

Year 7	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	<p>Biology: Movement and Cells</p> <ul style="list-style-type: none"> Levels of organisation Skeleton Movement: joints Movement: muscles Observing cells in a Microscope Plant & animal cells Specialised cells Movement of substances Unicellular organisms <p>Chemistry: Particle theory</p> <ul style="list-style-type: none"> The particle model States of matter Melting and freezing Boiling More changes of state Diffusion Gas pressure Inside particles 	<p>Biology: Human Reproduction</p> <ul style="list-style-type: none"> Adolescence Reproductive organs Fertilisation Development of a foetus The menstrual cycle <p>Chemistry: Separating Mixtures</p> <ul style="list-style-type: none"> Pure substances and mixtures Solutions Solubility Filtration Evaporation and distillation Chromatography 	<p>Chemistry: Earth and Universe</p> <ul style="list-style-type: none"> Structure of the earth Sedimentary rocks Igneous and metamorphic rocks The rock cycle Ceramics The night sky The solar system The moon <p>Chemistry: Acids and Alkalis</p> <ul style="list-style-type: none"> Acids and alkalis Indicators Neutralisation Making salts Elements Chemical reactions Metals and acids Metals and oxygen Displacement 	<p>Physics: Forces</p> <ul style="list-style-type: none"> Introduction to forces Balanced and unbalanced forces Speed Distance time graphs Gravity <p>Physics: Energy</p> <ul style="list-style-type: none"> Food and fuel Energy resources Energy and power Domestic energy Dissipation of energy 	<p>Biology: Variation</p> <ul style="list-style-type: none"> Variation Continuous and discontinuous Adapting to change <p>Physics: Electricity</p> <ul style="list-style-type: none"> Potential difference Resistance Series and parallel circuits Current Charge 	<p>Biology: Interdependence</p> <ul style="list-style-type: none"> Food chains Ecosystems Competition Flowers Pollination Fertilisation and germination Seed dispersal <p>Physics: Sound and Light</p> <ul style="list-style-type: none"> Sound waves Amplitude and frequency The ear Light Reflection Refraction The eye Colour
	Core Practical	<p>Observing cells</p> <ul style="list-style-type: none"> Microscope use Biological drawing Calculating magnification 	<p>Friction</p> <ul style="list-style-type: none"> Writing a hypothesis Planning and carrying out an experiment <p>Temperature and solubility</p> <ul style="list-style-type: none"> Recording accurate results Plotting graphs 		<p>Conservation of mass</p> <ul style="list-style-type: none"> Writing a hypothesis Planning and carrying out an experiment Recording accurate results 	<p>Circuits</p> <ul style="list-style-type: none"> Building a circuit Measuring current and potential difference
Independent Learning Link	<p>Movement and Cells</p> <p>Particle Theory</p>	<p>Human Reproduction</p> <p>Separating Techniques</p>	<p>The Earth</p> <p>The universe</p> <p>Acids and Alkalis</p>	<p>Forces</p> <p>Energy</p>	<p>Variation</p> <p>Electricity</p>	<p>Food chains</p> <p>Flowers and Pollination</p> <p>Waves</p>

Year 8	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	<p>Physics: Forces</p> <ul style="list-style-type: none"> Friction and drag Squashing and stretching Turning forces Pressure in gases Pressure in liquids Stress on solids <p>Biology : Breathing and Lifestyle</p> <ul style="list-style-type: none"> Gas exchange Breathing Drugs Alcohol Smoking 	<p>Physics: Magnets</p> <ul style="list-style-type: none"> Magnets and magnetic fields Electromagnets Using electromagnets <p>Biology: Digestive system</p> <ul style="list-style-type: none"> Nutrients Food tests Unhealthy diet Digestive system Bacteria and enzymes in digestion 	<p>Biology: Bioenergetics</p> <ul style="list-style-type: none"> Aerobic respiration Anaerobic respiration Biotechnology Photosynthesis Leaves Investigating photosynthesis Plant minerals <p>Chemistry: Periodic Table</p> <ul style="list-style-type: none"> Elements Atoms Compounds Chemical formulae Polymers The periodic table Group 1 Group 7 Group 0 	<p>Chemistry: Reactions</p> <ul style="list-style-type: none"> Atoms in chemical reactions Combustion Thermal decomposition Conservation of mass Exothermic and endothermic reactions Energy level diagrams Bond energies <p>Physics: Waves</p> <ul style="list-style-type: none"> Sound waves Water waves Energy Radiation and energy Modelling waves 	<p>Chemistry: Sustainability</p> <ul style="list-style-type: none"> Global warming The carbon cycle Climate change Extracting metals Recycling <p>Physics: Energy</p> <ul style="list-style-type: none"> Work energy and machines Energy and temperature Energy transfer conduction and convection Energy transfer radiation and insulation 	<p>Biology: Evolution, Variation and Inheritance</p> <ul style="list-style-type: none"> Natural selection Charles Darwin Extinction Preserving biodiversity Inheritance DNA genetics Genetic modification
Core Practical	<p>Hooke's law investigation</p> <ul style="list-style-type: none"> Writing a hypothesis Planning and carrying out an experiment 	<p>Electromagnets</p> <ul style="list-style-type: none"> Writing a hypothesis Planning and carrying out an experiment Recording accurate results Plotting graphs Drawing conclusions 	<p>Exercise</p> <ul style="list-style-type: none"> Writing a hypothesis Planning and carrying out an experiment Recording accurate results Plotting graphs Drawing conclusions 	<p>Reaction rate</p> <ul style="list-style-type: none"> Writing a hypothesis Planning and carrying out an experiment Recording accurate results Plotting graphs Drawing conclusions 		<p>Variation</p> <ul style="list-style-type: none"> Recording accurate results Plotting graphs
Independent Learning Link	<p>Working Safely in the lab Analysing data Forces Gas exchange and Respiration</p>	<p>Nutrition and Digestion Making observations Magnetism</p>	<p>Gas exchange and Respiration Photosynthesis Atoms, Elements and Compounds</p>	<p>Chemical reactions scientific apparatus Waves</p>	<p>Acid rain and Global warming Heat Transfer</p>	<p>Inheritance and Genetics</p>

Year 9	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	<p>Biology: Cells and transport Recap of Y7/8:</p> <ul style="list-style-type: none"> Specialised cells in animals Specialised cells in plants Microscopes Diffusion Osmosis active transport <p>Chemistry: Particles and Separation Recap of Y7/8:</p> <ul style="list-style-type: none"> Particle model Separating mixtures Filtration Chromatography Distillation Fractional distillation 	<p>Chemistry: Atoms and Periodic Table basics</p> <ul style="list-style-type: none"> Atom Elements and compounds recap Periodic table History of the atom Structure of the atom <p>Physics: Renewable and Non-renewable energy</p> <ul style="list-style-type: none"> Energy resources Energy demands Wind and water Solar and geothermal Nuclear Supply and demand 	<p>Biology: Organisation and Digestive system</p> <ul style="list-style-type: none"> Organisation Tissues Digestive system Enzymes Factors affecting rate of reaction of enzymes <p>Chemistry: Periodic Table</p> <ul style="list-style-type: none"> Electron structure and periodic Table Electron configuration Isotopes Chemical equations 	<p>Chemistry: Properties and trends of Periodic Table</p> <ul style="list-style-type: none"> Group 1 Group 7 Trends Transition elements <p>Physics: Energy Stores and transfers</p> <ul style="list-style-type: none"> Recap of Y7/8: Energy stores Conservation of energy Gravitational potential energy Kinetic energy Elastic energy Energy dissipation and Energy and power 	<p>Biology: Mass transport</p> <ul style="list-style-type: none"> Heart Heart dissection Blood and vessels Coronary heart disease Breathing Gas exchange Plant organs Transpiration <p>Chemistry: Sustainability</p> <ul style="list-style-type: none"> The earth's atmosphere Greenhouse gases Global climate change Pollutants 	<p>Physics: Waves</p> <ul style="list-style-type: none"> Waves basics Transverse and longitudinal waves Wave terminology Reflection Refraction Sound Ultrasound
Core Practical	<p>Observing cells</p> <ul style="list-style-type: none"> Microscope use Biological drawing Calculating magnification <p>Osmosis</p> <ul style="list-style-type: none"> Writing a hypothesis Planning and carrying out an experiment Recording accurate results Plotting graphs Drawing conclusions 		<p>Food tests</p> <ul style="list-style-type: none"> Recording accurate results <p>Enzymes</p> <ul style="list-style-type: none"> Writing a hypothesis Planning and carrying out an experiment Recording accurate results Plotting graphs Drawing conclusions 			<p>Reflection and refraction</p> <ul style="list-style-type: none"> Accurate drawings Reading a protractor
Independent Learning Link	<p>Movement and Cells</p> <p>Particle Theory</p> <p>Separating Techniques</p>	<p>Atoms and Elements</p> <p>Periodic Table</p> <p>Energy Resources</p>	<p>Organisation of the body</p> <p>Periodic Table</p>	<p>Group Trends</p> <p>Energy</p>	<p>Transport systems</p> <p>Earth and Atmosphere</p>	<p>Waves</p>