

Trilogy: Physics Overview—GCSE



	Year 10		Year 11	
	<p>Students will be given a variety of assessments each term to track their progress in literacy (RLITs), practical skills (RPs), application of knowledge through context questions (RCQs) and subject knowledge (EUTs).</p>			
	<p>In June students will be given an exam that assesses skills, subject knowledge and application of content covered in year 9 as well as year 10.</p> <p>In addition, in January students will be given a mid-year exam that covers the content of the year 9 course and the Autumn term units in year 10.</p>		<p>In November and March students will be given a mock exam that assesses skills' subject knowledge and application of content covered in years 9 & 10 as well as year 11. The first mock exam is used to inform predicted grades for the summer.</p>	
Term	Units	Assessments	Units	Assessments
Autumn	<p>10.1 & 10.2 – Wave Properties and Electromagnetic Waves</p> <p>Students investigate different kinds of waves, including light and sound. They take measurements of the wavelength and frequency of water waves and waves along strings and learn how to calculate the speed of waves. They study the dangers and uses of some electromagnetic waves in more depth, including X-rays and microwaves.</p>	<p>End of Unit test</p> <p>Literacy Task</p> <p>RP: Speed of Waves</p> <p>RP: Infra-red radiation</p>	<p>11.1 – Electric Circuits</p> <p>Students investigate what electricity is and how electrical circuits work.</p> <p>They learn how to measure and calculate values for current, potential difference and resistance.</p>	<p>End of Unit test</p> <p>RP: The resistance of a wire</p> <p>RP: Characteristics of electrical components</p>
			<p>11.2 – Electricity in the Home</p> <p>Students learn how the National Grid supplies homes with electricity. They investigate alternating and direct current and learn how to calculate the energy use and efficiency of electrical appliances such as kettles and toasters</p>	<p>Context Questions</p>

Spring	<p>10.3 – Conservation & Dissipation of Energy</p> <p><i>Students discover how energy comes in many different stores. They investigate one of the big ideas of physics, that energy is never created or destroyed. They also learn how to calculate how much energy is needed to stretch an elastic band, to get a car moving, and to climb a flight of stairs.</i></p>	<p>End of Unit test</p> <p>Context Questions</p>	<p>11.3 – Electromagnetism</p> <p>Students investigate the magnetic effects of bar magnets and electrical circuits. Students learn how generators and motors work.</p>	<p>End of Unit test</p> <p>Literacy Task</p>
	<p>10.4 – Radioactivity</p> <p>Students learn about the discovery of the nucleus and the structure of the atom. They investigate the different kinds of radiation and learn about the uses and effects of radioactive materials</p>	<p>End of Unit test</p> <p>Literacy Task</p>	<p>11.4,5 & 6 – Forces in Balance, Motion and Forces and Motion</p> <p>Students revisit work undertaken in year 9 and build upon this by investigating acceleration and momentum. They learn about the effects of pressure on different surfaces and learn how to use Newton's laws of motion.</p>	<p>End of Unit test</p> <p>RP: Extension of a Spring</p> <p>RP: Force and Acceleration</p>
Summer	<p>10.5 – Energy Transfer by Heating</p> <p>Students learn how energy is transferred by conduction and they apply their knowledge to practical applications such as insulating buildings, thermos flasks and warm clothing</p>	<p>End of Unit test</p> <p>RP: Specific Heat</p> <p>Capacity Literacy Task</p>	<p>Revision and exam practice</p>	
	<p>10.6 – Molecules & Matter</p> <p>Students investigate the nature of matter. They conduct experiments to find out how matter changes state and how much energy it takes to change the temperature of different kinds of materials.</p>	<p>End of Unit test</p> <p>RP: Calculating Density</p> <p>Context Questions</p>		