. The units of study are listed below

| Course Units |
|---|
| Unit 1: Energy and Motion |
| Unit 2: Waves |
| Unit 3: Elements and the Periodic Table |
| Unit 4: Physical and Chemical Reactions |
| Unit 5: Properties of Matter |