


Department	SCIENCE	
Key Stage	KEY STAGE 3 , YEAR 7	
Course Level	YEAR 7 KS3 AQA 5 YEAR PROGRAMME	
Exam Board	AQA	

Dates Delivered	Unit Title	End Points	Substantive Knowledge	Disciplinary Knowledge	Assessment Method	Key Course Guides & Reading
			What will they learn about in this topic?	What subject concepts will be developed through this topic?		
Year 7 Autumn term 1	Lab skills Forces	<p>Students will be able to use basic scientific equipment such as measuring cylinders, Bunsen burners, stopwatches, and glassware, safely and confidently. They will be able to identify hazards and suggest precautions they should take to work safely.</p> <p>Pupils will be able to draw and interpret force diagrams, deciding if forces are balanced or unbalanced. Pupils will be able to make conclusions using force diagrams and predict</p>	Lab skills	<ul style="list-style-type: none"> - Identifying scientific equipment - Using basic scientific equipment safely and confidently - Recording data and observations - Drawing graphs from data - 	Pupils complete end of topic tests at the end of each unit	BBC Bitesize link KS3 Forces Forces and movement - KS3 Physics - BBC Bitesize
			Naming forces and force diagrams			
			Calculating pressure			
			Calculating speed and distance time graphs			

what will happen to objects. They will be able to calculate speed and pressure, draw distance time graphs and apply their knowledge using their calculations, for example, why do snowshoes help you to not sink through snow.

Mass vs weight

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Year 7 Autumn term 2	Systems	.Students will be able to: <ul style="list-style-type: none"> - Label plants and animal cells with their organelles - Describe the function of cell organelles - Compare plant and animal cells - Prepare microscope slides using plant tissue - Describe how animal and plant 	Plant and animal cells	<ul style="list-style-type: none"> - Using basic scientific equipment safely and confidently - Application of knowledge - Analysis of data - 	Pupils complete end of topic tests at the end of each unit	BBC Bitesize link KS3 Systems Living organisms - KS3 Biology - BBC Bitesize
			Using a microscope			
	Magnetism		Specialised cells			

- cells may be specialised
- Identify parts of the digestive system
 - Explain how food is digested with reference to enzymes

Breathing system

Digestive system

Pupils will be able to:

- Make predictions of whether magnets will attract or repel
- Describe how we can use magnets to plot the Earth's magnetic field
- Describe how to produce an electromagnet
- Carry out experiments to measure current and potential difference in series and parallel circuits
- Calculate current and potential difference in series and parallel circuits

Magnetism

Current and potential difference

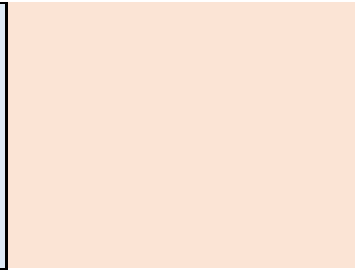
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Year 7 Spring 1	Matter	<p>Students will be able to define the following key terms; atom, particle, molecule, element, compound and mixture.</p> <p>Students will be able to use scientific diagrams to show solids, liquids, gases, elements, compounds and mixtures. They will be able to discuss limitations of these models.</p> <p>Students will be able to describe how to use separation techniques such as filtration and crystallisation</p>	<p>States of matter</p> <p>Changes of state</p> <p>Elements, compounds and mixtures</p> <p>Separation techniques</p>	<ul style="list-style-type: none"> - Identifying scientific equipment - Using basic scientific equipment safely and confidently - Recording data and observations - Drawing graphs from data - Using and interpreting scientific diagrams 	Pupils complete end of topic tests at the end of each unit	<p>BBC Bitesize link KS3 matter</p> <p>Atoms, elements and compounds - KS3 Chemistry - BBC Bitesize</p>

Pupils will be able to use the periodic table to identify elements and to use correct element symbols

Using the periodic table

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Year 7 Spring 2	Earth	Pupils will be able to: <ul style="list-style-type: none"> - Describe how igneous, sedimentary and metamorphic rocks are formed - Describe properties of igneous, sedimentary and metamorphic rocks - Describe the processes of weathering, transportation, erosion, deposition and sedimentation - Describe the composition of the 	Rock cycle	<ul style="list-style-type: none"> - Recording data and observations - Drawing graphs from data - Analysis and interpretation of data 	Pupils complete end of topic tests at the end of each unit	BBC Bitesize link KS3 The Earth and atmosphere - KS3 Chemistry - BBC Bitesize
			Earth's atmosphere			
			Climate change			

- Earth's atmosphere
- Discuss the impact of human activities of the composition of the Earth's atmosphere and the wider world



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Year 7 Summer 1	Waves	. Pupils will be able to <ul style="list-style-type: none"> - Identify the wavelength, frequency and amplitude of waves - Compare light and sound waves - Investigate wave properties including reflection and refraction 	Properties of waves Reflection and refraction Light and sound	<ul style="list-style-type: none"> - Identifying scientific equipment - Using basic scientific equipment safely and confidently - Recording data and observations - Drawing graphs from data - 	Pupils complete end of topic tests at the end of each unit	BBC Bitesize link KS3 Waves - KS3 Physics - BBC Bitesize

- Describe properties, uses and hazards of waves in the electromagnetic spectrum

Electromagnetic spectrum

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Year 7 Summer 2	Ecology	Pupils will be able to <ul style="list-style-type: none"> - Describe how different plants and animals may be adapted for different habitats - Investigate how factors in habitats affect how plants and animals are distributed - Identify herbivores and carnivores 	Habitats	<ul style="list-style-type: none"> - Identifying scientific equipment - Using basic scientific equipment safely and confidently - Recording data and observations - Drawing graphs from data - 	Pupils complete end of topic tests at the end of each unit	BBC Bitesize link KS3 Ecosystems and habitats - KS3 Biology - BBC Bitesize
			Adaptations			
			Food chains and food webs			

in food chains
- Describe and explain how changing population levels of one living things will affect others in the same food web

