

Year 10

All numbers refer to specification points

Timing	Unit Title	Key Question(s)	Knowledge	Assessing understanding
Autumn	<i>tissues and organs</i>	How are organisms organised and a study of non communicable diseases	<p>2.3.1 Plant tissues 2.3.2 Plant organ system 2.2.2-2.2.4 the heart and blood 2.2.4 Coronary heart disease: a non-communicable disease 2.2.5 Health issues 2.2.6 The effect of lifestyle on some non-communicable diseases 2.2.7 Cancer</p> <p>-----</p>	<p>How understanding is assessed</p> <p>Students will be assessed on their ability to:</p> <ul style="list-style-type: none"> Recall the knowledge covered Interpret graphical and experimental data, Make connections between different areas of understanding, Explain the Biological processes covered. <p>Assessment will take the form of written questions in a test.</p> <p>Skills Graphical interpretation Making connections Explanations Description Scientific literacy and development of use of key terminology Graph drawing Data analysis.</p>
Spring	4.3 Infection and response	How can diseases be caught, treated, avoided and studied?	<p>4.3.1.1 Communicable (infectious) diseases 4.3.1.2 Viral diseases 4.3.1.3 Bacterial diseases 4.3.1.4 Fungal diseases 4.3.1.5 Protist diseases 4.3.1.6 Human defence systems</p>	<p>How understanding is assessed</p> <p>Students will be assessed on their ability to:</p> <ul style="list-style-type: none"> Recall the knowledge covered Interpret graphical and experimental data,

			<p>4.3.1.7 Vaccination 4.3.1.8 Antibiotics and painkillers 4.3.1.9 Discovery and development of drugs 4.3.2.1 Producing monoclonal antibodies 4.3.2.2 Uses of monoclonal antibodies 4.3.3 Plant disease (biology only)</p>	<ul style="list-style-type: none"> • Make connections between different areas of understanding, explain the Biological processes covered. <p>Assessment will take the form of written questions in a test.</p> <p>Students will also be assessed on their ability to effectively carry out the following : <u>Required practical 2</u> : investigate the effect of antiseptics or antibiotics on bacterial growth using agar plates and measuring zones of inhibition.</p> <p>Skills Graphical interpretation Making connections Explanations Description Scientific literacy Planning and carrying out an investigation Graph drawing Data analysis.</p>
Summer	2.2.1 The human digestive system	How is our food digested?	<ul style="list-style-type: none"> • The structure and function of enzymes • Where are digestive enzymes produced and where is their action • The fate of the products of digestion • The formation and function of bile • Carrying out rate calculations for chemical reactions 	<p>How understanding is assessed Describe and explain the roles of enzymes, Students will be assessed on their ability to: Relate knowledge of enzymes to metabolism Describe the nature of enzyme molecules and relate their activity to temperature and pH changes Carry out rate calculations for chemical reaction</p> <p>Required practical activity 4 : use qualitative reagents to test for a range of carbohydrates, lipids and proteins</p>

				<p>Required practical 5 : investigate the effect of pH on the rate of reaction of amylase enzyme</p> <p>Skills Graphical interpretation Making connections Explanations Description Scientific literacy Planning and carrying out an investigation Graph drawing Data analysis.</p>
Summer	4.7 Ecology	How are complex communities maintained?	<p>4.7.1 Adaptations, interdependence and competition</p> <p>4.7.2 Organisation of an ecosystem</p> <p>4.7.3 Biodiversity and the effect of human interaction on ecosystems</p> <p>4.7.4 Trophic levels in an ecosystem (biology only)</p> <p>4.7.5 Food production (biology only)</p>	<p>How understanding is assessed</p> <p>Students will be assessed on their ability to:</p> <ul style="list-style-type: none"> ● Recall the knowledge covered ● Interpret graphical and experimental data, ● Make connections between different areas of understanding, explain the Biological processes covered. <p>Assessment will take the form of written questions in a test.</p> <p>Students will also be assessed on their ability to effectively carry out the following :</p> <p><u>Required practical 9</u> : measure the population size of a common species in a habitat. Use sampling techniques to investigate the effect of a factor on the distribution of this species</p> <p><u>Required practical 10</u>: the effect of temperature on the rate of decay of fresh milk by measuring pH change</p> <p>Skills</p>

				<p>Graphical interpretation Making connections Explanations Description Scientific literacy Planning and carrying out an investigation Graph drawing Data analysis.</p>
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