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**Course Name: Integrated Physics and Chemistry (IPC)****School Year: 2021 - 2022****Course Purpose and Relevance:**

In Integrated Physics and Chemistry, students conduct laboratory and field investigations, use scientific practices during investigation, and make informed decisions using critical thinking and scientific problem solving. This course integrates the disciplines of physics and chemistry in the following topics: force, motion, energy, and matter

**Overview of Student Outcomes:**

- The student, for at least 40% of instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices
- The student uses scientific practices during laboratory and field investigations.
- The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions.
- The student knows concepts of force and motion evident in everyday life.
- The student recognizes multiple forms of energy and knows the impact of energy transfer and energy conservation in everyday life.
- The student knows that relationships exist between the structure and properties of matter.
- The student knows that changes in matter affect everyday life.

**Available Support for Student Learning:**

Refer to the teacher's Course Syllabus for resources and course specific opportunities.

Student textbook and/or digital version are available through the CCISD Student Portal.

**Link to Course TEKS on State website:**

<http://ritter.tea.state.tx.us/rules/tac/chapter112/ch112c.html#112.33>

<b>Year-At-A-Glance 2021-2022</b>	<b>Department</b>	Science	<b>PEIMS Code</b>	
	<b>Subject Area</b>	IPC	<b>Grade Level</b>	9-12

Area	1 <sup>st</sup> Nine Weeks	2 <sup>nd</sup> Nine Weeks
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	August	September	October	November	December
Week 1		<b>Matter and Its Properties</b> Phases of Matter	<b>Solutions</b> Water as a Solvent Properties of Solutions  9 Weeks Exams	<b>Chemical Properties and Changes</b> Physical Chemical Behavior of Elements	<b>Reactions</b> Reactions and Energy Changes  Review
Week 2		<b>Matter and Its Properties</b> Properties of Matter	<b>Solutions</b> Solubility	<b>Chemical Properties and Changes</b> Physical Chemical Behavior of Elements	<b>Semester Exams</b>
Week 3	<b>Safety &amp; Sci. Practices</b> Safety Accidents	<b>Matter and Its Properties</b> Properties of Matter	<b>Chemical Properties and Changes</b> Review Atom Structure and Chem. Changes	<b>Reactions</b> Cons. Of Mass	<b>Winter Holidays</b>
Week 4	<b>Safety &amp; Sci. Practices</b> Scientific Skills	<b>Solutions</b> Water as a Solvent Properties of Solutions	<b>Chemical Properties and Changes</b> Physical Chemical Behavior of Elements	<b>Thanksgiving Break</b>	<b>Winter Holidays</b>
Week 5	<b>Matter and Its Properties</b> Phases of Matter <b>Safety &amp; Sci. Practices</b> Scientific Skills			<b>Reactions</b> Reactions and Energy Changes	

Week is based on the month that the first day of the week occurs.

<b>Year-At-A-Glance</b>	<b>Department</b>	Science	<b>PEIMS Code</b>	03060800
	<b>Subject Area</b>	IPC	<b>Grade Level</b>	9-12

3 <sup>rd</sup> Nine Weeks			4 <sup>th</sup> Nine Weeks		
	January	February	March	April	May
<b>Week 1</b>	Semester Exam Data Analysis	<b>Application of Forces</b> Force, Mass, Acceleration	<b>Energy</b> Heat Transfer	<b>Applications of Electrical Charges</b> Electromagnet Generators	<b>Waves</b> Reflection/Absorption
<b>Week 2</b>	<b>Motion</b> Speed, Velocity, and Acceleration	<b>Application of Forces</b> Momentum	<b>Renewable and Nonrenewable Energy</b> Energy Resources and Applications	<b>Applications of Electrical Charges</b> Circuits	<b>Waves</b> Refraction Diffraction Interference
<b>Week 3</b>	<b>Motion</b> Speed, Velocity, and Acceleration	<b>Energy</b> Energy	<b>Spring Break</b>	<b>Applications of Electrical Charges</b> Circuits	<b>Review</b>
<b>Week 4</b>	<b>Motion</b> Speed, Velocity, and Acceleration	<b>Energy</b> Energy Heat Transfer	<b>Applications of Electrical Charges</b> Basics of Electricity	<b>Waves</b> Wave Characteristics	<b>Semester Exam</b>
<b>Week 5</b>	<b>Application of Forces</b> Net Force in Motion		<b>Applications of Electrical Charges</b> Basics Electricity		