

B2, 1 Health and lifestyle	B2, 2 Life processes	B2, 3 Adaptation and inheritance
1.1 Nutrients <ul style="list-style-type: none"> - Name the nutrients required by the human body - Describe the components of a healthy diet - Explain the role of each nutrient in the body - Interpret nutritional information on food packaging to identify a healthy food 	2.1 Photosynthesis Key Practical <ul style="list-style-type: none"> - State where photosynthesis occurs in a plant - State the word equation for photosynthesis - Carry out an experiment to test for the presence of starch in a leaf and recall the method - Explain how the plant obtains the reactants for photosynthesis 	3.1 Competition and adaptation <ul style="list-style-type: none"> - State some resources that plants and animals compete for - Describe how organisms are adapted to their environments - Explain how adaptations help an organism survive in their environment
1.2 Food tests Key Practical <ul style="list-style-type: none"> - Describe how to test foods for starch, lipids, sugar, and protein - Describe the positive result for each food test - Use appropriate techniques to carry out a range of food tests safely - Explain why testing food is important 	2.2 Leaves (practical) <ul style="list-style-type: none"> - Describe the structure and function of the main components of a leaf - Make observations of stomata from the underside of the leaf, and record observations as a labelled diagram - Explain how the structures of the leaf make it well adapted for photosynthesis 	3.2 Natural Selection <ul style="list-style-type: none"> - State how adaptations affect survival rates - Describe the process of natural selection - Explain how natural selection leads to evolution
1.3 Digestive System <ul style="list-style-type: none"> - Describe the structure and function of the main parts of the digestive system - Describe the process of digestion - Explain how each part of the digestive system works in sequence, including adaptations of the small intestine for its function 	2.3 Aerobic respiration (practical) <ul style="list-style-type: none"> - State the word equation for aerobic respiration - Describe the process of respiration - Describe how to test for the products of aerobic respiration - Compare the process of respiration and combustion - Explain how the reactants for respiration get into the cells 	3.3 Variation <ul style="list-style-type: none"> - State what is meant by the term variation - Describe the difference between environmental and inherited variation - Suggest examples of each type of variation - Record and categorise observations of variations and present findings graphically
1.4 Enzymes in digestion Key Practical <ul style="list-style-type: none"> - Describe the role of enzymes in digestion - Record experimental data using a suitable results table and interpret results on enzymes - Explain how enzymes affect the rate of digestion 	2.4 Anaerobic respiration <ul style="list-style-type: none"> - State the word equation for anaerobic respiration - Describe the differences between aerobic and anaerobic respiration - Explain the problems with anaerobic respiration - Discuss oxygen debt 	3.4 Inheritance Key Practical <ul style="list-style-type: none"> - State what DNA is - State what is meant by a gene - Correctly follow a method to extract DNA - Describe how characteristics are inherited - Explain how characteristics are inherited through and coded for by genes
1.5 Alcohol, Smoking and Drugs <ul style="list-style-type: none"> - Describe the effect of alcohol and smoking on health and behaviour and on pregnancy - Explain how smoking causes disease - Describe the difference between recreational and medicinal drugs - Describe the effects of drugs on health and behaviour 	2.5 Food chains and webs <ul style="list-style-type: none"> - Describe what food chains and food webs show - Construct food chains for a specific ecosystem - Identify prey/predator and producer/consumer in food webs - Explain the link between food chains and energy 	
	2.6 Disruptions to food chains and webs <ul style="list-style-type: none"> - State how one population of organisms can affect another - Describe the interdependence of organisms within a food web - Describe how toxic materials can accumulate in a food web 	

C2, 1 The Periodic Table	C2, 2 Separation techniques	C2, 3 Metal reactions	C2, 4 The Earth
1.1 Metals and non-metals (practical) <ul style="list-style-type: none"> - State some common properties of metals and non-metals - Use position on the Periodic Table to suggest if an element is a metal or a non-metal - Use practical observations about materials to decide if they are metals or non-metals 	2.1 Mixtures <ul style="list-style-type: none"> - Describe particle arrangements in mixtures - Explain how to identify pure substances - Select appropriate separation techniques for different mixtures - Explain why separation techniques are suitable, in terms of the properties of constituent substances 	3.1 Metals and oxygen (practical) <ul style="list-style-type: none"> - Compare the reactions of different metals with oxygen - Write word equations for the reaction of metals with oxygen - Identify state symbols from an equation - Construct balanced equations that include state symbols 	4.1 Earth & atmosphere <ul style="list-style-type: none"> - Describe the layers of the Earth - Describe the composition of the atmosphere - Discuss how the atmosphere has changed over time
1.2 Groups and periods <ul style="list-style-type: none"> - State what a group and period are - Describe how the periodic table is organised - Describe what pattern is shown in a given property of a group or period - Use patterns to predict properties of elements 	2.2 Solutions <ul style="list-style-type: none"> - Identify a solvent, solute, and solution in a given scenario - Define the key terms solvent, solute, solution, soluble and insoluble - Use the particle model to explain dissolving - Use data to predict how much solute is dissolved in a solution or the mass of a solution 	3.2 Metals and acid (practical) <ul style="list-style-type: none"> - Compare the reactions of different metals with dilute acids - Decide which metals react more vigorously from practical observations - Describe the test for hydrogen gas - Use word equations to show what happens when metals react with different acids 	4.2 The Carbon Cycle <ul style="list-style-type: none"> - Describe the key stages of the carbon cycle - Identify which processes remove carbon dioxide from the atmosphere - Describe different stores of carbon
1.3 The elements of Group 1 (practical demo) <ul style="list-style-type: none"> - Make observations about the reactivity of Group 1 metals in water - Describe how different properties change for the elements of Group 1 - Write word equations for the reaction of Group 1 metals with water - Use patterns to predict properties of Group 1 elements - Write balanced equations for the reaction of Group 1 metals with water 	2.3 Solubility key Practical Write up <ul style="list-style-type: none"> - State what a saturated solution is - Describe the meaning of solubility - Describe how temperature affects solubility - Plan an investigation to compare solubility with temperature, considering variables - Explain why temperature affects the amount of solute dissolved in a solution 	3.3 Metal displacement reactions <ul style="list-style-type: none"> - State where different metals are found in the reactivity series - Predict if a given pair of substances will undergo displacement - Use the reactivity series to explain displacement reactions 	4.3 Climate change <ul style="list-style-type: none"> - Describe the greenhouse effect - Explain why global warming happens - Discuss some impacts of global warming - Explain ways to reduce climate change
1.4 The elements of Group 7 (practical) <ul style="list-style-type: none"> - State key features of group 7 - Use patterns to predict properties of Group 7 elements - Write word equations to represent displacement reactions - Explain displacement reactions 	2.4 Filtration and Evaporation Key Practical <ul style="list-style-type: none"> - Describe how to filter a mixture - Explain how to use evaporation to separate mixtures - Plan a method to separate a mixture of rock salt - Use particle diagrams to illustrate how filtering works 	3.4 Extracting metals (practical) <ul style="list-style-type: none"> - State where carbon is found in the reactivity series - Use the reactivity series to decide which metals can be extracted from their ores by heating with carbon - Explain why metals can be extracted using carbon, using the idea of displacement 	4.4 Energy resources <ul style="list-style-type: none"> - Describe the difference between renewable and non-renewable - Compare the advantages and disadvantages of using renewable and non-renewable

			- Describe how electricity is generated in a power station
1.5 The elements of Group 0	2.5 Chromatography Key Practical	3.5 Recycling	
<ul style="list-style-type: none"> - State properties of Group 0 elements - Describe the reactivity of Group 0 elements - Interpret data to plot a graph of atomic masses for Group 0 elements 	<ul style="list-style-type: none"> - Explain how chromatography separates mixtures - Carry out a chromatography practical - Analyse chromatograms to identify substances in mixtures - Calculate the RF value on a chromatogram 	<ul style="list-style-type: none"> - Describe how aluminium is recycled - Discuss the advantages and disadvantages of recycling - Compare how other materials are recycled with the recycling of aluminium - Explain why recycling metals reduces environmental impacts 	

P2, 1 Electricity and magnetism	P2, 2 Energy	P2, 3 Pressure
1.1 Static electricity	2.1 Energy transfers	3.1 Pressure in gases
<ul style="list-style-type: none"> Explain how objects can become charged Describe how charged objects interact Describe what is meant by an electric field 	<ul style="list-style-type: none"> Identify different forms of energy Describe simple energy transfers <p>Discuss useful and wasted energy</p>	<ul style="list-style-type: none"> Describe the factors that affect gas pressure <p>Describe how atmospheric pressure changes with height</p>
1.2 Electrical Circuits	2.2 Food and fuels Key Practical	P3.2 Pressure in liquids
<ul style="list-style-type: none"> Identify common circuit symbols Use circuit symbols correctly to draw a circuit diagram <p>- Describe what is meant by current</p>	<ul style="list-style-type: none"> Identify food and fuel as stores of energy Carry out an investigation to measure the energy in different food or fuels Complete a risk assessment identifying risks and precautions <p>- Use data gathered to compare fuels</p>	<ul style="list-style-type: none"> Describe how liquid pressure changes with depth Explain why some things float and some things sink <p>-</p>
1.3 Series Circuits Key Practical	2.3 Energy and temperature (<i>practical</i>)	P3.3 Pressure in solids
<ul style="list-style-type: none"> Describe what a series circuit is Measure current in a series circuit <p>- Describe how current varies in a series circuit</p>	<ul style="list-style-type: none"> State the difference between energy and temperature Describe what happens when you heat up solids, liquids, and gases <p>- Explain how a thermometer work in terms of expansion</p>	<ul style="list-style-type: none"> recall the units of pressure Explain why pressure depends upon surface area Calculate pressure given relevant data by using an equation <p>-</p>
1.4 Parallel Circuits Key Practical	2.4 Energy transfer: Conduction Key Practical	
<ul style="list-style-type: none"> Describe what a parallel circuit is Describe the difference between series and parallel circuits Measure current in a parallel circuit <p>- Describe how current varies in a parallel circuit</p>	<ul style="list-style-type: none"> Describe how energy is transferred by particles in conduction Discuss which materials are conductors or insulators Plan an investigation to compare different insulators <p>-</p>	-
1.5 Potential difference Key Practical	2.5 Energy transfer: Convection (<i>practical</i>)	
<ul style="list-style-type: none"> Describe what is meant by potential difference Measure the potential difference in a series and parallel circuit <p>- Compare the potential difference in a series and parallel circuit</p>	<ul style="list-style-type: none"> Describe how energy is transferred in convection Describe how convection is used in everyday appliances <p>Explain convection with reference to particles and density</p>	-
1.6 Power	2.6 Energy transfer: Radiation Key Practical	
<ul style="list-style-type: none"> explain the difference between energy and power describe the link between power, fuel use, and the cost of using domestic appliances <p>- Use equations to complete calculations</p>	<ul style="list-style-type: none"> Describe some sources of infrared radiation Explain how energy is transferred by radiation Carry out an investigation into which materials emit/absorb infrared radiation 	-
1.5 Magnets (<i>practical</i>)		

<ul style="list-style-type: none"> - State which materials are magnetic - Describe features of a magnet - Describe how magnets interact - Discuss how to induce magnetism 	-	-
1.6 Magnetic fields (<i>practical</i>)		
<ul style="list-style-type: none"> - Draw the magnetic field lines around a bar magnet - State the Earth has a magnetic field - Explain how a compass works - Describe two methods to plot a magnetic field 	-	-
1.7 Electromagnets Key Practical		
<ul style="list-style-type: none"> - Describe how to make an electromagnet - Describe how to change the strength of an electromagnet - Predict and test the effect of changes to an electromagnet - Compare and contrast permanent and electromagnets 		