

Semester 1 Overview 2022

11 Physics

Term	Topic	Assessment
1	<p>Unit 1: Thermal, nuclear and electrical physics</p> <p>Students will:</p> <p>Explore the ways Physics is used to describe, explain and predict the energy transfers and transformations that are pivotal to modern industrial societies. An understanding of heating processes, nuclear reactions and electricity is essential to appreciate how global energy needs are met. Students investigate heating processes, apply the nuclear model of the atom to investigate radioactivity, and learn how nuclear reactions convert mass into energy. They examine the movement of electrical charge in circuits and use this to analyse and design electrical circuits.</p>	<p>FIA1 – Data Test</p> <p>Due – Week 8</p>
		<p>FIA2 – Student Experimental Investigation</p> <p>Due – Week 16 (Term 1 week 6)</p>
2	<p>Unit 2: Linear motion and waves</p> <p>Students will:</p> <p>Develop an appreciation of how an understanding of motion and waves can be used to describe, explain and predict a wide range of phenomena. Students describe linear motion in terms of displacement, velocity, acceleration and time data, and examine the relationships between force, momentum and energy for interactions in one dimension. Students also investigate common wave phenomena, using waves on springs, sound waves and consideration of seismic waves. They compare the behaviour of these waves with the behaviour of light, leading to an explanation of light phenomena, including constructive and destructive interference, and diffraction, in terms of a wave model.</p>	<p><i>FIA 3 will be assessed in Term 3</i></p>