

ASHTON COMMUNITY SCIENCE COLLEGE: SCIENCE CURRICULUM

Year 7						
	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Knowledge	<p>Introduction to Science Skills</p> <p><u>Biology: Cells</u></p> <p>Q What are we made of?</p> <p><u>Biology: Human Reproduction</u></p> <p>Q Where does life begin?</p>	<p><u>Biology: Plant Reproduction</u></p> <p>Q Where does life begin?</p> <p>BIO TEST 1</p> <p><u>Physics: Sound</u></p> <p>Q How are we able to hear so many different notes being played on a musical instrument?</p> <p><u>Physics: Light</u></p> <p>Q Why is light essential for viewing the world?</p> <p>PHYS TEST 1</p>	<p><u>Chemistry: Particle Model</u></p> <p>How does the arrangement of the particles affect the properties of the substance?</p> <p><u>Chemistry: Elements and Compounds</u></p> <p>Q Everything in the world is made from tiny particles called atoms. But how can these atoms combine to form different substances?</p> <p><u>Chemistry: Separating Mixtures</u></p> <p>Q How can you separate this mixture?</p> <p>CHEM TEST 1</p>	<p><u>Physics: Voltage, Current and Resistance</u></p> <p>Q What do you know about the equation: $\text{current} = \text{voltage} \div \text{resistance}$?</p> <p><u>Physics: Magnetism and Electromagnets</u></p> <p>Q Magnetism – you can't see this force or touch this force, so how do you know it's there?</p> <p>PHYS TEST 2</p>	<p><u>Biology: Breathing</u></p> <p>Q How does our body keep us alive?</p> <p><u>Biology: Respiration</u></p> <p>Q Where does our energy come from?</p> <p>BIO TEST 2</p> <p><u>Chemistry: Metals</u></p> <p>Q How do metals react?</p>	<p><u>Chemistry: Earth Resources</u></p> <p>Q What useful materials do we get from the Earth?</p> <p>Q How can we protect the Earth's resources?</p> <p><u>Chemistry: Climate and Fuels</u></p> <p>Q How are humans destroying the Earth?</p> <p>CHEM TEST 2</p>
Skills/ application of knowledge	<p>Science Skills: Safety, Equipment, Using Bunsen Burners, Rounding, Averages, Percentages, Identifying Variables, Plotting Graphs, Extrapolating Data.</p> <p>Cells: Microscopes, Animal Cells, Plant Cells, Specialised Cells, Diffusion, Unicellular organisms.</p> <p>Human Reproduction: Reproductive Organs, Menstrual Cycle, Fertilisation, Foetal Development.</p>	<p>Plant Reproduction: Structure of a Flower, Methods of Pollination, Plant Fertilisation, Seed Dispersal, Biodiversity.</p> <p>Sound: Investigating Sounds, Sound Waves, Hearing Sounds, The Ear, Hearing Problems.</p> <p>Light: How Light Travels, Reflection, Refraction, Using Refraction, Sight Problems, Dispersion, Seeing Colours/</p>	<p>Particle Model: Investigating Solids, Liquids and Gases, Changing State, Floating and Sinking, Density, Gas Pressure.</p> <p>Elements and Compounds: Atoms, Elements and Compounds, Investigating Elements and Compounds, Relative Formula Mass.</p> <p>Separating Mixtures: Investigating Solubility, Filtration, Crystallisation, Distillation, Chromatography.</p>	<p>Voltage, Current and Resistance: Simple Circuits, Modelling Circuits, Current, Voltage, Series and Parallel, Investigating Potential Difference, Resistance, Investigating Resistance.</p> <p>Magnetism and Electromagnets: Magnetism, Magnetic Fields, Earth's Magnetic Fields, Electromagnets Investigation, Uses of Electromagnets.</p> <p>Breathing: Breathing System, How we Breathe, Investigating Height and Lung Volume, Breathing Measurements, Asthma, Smoking.</p>	<p>Respiration: Respiration, Aerobic and Anaerobic Respiration.</p> <p>Metals: Properties of Metals and Non-Metals, Reactions of Metals with Oxygen, Reactions of Metals with Acids, Displacement Reactions, Making Metal Salts.</p> <p>Earth Resources: Earth Structure, Sedimentary, Igneous and Metamorphic Rocks, Extracting Metals, Using Earth's Resources, Recycling.</p>	<p>Climate and Fuels: Fuels, Combustion, Pollutants, Global Warming, Acid Rain, Global Dimming, Reducing Pollutants.</p> <p>Energy Transfers: Different Types of Energy, Energy Transfers, Energy Stores, Wasted Energy, Efficiency.</p> <p>Energy Costs: Energy Resources, Alternative Energy Resources, Joule Island, Energy Usage, Electricity Bills, Energy in Food.</p>
Links to prior learning	<ul style="list-style-type: none"> KS2 Living Things and Habitats KS2 Animals, including humans 	<ul style="list-style-type: none"> KS2 Plants KS2 Living things and habitats KS2 Sound KS2 Light 	<ul style="list-style-type: none"> KS2 States of Matter KS2 Properties and changes of materials 	<ul style="list-style-type: none"> KS2 Electricity KS2 Forces and Magnets KS3 Cells 	<ul style="list-style-type: none"> KS2 Properties and Changes of materials KS2 Rocks KS3 Breathing 	<ul style="list-style-type: none"> KS2 Living things and their habitats
Assessment	Cells CAP (Animal and Plant Cells)	Biology 1 Assessment Physics 1 Assessment	Elements and Compounds CAP Chemistry 1 Assessment	Physics 2 Assessment	Biology 2 Assessment	Chemistry 2 Assessment End of Year Exams