Physical Science
Course Overview and Syllabus

Course Number: SC3208 IC  Grade level: 7–9
Prerequisite Courses: None  Credits: 1.0

Course Description
This full-year course focuses on traditional concepts in chemistry and physics, and encourages exploration of new discoveries in this field of science. The course includes an overview of scientific principles and procedures, and leads students toward a clearer understanding of matter, energy, and the physical universe. As students refine and expand their understanding of physical science, they will apply their knowledge in experiments that require them to ask questions and create hypotheses. Throughout the course, students solve problems, reason abstractly, and learn to think critically.

Course Objectives
Throughout the course, you will meet the following goals:

- Examine the periodic table and determine the properties of an element.
- Investigate the structures, types, and properties of matter.
- Learn about chemical bonds and chemical reactions.
- Explain the relationship between motion and forces.
- Recognize the interdependence of work and energy.
- Relate heat and temperature change on the macroscopic level to particle motion on the microscopic level.
- Demonstrate an understanding of waves, including sound and light.
- Analyze the connection between electricity and magnetism.

Student Expectations
This course requires the same level of commitment from you as a traditional classroom course would. Throughout the course, you are expected to spend approximately 5–7 hours per week online on the following activities:

- Interactive lessons that include a mixture of instructional videos and tasks
- Assignments in which you apply and extend learning in each lesson
• Assessments, including quizzes, tests, and cumulative exams

Communication

You are encouraged to communicate regularly with the school support staff through discussions, e-mail and online chat. We will regularly post system announcements. Instructors and academic success coaches are available during normal school hours to provide on-demand support.

Grading Policy

You will be graded on the work you do online and the work you submit electronically to your teacher. The weighting for each category of graded activity is listed below.

<table>
<thead>
<tr>
<th>Grading Category</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Quiz</td>
<td>20%</td>
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<tr>
<td>Test</td>
<td>30%</td>
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<tr>
<td>Exam</td>
<td>20%</td>
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<tr>
<td>Assignment</td>
<td>10%</td>
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<td>Lab</td>
<td>10%</td>
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<tr>
<td>Additional</td>
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<tr>
<td>Project</td>
<td>10%</td>
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Scope and Sequence

When you log into the course management system, you can view the entire course map—an interactive scope and sequence of all topics you will study. The units of study are summarized below:

Unit 1: Matter
Unit 2: Atoms, Elements, and the Periodic Table
Unit 3: Bonding
Unit 4: Chemical Reactions
Unit 5: Solutions and Other Mixtures
Unit 6: Motion and Forces

Unit 7: Work and Energy
Unit 8: Temperature and Heat
Unit 9: Waves and Sound
Unit 10: Light
Unit 11: Electricity and Magnetism