

Curriculum Overview – Year 9 Science

Year 9 Responsive Curriculum

Unit Title	Learning	How can parents best support?
Health and disease	The students will be studying; <ul style="list-style-type: none"> • Good and ill health (factors affecting health and disease) • Disease (communicable and non communicable) • Antibiotics and resistance • Investigating antimicrobials 	Encourage the completion of weekly homework quizzes Engage in scientific discussions Use the knowledge organiser to learn the meanings of essential keywords
Changes within an organism	Students will learn; <ul style="list-style-type: none"> • That growth is caused by the multiplication of cells The lifecycles of plant and animals cells and the importance of their organelles at different stages of the cycle	Encourage the completion of weekly homework quizzes Engage in scientific discussions Use the knowledge organiser to learn the meanings of essential keywords
Properties	Students will learn; <ul style="list-style-type: none"> • The properties of composite materials • How to classify materials based on their properties and melting points 	Encourage the completion of weekly homework quizzes Engage in scientific discussions Use the knowledge organiser to learn the meanings of essential keywords
Designing materials	Students will learn; <ul style="list-style-type: none"> • That polymers are long chains of repeating units and how their properties change based on their arrangement 	Encourage the completion of weekly homework quizzes Engage in scientific discussions Use the knowledge organiser to learn the meanings of essential keywords
Forces and motion	Students will learn, <ul style="list-style-type: none"> • How to describe forces and how they effect speed, direction and shape. 	Encourage the completion of weekly homework quizzes Engage in scientific discussions Use the knowledge organiser to learn the meanings of essential keywords

	<ul style="list-style-type: none"> • How to calculate balanced, unbalanced and resultant forces. • To investigate the uses of friction • Energy stores and transfers. • How to use Sankey diagrams to show efficiency. • The cost, use and fuel bills. 	
Reproduction	<p>Students will learn;</p> <ul style="list-style-type: none"> • The structures and functions of the female and male reproductive systems • The process of the menstrual cycle, fertilisation and foetal development • The causation and prevention of sexually transmitted infections • The differences between sexual and asexual reproduction • The processes involved in plant reproduction 	<p>Encourage the completion of weekly homework quizzes</p> <p>Engage in scientific discussions</p> <p>Use the knowledge organiser to learn the meanings of essential keywords</p>
Solubility	<p>Students will learn;</p> <ul style="list-style-type: none"> • The factors that affect the solubility of substances and how to draw and interpret solubility graphs 	<p>Encourage the completion of weekly homework quizzes</p> <p>Engage in scientific discussions</p> <p>Use the knowledge organiser to learn the meanings of essential keywords</p>
Chemical changes	<p>Students will learn;</p> <ul style="list-style-type: none"> • The differences between physical and chemical reactions 	<p>Encourage the completion of weekly homework quizzes</p> <p>Engage in scientific discussions</p> <p>Use the knowledge organiser to learn the meanings of essential keywords</p>
Heating and cooling	<p>Students will learn;</p> <ul style="list-style-type: none"> • The law of conservation of energy • The definition of a conductor and insulator, giving examples • What is meant by thermal store of energy • How to define and calculate the specific heat capacity 	<p>Encourage the completion of weekly homework quizzes</p> <p>Engage in scientific discussions</p> <p>Use the knowledge organiser to learn the meanings of essential keywords</p>

Interdependence	<p>Students will learn;</p> <ul style="list-style-type: none"> • The differences between a food chain and a food web • The affects of changing environments and populations within an ecosystem • The definition of a pathogen and its transmission 	<p>Encourage the completion of weekly homework quizzes</p> <p>Engage in scientific discussions</p> <p>Use the knowledge organiser to learn the meanings of essential keywords</p>
Earth and sun	<p>Students will learn;</p> <ul style="list-style-type: none"> • The affects of seasons and the Earths temperature changes 	<p>Encourage the completion of weekly homework quizzes</p> <p>Engage in scientific discussions</p> <p>Use the knowledge organiser to learn the meanings of essential keywords</p>
Water cycle	<p>Students will learn;</p> <ul style="list-style-type: none"> • The formation of clouds • Where ground water is found and the cycle it moves through 	<p>Encourage the completion of weekly homework quizzes</p> <p>Engage in scientific discussions</p> <p>Use the knowledge organiser to learn the meanings of essential keywords</p>
Periodic table	<p>Students will learn;</p> <ul style="list-style-type: none"> • The arrangement of the periodic table and how it links to the properties of elements • The development of the periodic table. 	<p>Encourage the completion of weekly homework quizzes</p> <p>Engage in scientific discussions</p> <p>Use the knowledge organiser to learn the meanings of essential keywords</p>
Simple electricity circuits	<p>Students will learn;</p> <ul style="list-style-type: none"> • The components within a circuit, their uses and affects • The difference between series and parallel circuits • What is meant by 'current', 'voltage' and 'electrostatic force' 	<p>Encourage the completion of weekly homework quizzes</p> <p>Engage in scientific discussions</p> <p>Use the knowledge organiser to learn the meanings of essential keywords</p>
More electric circuits	<p>Students will learn;</p> <ul style="list-style-type: none"> • How to take reading of and calculate potential difference and resistance 	<p>Encourage the completion of weekly homework quizzes</p> <p>Engage in scientific discussions</p> <p>Use the knowledge organiser to learn the meanings of essential keywords</p>