



**Key Stage 3 Curriculum Map - Science**

WCA KS3- The course is based on the AQA Activate scheme. It is taught through year 7 to the first term of year 9.

Year 7 Curriculum Map		Halfterm1	Halfterm2	Halfterm3	Halfterm4	Halfterm5	Halfterm6
Science	Curriculum Content inc Knowledge, Skills & Cultural Capital	<p><b>Activate baseline tests-</b> pupils carry out the activate tests to be given a baseline level.</p> <p><b>Organisms1- 8.1 Movement and 8.2 cells.</b></p> <p><u>Knowledge-</u> Levels of organisation; The skeleton; joints and muscles; Observing cells; plant and animal cells; specialised cells; movement of substances and uni-cellular organisms.</p> <p><u>Skills-</u> Microscope use, measuring the force of a muscle.</p>	<p><b>Matter- 5.1 Particle model and 5.2 Separating mixtures</b></p> <p><u>Knowledge-</u> The particle model; states of matter; melting and freezing; boiling; more changes of state; diffusion; gas pressure; inside particles; pure substances and mixtures; solutions; solubility; filtration; evaporation and distillation and chromatography.</p> <p><u>Skills-</u> Measuring the temperature during change of state, using lab equipment including Bunsen Burners to separate mixtures.</p>	<p><b>Forces1- 1.1 Speed and 1.2 Gravity</b></p> <p><u>Knowledge-</u> Introduction to forces; balanced and unbalanced; speed; distance-time graphs and gravity.</p> <p><u>Skills-</u> Mathematical use of formula and rearrangement. Using and drawing graphs. Experimental- recognising forces and directions of interaction.</p> <p><b>Genes1- 10.1 Variation and 10.2 Human reproduction</b></p> <p><u>Knowledge-</u> Variation; Continuous and discontinuous; adapting to change; adolescence; reproductive systems; fertilisation and implantation; development of a fetus and the menstrual cycle.</p> <p><u>Skills-</u> Measuring and graphing the occurrence of continuous and discontinuous variation.</p>	<p><b>Waves1- 4.1 Sound and 4.2 Light</b></p> <p><u>Knowledge-</u> Sound waves and speed; loudness and amplitude; frequency and pitch; the ear and hearing; light; reflection; refraction; the eye and vision and colour.</p> <p><u>Skills-</u> Interpreting CRO images, using light boxes to measure reflection and refraction.</p>	<p><b>Energy1- 3.1 Energy costs and 3.2 Energy transfer</b></p> <p><u>Knowledge-</u> Food and fuels; energy resources; energy and power; energy adds up and energy dissipation.</p> <p><u>Skills-</u> Mathematically- using percentages. Practically- Use of Bunsen burner, making observations.</p> <p><b>Revision</b> Two weeks of revision for end of year test</p>	<p><b>End of year test</b></p> <p><b>Energy1- 3.1 Energy costs and 3.2 Energy transfer- Complete</b></p> <p><b>Earth1- 7.1 Earth structure and 7.2 Universe</b></p> <p><u>Knowledge-</u> The structure of the Earth; sedimentary rocks; igneous and metamorphic rocks; the rock cycle; ceramics; the night sky; the solar system; the Earth and the moon and changing ideas.</p> <p><u>Skills</u> Observational skills</p>
	Assessment	Baseline test Organisms test	Matter test	Forces test	Matter test		End of year test Energy test Earth test
	Outside of the Curriculum						

Year 8 Curriculum Map		Halfterm1	Halfterm2	Halfterm3	Halfterm4	Halfterm5	Halfterm6
Department	Curriculum Content inc Knowledge, Skills & Cultural Capital	<p><b>Electromagnets1- 2.1 Potential difference and resistance and 2.2 Current</b></p> <p><u>Knowledge-</u> Potential difference; resistance; series and parallel circuits; current and charging up</p> <p><u>Skills-</u> Connect a circuit and use to measure p.d and current.</p>	<p><b>Ecosystems1- 9.1 Interdependence and 9.2 Plant reproduction- Continued</b></p> <p><b>Reactions1- 6.1 Acids and alkalis and 6.2 Metals and non-metals</b></p> <p><u>Knowledge-</u> Chemical reactions; acids and alkalis; indicators and pH; acid strength; neutralisation;</p>	<p><b>Forces2- 1.3 Contact forces and 1.4 Pressure</b></p> <p><u>Knowledge-</u> Friction and drag; squashing and stretching; turning forces; pressure in gases; pressure in liquids and pressure in solids.</p> <p><u>Skills-</u> Mathematically- using and manipulating an equation. Experimentally- A full investigation into speed of</p>	<p><b>Organisms- 8.3 Breathing and 8.4 Digestion</b></p> <p><u>Knowledge-</u> Gas exchange; breathing; drugs; alcohol; smoking; nutrients; food tests; unhealthy diet; digestive system and bacteria and enzymes in digestion.</p> <p><u>Skills-</u> Make qualitative assessments using food tests.</p>	<p><b>Genes2- 10.3 Evolution and 10.4 inheritance</b></p> <p><u>Knowledge-</u> Natural selection; Charles Darwin; extinction; preserving biodiversity; inheritance; DNA; genetics and genetic modification.</p> <p><u>Skills-</u> Analysing and graphing data</p>	<p><b>Earth2- 7.3 Climate and 7.4 Earth resources- Continued</b></p> <p><b>Energy2- 3.3 Work and 3.4 Heating and cooling</b></p> <p><u>Knowledge-</u> Work, energy and machines; energy and temperature; energy transfer: particles; energy transfer: radiation and insulation.</p>



6 hrs per fortnight		<p><b>Ecosystems1- 9.1 Interdependence and 9.2 Plant reproduction</b></p> <p><u>Knowledge</u>- Food chains and webs; disruption to food chains and webs; ecosystems; competition; flowers and pollination; fertilisation and germination and seed dispersal.</p> <p><u>Skills</u>- flower dissection, investigation of germination.</p>	<p>making salts; more about elements; chemical reactions of metals and non-metals; metals and acids; metals and oxygen; metals and water and metal displacement reactions.</p> <p><u>Skills</u>- Carry out test tube reactions</p>	<p>parachute drop with different area parachutes.</p> <p><b>Matter2- 5.3 Elements and 5.4 Periodic table</b></p> <p><u>Knowledge</u> Elements; atoms; compounds; chemical formulae; polymers; the periodic table; the elements of group 0, 1 and 7.</p> <p><u>Skills</u> Manipulation of test tube reactions.</p>		<p><b>Earth2- 7.3 Climate and 7.4 Earth resources</b></p> <p><u>Knowledge</u>- Global warming; the carbon cycle; climate change; extracting metals and recycling.</p> <p><u>Skills</u>- Analysing and critiquing data.</p>	<p>Skills- Use of Bunsen burners, observing reactions, describing unobservable particles.</p>
	Assessment	Electromagnets test	Ecosystems and reactions tests	Forces and matter tests	Organisms test	Genes test	End of year test Earth test Energy test
	Outside of the Curriculum						

Year 9 Curriculum Map		Halfterm1	Halfterm2
6 hrs per fortnight	Curriculum Content inc Knowledge, Skills & Cultural Capital	<p><b>Electricity- 2.1 Potential difference and resistance and 2.2 Current</b></p> <p><u>Knowledge</u>- Potential difference; resistance; series and parallel circuits; current and charging up</p> <p><u>Skills</u>- Connect a circuit and use to measure p.d and current.</p> <p><b>Electromagnets2- 2.3 Magnetism and 2.4 Electromagnets</b></p> <p><u>Knowledge</u>- Magnets and magnetic fields; electromagnets and using electromagnets.</p> <p><u>Skills</u>- Investigate the variables that effect the strength of an electromagnet.</p>	<p><b>Reactions2- 6.3 Types of reaction and 6.4 Chemical energy</b></p> <p><u>Knowledge</u> Atoms in chemical reactions, combustion, thermal decomposition, conservation of mass, exothermic and endothermic, energy level diagrams and bond energies.</p> <p><u>Skills</u>- Control reactions that involve heating, use quantitative techniques in Chemistry.</p> <p><b>Waves2- 4.3 Wave effects and 4.4 Wave properties</b></p> <p><u>Knowledge</u> Sound waves, water waves and energy; radiation and energy and modelling waves.</p> <p><u>Skills</u>- Research</p>
	Assessment	Electricity test and electromagnets test	Reactions and waves test
	Outside of the Curriculum		

