Physical Science

- - - COURSE SYLLABUS | 2022 - 2023 - - -

TEXTBOOK INFO

Textbook:

Pearson Physical Science Concepts
Replacement cost: $85

Digital textbook and accompanying resources may be accessed through the school's Clever page. Students are responsible for books that they check out and will be given an indebtedness notice if not returned by the end of the year and/or graduation.

Literacy resources assigned to students:

Physical Science
The Physics of Superheroes
Replacement cost: $15

Advanced Physical Science
October Sky
Replacement cost: $29

COURSE DESCRIPTION & STANDARDS

Physical Science is the study of matter and energy. Students in this course will be introduced to basic principles of chemistry and physics. The course will cover a variety of topics, including motion and forces, states of matter, atomic structure, the periodic table, electricity, and magnetism.

SPS1. Obtain, evaluate, and communicate information from the Periodic Table to explain the relative properties of elements based on patterns of atomic structure.
SPS2. Obtain, evaluate, and communicate information to explain how atoms bond to form stable compounds.
SPS3. Obtain, evaluate, and communicate information to support the Law of Conservation of Matter.
SPS4. Obtain, evaluate, and communicate information to explain the changes in nuclear structure as a result of fission, fusion and radioactive decay.
SPS5. Obtain, evaluate, and communicate information to compare and contrast the phases of matter as they relate to atomic and molecular motion.
SPS6. Obtain, evaluate, and communicate information to explain the properties of solutions.
SPS7. Obtain, evaluate, and communicate information to explain transformations and flow of energy within a system.
SPS8. Obtain, evaluate, and communicate information to explain the relationships among force, mass, and motion
SPS9. Obtain, evaluate, and communicate information to explain the properties of waves.
SPS10. Obtain, evaluate, and communicate information to explain the properties of and relationships between electricity and magnetism.

READING IN CONTENT AREAS

All students will be required to read content-related materials to enhance the curriculum. The reading requirement is in compliance with county-wide literacy goals. Students will enhance reading in all curriculum areas by reading in all curriculum areas and reading both informational and fictional texts in various genres and modes of discourse. Specifically, there is focus on scientific literacy in the third nine weeks.

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COURSE RIGOR AND GRADING

Physical Science

This course covers the Georgia Standards of Excellence. The grading system for this course is as follows:

- **30%** Tests
- **25%** Labs & Activities
- **25%** Daily Work
- **20%** Benchmark

Advanced Physical Science

This course covers the Georgia Standards of Excellence. Students enrolled in the Advanced Level course are required to complete a long-term project (science fair or Exploravision). The grading system for this course is as follows:

- **40%** Tests
- **25%** Labs & Activities
- **15%** Daily Work
- **20%** Benchmark

COURSE OUTLINE

First Nine Weeks	• Introduction (1 week) • Motion (3 weeks) • Forces & Newton's Laws (3 weeks) • Work & Simple Machines (2 weeks)
Second Nine Weeks	• Types of Energy & Heat (4 weeks) • Waves (3 weeks) • Electricity & Magnetism (2 weeks)
Third Nine Weeks	• Matter (2 weeks) • Atoms & the Periodic Table (3 weeks) • Chemical Bonding (2 weeks) • Chemical Reactions (2 weeks)
Fourth Nine Weeks	• Solutions, Acids & Bases (3 weeks) • Radioactivity & Half-life (3 weeks) • Year-in-review (3 weeks)