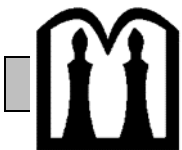
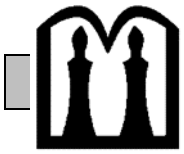


Year 7 Science Curriculum		
Autumn Term	Spring Term	Summer Term
<p>Autumn 1</p> <p><u>Introduction to Science</u></p> <ul style="list-style-type: none"> • Lab rules • Safety risks and hazards • Measurements and units • The Bunsen burner <p><u>ORGANISMS</u></p> <p>Cells</p> <ul style="list-style-type: none"> • Animal and plant cells • Exploring cells - Using the microscope • Tissues, organs and organ systems • Adaptation of cells • Prokaryotes and Eukaryotes <p>Movement</p> <ul style="list-style-type: none"> • Human skeleton • Muscles and joints • Problems with the skeletal system • Antagonistic muscles <p><u>MATTER</u></p> <p>Particle Model</p> <ul style="list-style-type: none"> • Using particles to explain matter • Understanding solids 	<p>Spring 1</p> <p><u>ORGANISMS</u></p> <p>Digestion</p> <ul style="list-style-type: none"> • Unbalanced diets • Effects of diet on health • Digestive system • Roles of digestive organs <p><u>REACTIONS</u></p> <p>Metals and non – metals</p> <ul style="list-style-type: none"> • Using metals and non-metals • Exploring reactions of metals with acids • Investigating reaction of metals with acids • Understanding displacement reactions • Understanding oxidation reactions • Investigating oxidation reactions <p><u>ELECTROMAGNETS</u></p> <p>Voltage and Resistance</p> <ul style="list-style-type: none"> • Describing electric circuits • Understanding energy in circuits • Explaining resistance • Describing series and parallel circuits 	<p>Summer 1</p> <p><u>ORGANISMS</u></p> <p>Inheritance</p> <ul style="list-style-type: none"> • Understanding the nature of genetic material • Modelling inheritance • Understanding variation <p>Reproduction</p> <ul style="list-style-type: none"> • The menstrual cycle. <p><u>REACTIONS</u></p> <p>Acids and alkalis</p> <ul style="list-style-type: none"> • Exploring acids • Exploring alkalis • Using indicators • Exploring neutralisation • Investigating neutralisation <p><u>WAVES</u></p> <p>Sound</p> <ul style="list-style-type: none"> • Exploring sound • Describing sound • Exploring sound systems • Hearing sounds • Understand how sound travels through materials



<ul style="list-style-type: none"> • Understanding liquids and gases • Exploring diffusion • Changes of state 	<ul style="list-style-type: none"> • Comparing series and parallel circuits 	<ul style="list-style-type: none"> • Learning about the reflection and absorption of sound <p>Light</p> <ul style="list-style-type: none"> • Exploring the properties of light • Exploring reflection • Exploring refraction • Seeing clearly • Exploring coloured light
<p>Autumn 2</p>	<p>Spring 2</p>	<p>Summer 2</p>
<p>Separating Mixtures</p> <ul style="list-style-type: none"> • Introducing separating mixtures • Exploring solutions • Understanding distillation • Explaining chromatography <p><u>FORCES</u></p> <p>Speed</p> <ul style="list-style-type: none"> • Describing forces • Understanding speed • Describing journeys with distance – time graphs • Exploring Journeys • Investigating motion of a car • Understanding relative motion <p>Gravity</p> <ul style="list-style-type: none"> • Understanding forces • Understanding gravitational fields • Understanding mass and weight 	<p>Current</p> <ul style="list-style-type: none"> • Investigating static charge • Explaining static charge • Understanding electric fields circuits 	<p><u>ECOSYSTEMS</u></p> <p>Interdependence</p> <ul style="list-style-type: none"> • Understanding food webs • Understanding the effects of toxins in the environment • The importance of insects and ecological balance <p><u>EARTH</u></p> <p>Earth Structure</p> <ul style="list-style-type: none"> • Understanding the structure of the Earth • Exploring igneous rock • Exploring sedimentary rock • Exploring metamorphic rocks • Understanding the rock cycle



- Understanding gravity



Year 8 Science Curriculum		
Autumn Term	Spring Term	Summer Term
<p>Autumn 1</p> <p>Plant Reproduction</p> <ul style="list-style-type: none"> • Exploring flowering plants • Exploring the anatomy of a plant • Importance of insects and ecological balance • Exploring flowering plants • Exploring fertilization • How seeds are dispersed • How fruits disperse seeds • Investigation into the effect of sugar concentration on pollen tubes <p>Periodic table</p> <ul style="list-style-type: none"> • Looking at the periodic table of elements • Exploring metals in the periodic table • Exploring non-metals in the periodic table • Investigation into metals and non-metals • Analysing wider patterns in the periodic table 	<p>Spring 1</p> <p>Breathing</p> <ul style="list-style-type: none"> • Understanding how breathing works • Measuring breathing • Exploring gas exchange in humans <p>Elements</p> <ul style="list-style-type: none"> • Combining elements • Comparing elements and compounds • Exploring polymers • Exploring ceramics and composites <p>Magnetism</p> <ul style="list-style-type: none"> • Magnetic fields • Magnetic attraction and repulsion • Explaining electromagnets • Using electromagnets • Investigating the strength of electromagnets 	<p>Summer 1</p> <p>Universe</p> <ul style="list-style-type: none"> • Describing stars and galaxies • Explaining the effects of the Earth's motion • Exploring our neighbours • Using models in science



Autumn 2	Spring 2	Summer 2
<p>Energy transfer</p> <ul style="list-style-type: none"> • Understanding energy transfer • Comparing rates of energy • Getting the electricity we need • Energy stores and transfers • Exploring energy transfers • Understanding potential and kinetic energy • Understanding elastic energy <p>Energy costs</p> <ul style="list-style-type: none"> • Looking at the cost of energy in the home • Using electricity responsibly 	<p>Respiration</p> <ul style="list-style-type: none"> • Understanding aerobic respiration • Exploring respiration in sport • Understanding anaerobic respiration • Investigating fermentation • Comparing aerobic and anaerobic respiration <p>Climate</p> <ul style="list-style-type: none"> • Understanding our atmosphere • Understanding how carbon is recycled • Exploring how humans affect the carbon cycle • Understanding global warming • Project on global warming <p>Heating and cooling</p> <ul style="list-style-type: none"> • Explaining thermal energy • Heating • How to stop energy from travelling • Energy and temperature 	<p>Revision of topics covered in year 7 and 8</p> <p>Scientific enquiry projects</p> <p>Biology Chemistry Physics</p> <p>Understanding variables Understanding Graphs Interpreting graphs Maths in science</p>



Year 9 Science Curriculum		
Autumn Term	Spring Term	Summer Term
Autumn 1	Spring 1	Summer 1
<p>Genes</p> <ul style="list-style-type: none"> • Introducing genes • Explaining natural selection • Understanding the importance of biodiversity • Explaining extinction • Understanding the nature of genetic material • Exploring the role of chromosomes • Understanding variation • Modelling inheritance <p>Wave properties</p> <ul style="list-style-type: none"> • Exploring Light • Comparing transverse and longitudinal waves • Exploring waves <p>Pressure</p> <ul style="list-style-type: none"> • Exploring pressure on a solid • Exploring pressure in a fluid • Calculating pressure • Explaining floating and sinking 	<p>Electromagnets</p> <ul style="list-style-type: none"> • Forces and fields • Using ideas about fields • Investigating electromagnetism • Using electromagnets • Investigating the strength of electromagnets <p>Types of reaction</p> <ul style="list-style-type: none"> • Exploring combustion • Exploring the use of fuels • Experiment investigating the products of combustion • Thermal decomposition • Investigating the products of thermal decomposition • Understanding thermal decomposition • Explaining changes 	<p>Begin GCSE units m Paper 1 topics</p> <p>Biology – Cell structure and transport Chemistry – Atomic structure Physics - Energy</p>
Autumn 2	Spring 2	Summer 2



<p>Work</p> <ul style="list-style-type: none">• Doing work• Making work easier <p>Chemical energy</p> <ul style="list-style-type: none">• Understanding exothermic reactions• Comparing exothermic and endothermic changes• Investigating exothermic reactions• Explaining the use of catalysts	<p>Review KS3 units Assessmen</p>	
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