

**Year 9  
Science Learning Programme\***

TERM	TERM DATES	AREA OF SCIENCE	TOPICS
Spring	<b>Spring Term 1</b>  <b>Starts:</b> Saturday 15 January 2022 <b>Ends:</b> Saturday 12 February 2022 <b>Total:</b> five sessions	Biology	<ul style="list-style-type: none"> <li>Understand that changes in the environment may lead to organisms being less well adapted to compete and successfully reproduce which may lead to extinction</li> <li>The role of enzymes as a biological catalyst and the factors affecting enzymatic reactions</li> <li>Describe the structure and function of the nervous system including the purpose of reflex actions</li> <li>Explain what homeostasis is and relate this to the endocrine and nervous systems</li> </ul>
	<b>Spring Term 2</b>  <b>Starts:</b> Saturday 26 February 2022 <b>Ends:</b> Saturday 26 March 2022 <b>Total:</b> five sessions	Chemistry	<ul style="list-style-type: none"> <li>Identify how elements are arranged in the periodic table in relation to their atomic structure and arrangement of outer electrons</li> <li>Identify and explain the factors affecting a chemical reaction such as varying temperature or concentration, changing the surface area or adding a catalyst</li> <li>State the products of crude oil and explain how crude oil can be separated by fractional distillation</li> <li>State and explain the evidence for the composition and evolution of the Earth's atmosphere as well as the human causes of climate change</li> </ul>
Summer	<b>Summer Term 1</b>  <b>Starts:</b> Saturday 23 April 2022 <b>Ends:</b> Saturday 21 May 2022 <b>Total:</b> five sessions	Physics	<ul style="list-style-type: none"> <li>Calculate the energy efficiency of different devices and compare renewable and non-renewable sources of energy</li> <li>Calculate work done as force x distance moved as well as power as the rate of energy transfer</li> <li>Interpret graphs of distance, time and speed and calculate braking distances on road</li> <li>Calculate energy changes using specific heat capacity and specific latent heat</li> </ul>
	<b>Summer Term 2</b>  <b>Starts:</b> Saturday 11 June 2022 <b>Ends:</b> Saturday 9 July 2022 <b>Total:</b> five sessions	Examination Practice	<ul style="list-style-type: none"> <li>Read and understand questions across a range of topics</li> <li>Identify key words and command words from exam questions</li> <li>Learn and practice how to structure a full mark answer</li> </ul>

**\*Topics, dates, and locations are subject to change without prior notice. Topics are intended for guidance only.**