

ASHTON COMMUNITY SCIENCE COLLEGE: SCIENCE CURRICULUM

Year 8						
	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Knowledge	<p>Science Skills Review Lessons</p> <p>Biology: Movement <i>Q How does our body move?</i></p> <p>Biology: Digestion <i>Q What happens to the food that we eat?</i></p> <p>BIO TEST 1</p> <p>Physics: Energy Transfers <i>Q If energy cannot be destroyed where does it go?</i></p>	<p>Physics: Energy Costs <i>Q How much does it cost to run a home?</i></p> <p>PHYS TEST 1</p> <p>Chemistry: Atomic Structure <i>Q Everything in the world is made from tiny particles called atoms, but what are atoms made from?</i></p> <p>Chemistry: Periodic Table <i>Q What does the position of an element on the periodic table tell you about the element?</i></p> <p>CHEM TEST 1</p>	<p>Physics: Gravity <i>Q Why would you weigh less on the Moon than the Earth?</i></p> <p>Physics: The Universe <i>How can the movement of objects in space explain life experiences for us on Earth?</i></p> <p>PHYS TEST 2</p> <p>Biology: Inheritance, Variation and Evolution <i>Q Where do our differences come from?</i> <i>Q Where does a new species come from?</i></p> <p>BIO TEST 2</p>	<p>Physics: Contact Forces <i>Q How can you make an object change speed, change shape or change direction?</i></p> <p>Physics: Speed <i>Q How do you know how fast you are travelling on a journey?</i></p> <p>Physics: Pressure <i>Q Why don't camels sink into the sand in the desert?</i></p> <p>PHYS TEST 3</p>	<p>Chemistry: Chemical Reactions <i>Q Everything in the world is made from tiny particles called atoms. What happens to these atoms when substances react together?</i></p> <p>Chemistry: Acids and Alkalis <i>Q A bee sting is acidic and a wasp sting is alkaline – or is it the other way round? How can we find out?</i></p> <p>Chemistry: Chemical Energy <i>Q What energy changes take place during a chemical reaction?</i></p> <p>CHEM TEST 2</p>	<p>Biology: Photosynthesis <i>Q Could humans survive without plants?</i></p> <p>Biology: Interdependence <i>Q Why is biodiversity important?</i></p> <p>BIO TEST 3</p> <p>Physics: Heating and Cooling <i>Q How can heat be transferred?</i></p> <p>Physics: Wave Properties and Wave Effects <i>Q What is the Electromagnetic Spectrum and why are the parts of it both useful and dangerous?</i></p> <p>PHYS TEST 4</p>
Skills/ application of knowledge	<p>Movement: The Skeleton, Muscles, Joints, Dissection, Arthritis.</p> <p>Digestion: Food Groups and Balanced Diets, The Digestive System, Enzymes, Energy in Food, Orange Juice Titration.</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> <p>Atomic Structure: Atomic Structure, Electron Configuration, History of the Atom.</p> <p>Periodic Table: Structure of the Periodic Table, History of the Periodic Table, Group 1, Group 7, Group 0.</p>	<p>Gravity: Mass vs Weight, Gravity.</p> <p>The Universe: Stars and Galaxies, The Solar System, Eclipses, Days and Nights, Seasons, Space Exploration.</p> <p>Inheritance, Variation and Evolution: Causes of Variation, Continuous and Discontinuous Variation, Natural Selection, Darwin's Finches, Extinction, Biodiversity.</p>	<p>Contact Forces: Forces, Balanced and Unbalanced Forces, Resultant Forces. Floating and Sinking, Friction, Streamlining, Stretching.</p> <p>Speed: Resultant Forces, Calculating Speed, Investigating Speed, Distance Speed Graphs.</p> <p>Pressure: Pressure, Pressure Calculations, Pressure in Fluids, Hydraulics.</p>	<p>Chemical Reactions: Chemical and Physical Changes, Combustion, Thermal Decomposition, Displacement, Conservation of Mass, Balancing Equations.</p> <p>Acids and Alkalis: Identifying Acids and Alkalis, The pH scale, Making an Indicator, Neutralisation, Applications of Neutralisation.</p> <p>Chemical Energy: Exothermic and Endothermic Reactions, Catalysts, Energy Levels.</p>	<p>Photosynthesis: Photosynthesis, Structure of the Leaf, Testing a Leaf for Starch, Rate of Photosynthesis.</p> <p>Interdependence: Food Chains, Food Webs, Factors Affecting Populations, Bioaccumulation.</p> <p>Heating and Cooling: Heat and Temperature, Conduction, Convection, Radiation, Insulation, Specific Heat Capacity.</p> <p>Wave Properties and Wave Effects: Types of Waves, Wave Calculations, The Electromagnetic Spectrum, Ultrasound.</p>
Links to prior learning	<ul style="list-style-type: none"> KS2 Animals, including humans Year 7 Cells Year 7 Respiration 	<ul style="list-style-type: none"> Year 7 Particle Model Year 7 Elements and Compounds 	<ul style="list-style-type: none"> KS2 Evolution and Inheritance KS2 Living things and habitats KS2 Earth and space KS2 Forces 	<ul style="list-style-type: none"> KS2 Forces KS2 Forces and Magnets 	<ul style="list-style-type: none"> KS2 Properties and changes of materials Year 7 Metals 	<ul style="list-style-type: none"> KS2 Plants KS2 Living things and habitats KS2 Animals, including humans
Assessment	Biology 1 Assessment Digestion CAP	Physics 1 Assessment Chemistry 1 Assessment	Physics 2 Assessment Biology 2 Assessment	Physics 3 Assessment	Chemistry 2 Assessment	Biology 3 Assessment Physics 4 Assessment End of Year Exams