



Year 8 Science Learning Journey

YEAR GROUP: 8 Learning map**SUBJECT: Science**

When?	Knowledge	Understanding	Assessment
Topic 1 B/C/P	<p>Will be able to:</p> <p>B2 Ch1 Health and Lifestyle</p> <ul style="list-style-type: none">describe the differences between a healthy and unhealthy diet, including the effect of drugs and alcohol.carry out food tests.describe the components and function of the digestion system. <p>C2 Ch1 The periodic table</p> <ul style="list-style-type: none">describe the differences between metals and non –metalsunderstand the term groups and periodsdescribe the properties in group 0, 1 and 7.	<p>Students will carry out a range of practical experiments during these topics.</p> <p>B2 Ch1 Health and Lifestyle key vocabulary:</p> <p>alcoholic balanced diet carbohydrate catalyst deficiency digestion enzyme food test hypothesis large intestine malnourishment passive smoking protease protein small intestine starvation</p> <p>C2 Ch1 The periodic table key vocabulary:</p> <p>displacement reaction Group 0 Group 1 Group 7 halogen metal noble gases non-metal period physical property reactive unreactive</p>	<p>B2 Ch1 test (40 marks) C2 Ch1 test (40 marks) P2 Ch1 test (40 marks)</p>

When?	Knowledge	Understanding	Assessment
	<p>P2 Ch1 Electricity and magnetism</p> <ul style="list-style-type: none"> describe the differences between a series and parallel circuit and explain the components of a circuit. Describe the differences between a magnet and electromagnet and explain what is happening. 	<p>P2 Ch1 Electricity and magnetism key vocabulary:</p> <p>ammeter electric charge electrical field electromagnet insulator magnetic field motor negative neutral potential difference proton relay repel resistance switch voltmeter</p>	
<p>B2Ch3 C2Ch2 P2Ch2</p>	<p>Will be able to:</p> <p>B2 Ch3 Adaptation and inheritance</p> <ul style="list-style-type: none"> describe competition and adaptation in animals. describe the inheritance of traits in animals. describe evolution and extinction in animals. 	<p>Students will carry out a range of practical experiments during these topics.</p> <p>B2 Ch3 Adaptation and inheritance key vocabulary:</p> <p>adaptation chromosome competition continuous variation discontinuous variation DNA evolution extinct fossil gene gene bank interdependence natural selection species variation</p>	<p>B2 Ch3 test (40 marks) C2 Ch2 test (40 marks) P2 Ch2 test (40 marks)</p>

When?	Knowledge	Understanding	Assessment
	<p>C2 Ch2 Separation techniques</p> <ul style="list-style-type: none"> describe the term mixtures and solutions. determine which separation technique would be used to separate different substances and be able to describe how they are carried out. <p>P2 Ch2 Energy</p> <ul style="list-style-type: none"> define energy and describe how it is different from temperature. describe how energy is transferred through convection and conduction. describe the difference between renewable and non-renewable resources. link energy, work and power. 	<p>C2 Ch2 Separation techniques key vocabulary:</p> <p>chromatography distillation filtration impure insoluble mixture pure saturated solution solubility solution solvent</p> <p>P2 Ch2 Energy key vocabulary:</p> <p>chemical store conduction convection energy energy resources equilibrium gravitational potential store infrared radiation insulator kilojoules law of conservation of energy non-renewable power rating radiation renewable temperature thermometer</p>	
<p>B2 Ch2 C2 Ch3 P2 Ch3</p>	<p>Will be able to:</p> <p>B2 Ch2 Ecosystems</p> <ul style="list-style-type: none"> describe the key biological and chemical processes in plants describe food webs and chains and how they can be disrupted. 	<p>Students will carry out a range of practical experiments during these topics.</p> <p>B2 Ch2 Ecosystems key vocabulary:</p> <p>aerobic respiration anaerobic respiration chemosynthesis consumer deficiency ecosystem fermentation</p>	<p>B2 Ch2 test (40 marks) C2 Ch3 test (40 marks) P2 Ch3 test (40 marks)</p>

When?	Knowledge	Understanding	Assessment
	<p>C2 Ch3 Metals and acids</p> <ul style="list-style-type: none"> describe and explain the reactions of metals and other substances. describe the composition of different materials. <p>P2 Ch 3 Motion and pressure</p> <ul style="list-style-type: none"> calculate speed using equations be able to draw and explain motion graphs describe the pressure in solids, liquids and gases. explain and calculate turning forces. 	<p>fertiliser food chain food web habitat interdependence photosynthesis predator prey</p> <p>C2 Ch3 Metals and acids key vocabulary: composite displace displacement reaction metal natural polymer polymer reactivity series state symbol thermite reaction</p> <p>P2 Ch 3 Motion and pressure key vocabulary: acceleration centre of gravity centre of mass distance-time graph gas pressure instantaneous speed law of moments moment pivot pressure relative motion speed</p>	
<p>C2 Ch4</p>	<p>C2 Ch4 the Earth Will be able to:</p> <ul style="list-style-type: none"> describe the formation of different rock types. Describe climate change and explain the importance of 	<p>Students will carry out a range of practical experiments during these topics.</p> <p>C2 Ch4 the Earth key vocabulary: atmosphere biological weathering carbon cycle</p>	<p>C2 Ch4 test (40 marks)</p>

When?	Knowledge	Understanding	Assessment
	recycling	climate change combustion deforestation deposition erosion global warming greenhouse effect greenhouse gas igneous physical weathering recycling respiration rock cycle sediment weathering	