

Course Title: PHYSICAL SCIENCE IIIB	Course Description
<p>Course No. 3356 Grade level: 8-12</p> <p>Text and Resource Options: A. <i>Science Explorer: Physical Science</i>, Part II; Prentice Hall B. <i>Holt Science and Technology: Physical Science</i>, Part II; Holt C. <i>Concepts and Challenges: Physical Science</i>, Part II; Globe Fearon</p>	<p>Course Value: *One Semester</p> <p>Credit Value: 1 – 5 credits</p>
<p>Course Content: Key Content Standards and Course Objectives</p>	<p>This course will focus on the science strands that parallel the Grade 9-12 Chemistry and Physics standards.</p>
<p>This course is based on a combination of the following physics, chemistry and physical science standards:</p> <ol style="list-style-type: none"> Forces and Motion: The motion of objects can be observed and measured (2-1a-g), Newton’s laws predict the motion of most objects (Physics: 9/12-1e,f), the velocity of an object is the rate of change of its position (8-1a-f), unbalanced forces cause changes in velocity (8-2a-g), tools and machines are used to apply forces to make things move (2-1d). Energy: Electric and magnetic phenomena are related and have many practical applications (Physics: 9/12-5), the laws of conservation of energy and momentum provide a way to predict and describe the movement of objects (Physics: 9/12-2), radiation and convection currents (6-4a-e), energy and matter have multiple forms and can be changed from one form to another (3-1a-i), visible light is a small band within a very broad electromagnetic spectrum (7-6a-g), light has a source and travels in a direction (3-2), sound is made by vibrating objects and can be described by its pitch and volume (2-1g). Chemistry: Structure of matter: elements (8-3, 8-7), the periodic table displays the elements in increasing atomic number (Chemistry: 9/12-1a-d), elements and their combinations account for all the varied types of matter in the world (5-1a-i), chemical reactions are processes in which atoms are rearranged into different combinations of molecules (8-5a-e), density and buoyancy (8-8a-d). Investigation and Experimentation Students will ask meaningful questions and conduct careful investigations addressing the content of the above Physical Science standards. 	<p>This course, along with Physical Science IA, can fulfill the Alternative Education’s physical science requirement for the high school diploma. Note that some exploratory activities are used, but lack of facilities that conform to state safety guidelines for laboratories precludes many laboratory activities.</p> <p>*Open entry/open exit</p>
<p>Methods of Study</p>	<p>Evaluation of Performance Standards</p>
<ol style="list-style-type: none"> Students will complete all activities assigned. Students will participate in discussion with other class members and/or teacher. 	<ol style="list-style-type: none"> Students will complete all assignments with a minimum of 70% accuracy. The supervising teacher will be satisfied with the quality of the student’s work. The student must receive a minimum score of 70% on a teacher assigned final evaluation.

PHYSICAL SCIENCE IIIB

Course Outline: 3356

I. Textbook Assignment Options:

- A. *Science Explorer: Physical Science*, Part II (5.0 credits)
- Read: Chapters 12-22.
 - Complete: All “Section Review” exercises.
 - Complete: All “Reviewing Content” and “Checking Concepts” sections.
 - Complete one of the Extension Activities listed below.
- B. *Holt Science and Technology: Physical Science*, Part II (5.0 credits)
- Read: Units 5-7.
 - Complete: All “Lesson Reviews.”
 - Complete: All “Chapter Reviews.”
 - Complete one of the Extension Activities listed below.
- C. *Concepts and Challenges: Physical Science*, Part II (5.0 Credits)
- Read: Chapters 12-21.
 - Complete: Checking Concepts, Thinking Critically and Interpreting Visuals (if given) at the end of each lesson.
 - Complete: The Chapter Challenges at the end of each chapter
 - Key Term Challenges
 - Content Challenges
 - Concept Challenges
 - Complete one of the Extension Activities listed below.

II. Extension Activity Options:

1. Using the Internet, and the search term “how stuff works rainbows,” conduct research on how rainbows are formed. Write a 4-paragraph essay based upon your research, including a graphic depicting how light and moisture create the rainbow. You can either import a photo from the Internet, or draw one of your own. Use Writing Rubric Exp. III.
2. Complete a PowerPoint presentation of at least 10 slides showing at least two types of bridges and how they work. If you use “bridge building” as a search term, you can find many resources about bridges on the Internet.
3. Research how magnets work. If you use the Internet, use the search term “Canada science museum magnets.” Create at least a 10-slide PowerPoint presentation or write a 4-paragraph essay based upon your research of two different types of magnets. Use Writing Rubric Exp. III.
4. *Concepts and Challenges* Textbook: Complete 2 Web Info Searches from Chapters 12-21.
5. Teacher generated activity, approved by the site administrator.

III. Evaluation

- See your teacher for a unit test.
- All Writing assignments must meet the proficient level of the rubric provided by the teacher.
- All textbook work must meet 70% accuracy level for a “C” grade.