

½ TERM TOPIC	TAUGHT CURRICULUM	TAUGHT SKILLS	SUMMATIVE ASSESSMENT TITLE/TYPE	ASSESSMENT CRITERIA NC Working Scientifically	LEARNED CURRICULUM
1-3	Particles (HT 1) <ul style="list-style-type: none"> <li>● Kinetic theory</li> <li>● Gas Pressure</li> <li>● Atomic properties</li> <li>● Difference between atoms, elements, compounds and mixtures</li> <li>●</li> </ul> Chemical Reactions (HT 2) <ul style="list-style-type: none"> <li>● Reversible/irreversible reactions</li> <li>● Physical change &amp; chemical change</li> <li>● Products &amp; reactants</li> <li>● Change of state</li> </ul> Acids and Alkalis (HT 3) <ul style="list-style-type: none"> <li>● Working safely</li> </ul>	<ul style="list-style-type: none"> <li>● Drawing graphs/cooling curves</li> <li>● Identifying state based on temperature</li> <li>● Calculating numbers of protons, neutrons and electrons</li> <li>● How to use symbols from the periodic table</li> </ul> Chemical reactions: <ul style="list-style-type: none"> <li>● Melting ice, using a bunsen burner and reading a thermometer</li> <li>● Exothermic and endothermic reactions eg hydrochloric acid and magnesium</li> <li>● Drawing accurate graphs</li> </ul>	End of topic test 40-50 minute written assessment covering all the topics biology, chemistry and physics studied in that half term.	<b>Scientific attitude</b> <b>Experimental skills and investigation</b> <b>Analysis and evaluation</b> <b>Measurement</b>	<i>Particles</i> <ul style="list-style-type: none"> <li>● Draw particle diagrams</li> <li>● Recall safe change names</li> <li>● Structure of the atom</li> </ul> Chemical Reactions  Learn physical changes, keywords and definitions i.e condensing, evaporating, melting and cooling, exothermic and endothermic  Acids and Alkalis: <ul style="list-style-type: none"> <li>● Identification of acids and alkalis</li> <li>● Properties and uses of acids and alkalis</li> </ul>

# Curriculum Assessment Map

Year: Year 7

Subject + Course details: Chemistry

	<ul style="list-style-type: none"> <li>pH</li> <li>Indicators</li> <li>Neutralisation</li> </ul>	<ul style="list-style-type: none"> <li>Recognition of common hazards and hazard symbols in labs</li> <li>Observation of gases as products eg fizzing/bubbling - squeaky pop test for hydrogen</li> <li>pH Scale</li> <li>Word equations</li> </ul>			<ul style="list-style-type: none"> <li>pH scale and neutralisation eg wasp and bee stings</li> </ul>
4-6	<p>Environmental chemistry (HT 4)</p> <ul style="list-style-type: none"> <li>Metals, extraction, appearance, properties and reactivity</li> <li>Locations in the periodic table</li> <li>Crude oil - extraction, separation using fractional distillation</li> <li>Plant oils - uses</li> <li>Polymers - structure, identify and uses</li> </ul> <p>Periodic Table (HT 5)</p> <ul style="list-style-type: none"> <li>Physical and chemical properties of elements</li> <li>Identify periods,</li> </ul>	<ul style="list-style-type: none"> <li>Displacement of metals practical - observe and evaluate reactivity of each sample</li> </ul> <p>Development of the periodic table - History and reasons for arrangement</p>	<p>End of topic test 40-50 minute written assessment covering all the topics biology, chemistry and physics studied in that half term.</p>	<p><b>Scientific attitude</b></p> <p><b>Experimental skills and investigation</b></p> <p><b>Analysis and evaluation</b></p> <p><b>Measurement</b></p>	<p>Extraction and separation of metals, plant oil and crude oil. Uses of polymers.</p> <p>Locations of metals and nonmetals on the periodic table. The properties of elements from group 1 the</p>

	<p>groups and the history of the periodic table i.e Mendeleev</p> <ul style="list-style-type: none"> <li>• Location of metals and non-metals</li> <li>• Identify groups 1, 7 and 0 - understand the chemical/physical properties of each group, uses, electronic configuration and reactivity</li> </ul> <p>Purity (HT 6)</p> <ul style="list-style-type: none"> <li>• What is a pure substance - difference between pure and impure</li> <li>• Mixtures, molecules, compounds definitions and examples</li> <li>• Solutions - define solute, solution, solvent and soluble</li> <li>• Diffusion - movement of gases from high concentration gradient to a low gradient and observations in</li> </ul>	<p>Identifying elements using symbols, becoming familiar with relative atomic mass and proton/atomic number</p> <p>Carry out Chromatography Distillation Filtration Evaporation</p>			<p>alkali metals and group 7 the halogens.</p> <p>Terminology to describe pure substance, i.e. element and compound. Terminology to describe mixtures, i.e. gel alloy aerosol and foam. Which separation technique can be used for a particular mixture.</p>
--	--	---	--	--	--

# Curriculum Assessment Map

Year: Year 7

Subject + Course details: Chemistry

	<p>real life</p> <ul style="list-style-type: none"><li>• Separation of mixtures - filtration, chromatography, magnetism, distillation, crystallisation</li></ul>				
--	--	--	--	--	--

½ TERM TOPIC	TAUGHT CURRICULUM	TAUGHT SKILLS	SUMMATIVE ASSESSMENT TITLE/TYPE	ASSESSMENT CRITERIA NC Working Scientifically	LEARNED CURRICULUM
1-3	<p>Energy (HT 1)</p> <ul style="list-style-type: none"> <li>● Energy store definitions</li> <li>● Fuel definition and uses</li> </ul> <p>Forces &amp; Motion (HT 2)</p> <ul style="list-style-type: none"> <li>● Balanced &amp; unbalanced forces</li> <li>● Resultant forces</li> <li>● How resultant forces affect motion</li> </ul>	<ul style="list-style-type: none"> <li>● Draw energy transfer diagrams</li> <li>● Energy transfers practicals</li> <li>● Compare energy values in foods</li> <li>● Calculate amounts of energy and fuel bills</li> <li>● Evaluate energy resources</li>   <li>● Draw force diagrams</li> <li>● Using clamps, stands, springs and masses</li> <li>● Drawing a line graph</li> <li>● Calculating a resultant force</li> <li>● Calculating speed and momentum</li> <li>● Drawing and interpreting distance-time graphs</li> </ul>	40/50 minute assessment each half term covering all the the biology, chemistry and physics topics	<p><b>Scientific attitude</b></p> <p><b>Experimental skills and investigation</b></p> <p><b>Analysis and evaluation</b></p> <p><b>Measurement</b></p>	<p><i>Energy</i></p> <ul style="list-style-type: none"> <li>● <i>Types of energy stores</i></li> <li>● <i>State types of fuels</i></li>   <li>● <i>Recall types of forces</i></li> <li>● <i>Define speed, velocity and momentum</i></li> </ul>

# Curriculum Assessment Map

Year: Year 7

Subject + Course details: Physics

	<p>Waves (HT 3)</p> <ul style="list-style-type: none"> <li>• Transverse and longitudinal waves</li> <li>• Sound waves and frequency</li> <li>• Light, reflection and refraction</li> </ul>	<ul style="list-style-type: none"> <li>• Draw and label features of a wave</li> <li>• Drawing ray diagrams</li> </ul>			<ul style="list-style-type: none"> <li>• <i>Recall types of waves</i></li> <li>• <i>Recall order of the electromagnetic spectrum (EM)</i></li> <li>• <i>Recall uses of EM waves</i></li> </ul>
4-6	<p>Space (HT 4)</p> <ul style="list-style-type: none"> <li>• Gravity</li> <li>• Day and Night</li> <li>• Seasons</li> <li>• Stars</li> <li>• The Universe</li> </ul> <p>Electricity and Magnetism (HT 5)</p> <ul style="list-style-type: none"> <li>• Current</li> <li>• Potential Difference</li> <li>• Series Circuits</li> <li>• Parallel Circuits</li> <li>• Static Electricity</li> <li>• Magnetism</li> </ul> <p>Matter (HT 6)</p> <ul style="list-style-type: none"> <li>• Physical change</li> <li>• Brownian motion</li> <li>• Diffusion</li> <li>• Density</li> <li>• Kinetic Theory</li> <li>• Atmospheric pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Calculations</li> <li>• Modelling</li> </ul> <ul style="list-style-type: none"> <li>• Reading of metres</li> <li>• Use of a plotting compass</li> </ul> <ul style="list-style-type: none"> <li>• Use of a balance.</li> <li>• Calculations</li> <li>• Modelling</li> </ul>	40/50 minute assessment each half term covering all the the biology, chemistry and physics topics	<p><b>Scientific attitude</b></p> <p><b>Experimental skills and investigation</b></p> <p><b>Analysis and evaluation</b></p> <p><b>Measurement</b></p>	<p>Space</p> <ul style="list-style-type: none"> <li>• Solar system research/project</li> <li>• Research on the Big Bang</li> </ul> <p>Electricity and Magnetism</p> <ul style="list-style-type: none"> <li>• Uses of magnets</li> </ul> <p>Matter</p> <ul style="list-style-type: none"> <li>• Research Felix Baumgartner parachute jump and what it tells us about the composition of the atmosphere.</li> </ul>

½ TERM TOPIC	TAUGHT CURRICULUM	TAUGHT SKILLS	SUMMATIVE ASSESSMENT TITLE/TYPE	ASSESSMENT CRITERIA NC Working Scientifically	LEARNED CURRICULUM
1-3	<p>Cells (HT 1)</p> <ul style="list-style-type: none"> <li>Explaining the function of cell organelle</li> <li>Research and explain the function of each organ in a given system.</li> <li>Explain what each of the substances moving in and out of a cell is used for.</li> <li>Explain the process of diffusion in cells.</li> </ul> <p>Nutrition (HT 2)</p> <ul style="list-style-type: none"> <li>Explain the importance of each food group and the consequences of deficiencies.</li> <li>Explain how an imbalanced diet can lead to malnutrition.</li> <li>Understand the word equation for</li> </ul>	<p>Cells</p> <ul style="list-style-type: none"> <li>Using microscopes</li> <li>Magnification</li> </ul> <p>Nutrition</p> <ul style="list-style-type: none"> <li>Calculate the energy content in different meals</li> <li>Work out the energy content in food intake for one day.</li> <li>Analyse data of energy content in food versus activities and explain the consequences.</li> <li>Analyse data of food input and energy output.</li> <li>Draw conclusions from the results of photosynthesis experiments.</li> </ul> <p>Reproduction</p> <ul style="list-style-type: none"> <li>Analyse data of the 2 types of fertilisation</li> </ul>	40/50 minute assessment each half term covering all the the biology, chemistry and physics topics	<p><b>Scientific attitude</b></p> <p><b>Experimental skills and investigation</b></p> <p><b>Analysis and evaluation</b></p> <p><b>Measurement</b></p>	<p>Cells</p> <ul style="list-style-type: none"> <li>Cell structure</li> <li>Stating role of organelles</li> <li>Identify the differences between plant and animal cells</li> <li>Define a tissue, organ and organ system.</li> <li>Identify a tissue, organ and organ system.</li> <li>Identify substances that move in and out of cells.</li> </ul> <p>Nutrition</p> <ul style="list-style-type: none"> <li>Identify the main food groups and examples of foods in each.</li> <li>Describe the function of each food group.</li> <li>State the energy requirements of different types of people.</li> </ul>

	<p>photosynthesis and outline the uses of glucose.</p> <p>Reproduction (HT 3)</p> <ul style="list-style-type: none"> <li>• Explain the menstrual cycle</li> <li>• Explain the role of the placenta</li> </ul>				<ul style="list-style-type: none"> <li>• Know what a balanced diet is.</li> <li>• Describe the consequences of too much/too little food.</li> <li>• State where plants get their food from</li> <li>• Know the word equation for photosynthesis.</li> </ul> <p>Reproduction</p> <ul style="list-style-type: none"> <li>• Know the difference between internal external fertilisation</li> <li>• Describe each type of fertilisation</li> <li>• Be able to label the parts of each system</li> <li>• Describe the function of each part</li> <li>• Describe the menstrual cycle</li> <li>• Describe the process of fertilisation.</li> <li>• Know the main parts of the flower</li> <li>• Describe the function of the different flower parts.</li> </ul>
<p>4-6</p>	<p><b>Interdependence (HT 4)</b></p>		<p>40/50 minute assessment each half term covering all the the biology, chemistry and physics topics</p>		<p>Define the terms producer and consumer</p>



# Curriculum Assessment Map

Year: Year 7

Subject + Course details: Biology

	<p>Create a simple food chain from a list of organisms</p> <p>Identify producers and consumers in a food chain</p> <p>Explain the difference between a producer and a consumer.</p> <p>Create a simple food chain from scratch</p> <p>Explain what the direction of an arrow in a food chain represents</p> <p>Explain how producers gain protein and energy</p> <p>State what an ecosystem is</p> <p>State what the term overcrowding refers to</p>				<p>Define the terms herbivore, carnivore and omnivore</p> <p>List the factors that can lead to overcrowding of a population</p> <p>Categorise the factors that can affect food security into human and natural factors</p> <p>Research how science is being used to try and increase food security</p> <p>Explain the role of photosynthesis in food security</p>
--	--	--	--	--	---

	<p>Identify common habitats</p> <p>Describe different adaptations</p> <p><b>Photosynthesis (HT 5)</b></p> <p>State the products of photosynthesis.</p> <p>State the reactants of photosynthesis.</p> <p>State the word equation for photosynthesis.</p> <p>Explain what the equation for photosynthesis means.</p> <p>List ways in which plants and algae use the products of photosynthesis</p>	<p>List what the independent variables could be in an experiment investigating the rate of photosynthesis</p> <p>Conduct an experiment to investigate how the rate of photosynthesis can be increased</p> <p>Plan an experiment to investigate how the rate of photosynthesis can be increased</p> <p>Evaluate the success of your photosynthesis</p>			
--	--	---	--	--	--

	<p>Explain how plants and algae use the products of photosynthesis</p> <p><b>Variation (HT 6)</b></p> <p>Define variation</p>	<p>investigation (Level 7).</p> <p>Justify how the data obtained from your investigation could help explain the distribution of plants in different habitats</p> <p>Graph measurements of variation</p> <p>Could measure :-height, length of index finger or length of seeds</p> <p>List examples of continuous and discontinuous variation</p> <p>Explain differences between continuous and discontinuous variation</p> <p>Explain the causes of variation</p>			<p>List examples of variation</p> <p>Know that variation is caused by genetic and environmental factors</p>
--	---	--	--	--	---

½ TERM TOPIC	TAUGHT CURRICULUM	TAUGHT SKILLS	SUMMATIVE ASSESSMENT TITLE/TYPE	ASSESSMENT CRITERIA NC Working Scientifically	LEARNED CURRICULUM
1-3	<p>Forces &amp; Motion (HT1)</p> <ul style="list-style-type: none"> <li>● Recap Yr 7 basics</li> <li>● Contact and non-contact forces</li> <li>● Moments</li> <li>● Speed</li> <li>● Distance-time graphs</li> <li>● Velocity-time graphs</li> <li>● Balanced and unbalanced forces</li> <li>● Momentum</li> </ul> <p>Energy 2 (HT 2)</p> <ul style="list-style-type: none"> <li>● Energy stores</li> <li>● Energy transfers</li> <li>● Energy resources</li> <li>● Methods of heat transfer</li> <li>● Force multipliers</li> <li>● Power</li> </ul> <p>Waves 2 (HT 3)</p> <ul style="list-style-type: none"> <li>● Recap Year 7 work</li> <li>● Properties of waves</li> <li>● Colour of light</li> <li>● Lenses</li> </ul>	<ul style="list-style-type: none"> <li>● Force diagrams</li> <li>● Calculations</li> <li>● Rearranging equations</li> <li>● Graph work</li> <li>● Practical and safety skills - balancing</li> <li>● Draw energy transfer diagrams</li> <li>● Calculations</li> <li>● Rearranging equations</li> <li>● Drawing waves</li> <li>● Drawing ray diagrams</li> </ul>	40/50 minute assessment each half term covering all the the biology, chemistry and physics topics	<p><b>Scientific attitude</b></p> <p><b>Experimental skills and investigation</b></p> <p><b>Analysis and evaluation</b></p> <p><b>Measurement</b></p>	<p><i>Forces and motion</i></p> <ul style="list-style-type: none"> <li>● <i>Recall/revise Yr 7 work</i></li> <li>● <i>Exploring moments with a balance bar</i></li> </ul> <p><i>Energy 2</i></p> <ul style="list-style-type: none"> <li>● <i>Recall/revise Yr 7 work</i></li> <li>● <i>Recall types of insulators and conductors</i></li> </ul> <p><i>Waves 2</i></p> <ul style="list-style-type: none"> <li>● <i>Recall what a longitudinal and transverse wave are</i></li> </ul>

# Curriculum Assessment Map

Year: Year 8

Subject + Course details: Physics

	<ul style="list-style-type: none"> <li>Electromagnetic spectrum</li> <li>Properties of sound waves</li> <li>Reflection and absorption of sound</li> </ul>	<ul style="list-style-type: none"> <li>Using a ray box</li> </ul>			<ul style="list-style-type: none"> <li><i>Learn order of EM waves</i></li> </ul>
4-6	<p>Space (HT 4)</p> <ul style="list-style-type: none"> <li>Gravity</li> <li>Day and Night</li> <li>Seasons</li> <li>Stars</li> <li>The Universe</li> <li>Galaxies</li> <li>The fate of the universe</li> </ul> <p>Electricity and Magnetism (HT 5)</p> <ul style="list-style-type: none"> <li>Current and Potential Difference in Series Circuits</li> <li>Current and Potential Difference in Parallel Circuits</li> <li>Conductors and insulators</li> <li>Electromagnets</li> </ul> <p>Matter (HT 6)</p> <ul style="list-style-type: none"> <li>Physical change</li> <li>Brownian motion</li> <li>Diffusion</li> </ul>	<ul style="list-style-type: none"> <li>Calculations</li> <li>Modelling</li> <li>Converting between astronomical distance units.</li> <li>Reading of metres</li> <li>Making and testing an electromagnet</li> <li>Use of a balance.</li> <li>Calculations</li> </ul>	40/50 minute assessment each half term covering all the the biology, chemistry and physics topics	<p><b>Scientific attitude</b></p> <p><b>Experimental skills and investigation</b></p> <p><b>Analysis and evaluation</b></p> <p><b>Measurement</b></p>	<p>Space</p> <ul style="list-style-type: none"> <li>Research on the fate of the universe.</li> <li>Research on where stars get their energy from.</li> </ul> <p>Electricity and Magnetism</p> <ul style="list-style-type: none"> <li>Uses of magnets</li> </ul> <p>Matter</p> <ul style="list-style-type: none"> <li>Come up with a method for</li> </ul>

# Curriculum Assessment Map

Year: Year 8

Subject + Course details: Physics

	<ul style="list-style-type: none"><li>• Density</li><li>• Kinetic Theory</li><li>• Pressure</li><li>• Atmospheric pressure</li><li>• Pressure in liquids</li></ul>	<ul style="list-style-type: none"><li>• Modelling</li><li>• Graphing atmospheric pressure with altitude.</li></ul>			weighing your car. Check this with the 'true value.'
--	--	--	--	--	--

½ TERM TOPIC	TAUGHT CURRICULUM	TAUGHT SKILLS	SUMMATIVE ASSESSMENT TITLE/TYPE	ASSESSMENT CRITERIA NC Working Scientifically	LEARNED CURRICULUM
1-3	<p><b><u>Skeletons and muscles (HT1)</u></b></p> <ul style="list-style-type: none"> <li>● Explain how the structure of a joint allows movement</li> <li>● Explain the interaction of muscles and bones at a hinge joint</li> </ul> <p><b><u>Digestion (HT2)</u></b></p> <ul style="list-style-type: none"> <li>● Explain the adaptations to function the organs</li> <li>● Explain how enzymes produce the products of digestion</li> <li>● Explain the adaptation to function in the small intestine</li> </ul> <p><b><u>Health (HT3)</u></b></p>	<p><b><u>Skeletons and muscles</u></b></p> <ul style="list-style-type: none"> <li>● Measure circumference of upper arm &amp; time how long it takes to lift a 1Kg mass before fatigued</li> <li>● Count how many times 1Kg mass is lifted before fatigued</li> <li>● Measure force exerted by different muscles</li> </ul> <p><b><u>Digestion</u></b></p> <ul style="list-style-type: none"> <li>● Effect of temperature on enzymes experiment</li> </ul> <p><b><u>Health</u></b></p> <ul style="list-style-type: none"> <li>● Analyse the impact of illegal/legal drugs</li> </ul>	•	<p><b>Scientific attitude</b></p> <p><b>Experimental skills and investigation</b></p> <p><b>Analysis and evaluation</b></p> <p><b>Measurement</b></p>	<p><b><u>Skeletons and muscles</u></b></p> <ul style="list-style-type: none"> <li>● Know the function of the skeleton i.e. support, protection, movement and making blood cells.</li> <li>● Describe how it is adapted to function</li> <li>● Name 10 main bones</li> <li>● Describe the function of the main bones e.g. ribs – protection</li> <li>● Know the 2 main types of joints</li> <li>● Describe the structure of a joint</li> <li>● Know muscles work in pairs</li> <li>● Describe the function of muscles and examples of antagonistic pairs</li> </ul> <p><b><u>Digestion (HT2)</u></b></p>

	<ul style="list-style-type: none"> <li>● Explain how the chemicals cause disease</li> <li>● Explain the effects alcohol has on the body.</li> <li>● Explain how bacteria/virus cause disease</li> <li>● Explain how barriers to infection work</li> <li>● Explain the role of antibodies</li> <li>● Explain how vaccinations work</li> <li>●</li> </ul>				<ul style="list-style-type: none"> <li>● Identify main food groups and e.gs (level 4)</li> <li>● Describe the function of each group</li> <li>● Identify the tissues and organs of the human digestive system</li> <li>● Describe the function of each organ</li> <li>● Know enzymes are biological catalysts</li> <li>● Name the enzymes of the digestive system</li> <li>● Describe how enzymes work</li> <li>● Describe how food is absorbed into the blood</li> </ul> <p><b><u>Health (HT3)</u></b></p> <ul style="list-style-type: none"> <li>● Identify/name the organs</li> <li>● Describe the function of each organ</li> <li>● Know the 3 most harmful chemicals in tobacco</li> <li>● Name 3 diseases caused by smoking</li> <li>● Name 3 harmful effects of alcohol</li> </ul>
--	---	--	--	--	---



					<ul style="list-style-type: none"> <li>● Identify legal/illegal drugs</li> <li>● Know the general effect of drugs</li> <li>● Describe the effect of illegal/legal drugs</li> <li>● Know the 3 main pathogens</li> <li>● Identify 1 disease caused by each</li> <li>● Identify 3 barriers to infection</li> </ul>
4-6	<p><b>Interdependence (HT 4)</b></p> <p>Define the terms herbivore, carnivore and omnivore</p> <p>Construct a pyramid of numbers .</p> <p>Describe how the number of organisms changes at each stage of a food chain</p> <p>Explain why pyramids of numbers can be different shapes</p> <p>Give reasons for food</p>				<p>Understand the terms <b>producer, consumer, herbivore, carnivore</b></p> <p>Research food poverty</p>

**Curriculum Assessment Map**

**Year: Year 7**

**Subject + Course details: Biology**

	shortages in some parts of the world				
	<b>Respiration (HT 4)</b>  Know the function of the 3 main systems in the body  Describe the function of each system  Explain how the systems work together	Experiment – Comparing inhaled and exhaled air			Name the main organs in each system  Know why our bodies need energy
	Know the word equation for aerobic respiration				

**Curriculum Assessment Map****Year: Year 7****Subject + Course details: Biology**

	Explain the terms respiration and cellular respiration				
	Know the organs of the Breathing System  Describe the function of each organ  Explain how the lungs are adapted to function and gas exchange in the alveoli  Describe the mechanics of breathing				Understand the mechanics of breathing
	Know how the body responds to increase demands for oxygen  Explain how the body responds to increased oxygen demands				

**Curriculum Assessment Map****Year: Year 7****Subject + Course details: Biology**

	<p>Know the word equation</p> <p>Explain Anaerobic respiration</p> <p>Explain the oxygen debt</p>				
	<p>Know the types of variation and causes</p>				
	<p>Know characteristics are passed on via sex cells</p> <p>Describe how characteristics are inherited</p>				
	<p>Describe how genes are passed on</p> <p>Describe what genes are made of</p> <p>Explain what dominant and recessive genes are</p>				<p>Be able to label a diagram showing DNA, gene, chromosome, nucleus</p>

**Curriculum Assessment Map****Year: Year 7****Subject + Course details: Biology**

	<p>Describe the process of selective breeding</p> <p>Explain the reasons for, and benefits of selective breeding</p>				<p>Give examples of selective breeding</p>
		<p>Focus – describing patterns in graphs (need to plot graph first)</p>			
	<p>Explain the reasons for extinction of some species</p>				<p>Know the reasons why some species are extinct</p>

½ TERM TOPIC	TAUGHT CURRICULUM	TAUGHT SKILLS	SUMMATIVE ASSESSMENT TITLE/TYPE	ASSESSMENT CRITERIA NC Working Scientifically	LEARNED CURRICULUM
1-3	<p>Particles (HT1)</p> <ul style="list-style-type: none"> <li>● Kinetic theory</li> <li>● Gas Pressure</li> <li>● Atomic properties</li> <li>● Difference between atoms, elements, compounds and mixtures</li> <li>● Symbols</li> <li>● Particle interactions</li> </ul> <p>Chemical Reactions (HT 2)</p> <ul style="list-style-type: none"> <li>● Reversible/irreversible reactions</li> <li>● Physical change &amp; chemical change</li> <li>● Products &amp; reactants</li> <li>● Change of state</li> <li>● Conservation of mass</li> <li>●</li> </ul>	<ul style="list-style-type: none"> <li>● Drawing graphs/cooling curves</li> <li>● Identifying state based on temperature</li> <li>● Calculating numbers of protons, neutrons and electrons</li> </ul> <p>Chemical reactions:</p> <ul style="list-style-type: none"> <li>● Melting ice, using a bunsen burner and reading a thermometer</li> <li>● Exothermic and endothermic reactions eg hydrochloric acid and magnesium</li> <li>● Drawing accurate graphs</li> <li>● Writing word equations</li> <li>● Writing symbol equations</li> </ul>	End of topic test 40-50 minute written assessment covering all the topics biology, chemistry and physics studied in that half term	<p><b>Scientific attitude</b></p> <p><b>Experimental skills and investigation</b></p> <p><b>Analysis and evaluation</b></p> <p><b>Measurement</b></p>	<p><i>Particles</i></p> <ul style="list-style-type: none"> <li>● <i>Draw particle diagrams</i></li> <li>● <i>Recall state change names</i></li> <li>● <i>Structure of the atom</i></li> </ul> <p>Chemical Reactions</p> <p>Learn physical changes, keywords and definitions i.e condensing, evaporating, melting and cooling, exothermic and endothermic</p> <p>Acids and Alkalis:</p> <ul style="list-style-type: none"> <li>● Identification of acids and alkalis</li> <li>● Properties and uses of acids and alkalis</li> </ul>

	<p>Acids and Alkalis (HT 3)</p> <ul style="list-style-type: none"> <li>Working safely</li> <li>pH</li> <li>Indicators</li> <li>Neutralisation</li> </ul>	<ul style="list-style-type: none"> <li>Recognition of common hazards and hazard symbols in labs</li> <li>Observation of gases as products eg fizzing/bubbling - squeaky pop test for hydrogen</li> <li>pH Scale</li> <li>Word equations</li> <li>Displacement reactions</li> </ul>			<ul style="list-style-type: none"> <li>pH scale and neutralisation eg wasp and bee stings</li> </ul>
4-6	<p>Environmental chemistry (HT 4)</p> <ul style="list-style-type: none"> <li>Structure of the Earth</li> <li>Rock Cycle</li> <li>Recycling</li> <li>Carbon Cycle</li> <li>Atmosphere</li> <li>Carbon dioxide Emissions</li> <li>Greenhouse Effect and global warming</li> </ul> <p>Periodic Table - Recap (HT 5)</p> <ul style="list-style-type: none"> <li>Physical and chemical properties of</li> </ul>	<ul style="list-style-type: none"> <li>Identify types of rock - metamorphic, igneous and sedimentary</li> <li>Combustion demo</li> </ul>			<ul style="list-style-type: none"> <li>Research the rock cycle</li> <li>Debate the greenhouse effect and global warming</li> </ul>

# Curriculum Assessment Map

Year: Year 8

Subject + Course details: Chemistry

	<p>elements</p> <ul style="list-style-type: none"> <li>Identify periods, groups and the history of the periodic table i.e Mendeleev</li> <li>Location of metals and non-metals</li> <li>Identify groups 1, 7 and 0 - understand the chemical/physical properties of each group, uses, electronic configuration and reactivity</li> <li>Energy Levels</li> </ul> <p>Purity (HT 6)</p> <ul style="list-style-type: none"> <li>What is a pure substance - difference between pure and impure</li> <li>Mixtures, molecules, compounds definitions and examples</li> <li>Solutions - define solute, solution, solvent and soluble</li> <li>Diffusion - movement of gases from high concentration</li> </ul>	<p>Development of the periodic table - History and reasons for arrangement</p> <ul style="list-style-type: none"> <li>Identifying elements using symbols, becoming familiar with relative atomic mass and proton/atomic number</li> <li>Carry out Chromatography Distillation Filtration Evaporation</li> <li>Electrolysis - Hoffman</li> </ul>			<p>Locations of metals and nonmetals on the periodic table. The properties of elements from group 1 the alkali metals and group 7 the halogens.</p> <p>Terminology to describe pure substance, i.e. element and compound. Terminology to describe mixtures, i.e. gel alloy aerosol and foam. Which separation technique can be used for a particular mixture.</p>
--	--	---	--	--	---



	<p>gradient to a low gradient and observations in real life</p> <ul style="list-style-type: none"><li>• Separation of mixtures - filtration, chromatography, magnetism, distillation, crystallisation</li></ul>				
--	---	--	--	--	--

½ TERM	TAUGHT CURRICULUM	TAUGHT SKILLS	SUMMATIVE ASSESSMENT TITLE/TYPE	ASSESSMENT CRITERIA	LEARNED CURRICULUM
TOPIC					
1-3	<p>Energy</p> <ul style="list-style-type: none"> <li>• Energy calculations</li> <li>• Using prefixes and scientific notation.</li> <li>• Energy transfers and conservation of energy</li> <li>• Specific heat calculations</li> <li>• Power calculations</li> <li>• Efficiency of energy and power</li> <li>• National and global energy resources</li> </ul> <p>Electricity</p> <ul style="list-style-type: none"> <li>• Series and parallel circuit rules</li> <li>• Calculations with charge, current, potential difference</li> </ul>	<ul style="list-style-type: none"> <li>• Using and rearranging formulae to perform calculations.</li> <li>• Accurate use of thermometer and stopwatch.</li> <li>• Calculate the gradient of a line.</li> <li>• Setting up both series and parallel electric circuits</li> <li>•</li> </ul>	20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</p> <p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</p>	<p><i>Energy</i></p> <ul style="list-style-type: none"> <li>• <i>Energy stores</i></li> <li>• <i>Energy Resources</i></li> <li>• <i>Memorise equations and units.</i></li> </ul> <p><i>Electricity</i></p> <ul style="list-style-type: none"> <li>• <i>Memorise equations and units.</i></li> <li>• <i>Learn circuit symbols</i></li> <li>• <i>Definitions of charge, current, potential difference and resistance</i></li> <li>• <i>Resistance in series and parallel</i></li> <li>• <i>Learn I-V graph shapes for a resistor at a constant temperature, filament lamp and diode</i></li> <li>• <i>Wiring of a 3-pin</i></li> </ul>

**Curriculum Assessment Map**

**Year: 9**

**Subject: Science: Physics (AQA)**

	<p>and resistance</p> <ul style="list-style-type: none"> <li>Resistance characteristics of a resistor at a constant temperature, filament lamp and diode</li> <li>Circuit rules</li> <li>Calculating electrical power</li> <li>Energy transfers in everyday appliances</li> <li>Transformer calculations</li> </ul>				<p><i>plug</i></p> <ul style="list-style-type: none"> <li><i>UK mains supply values</i></li> <li><i>Diagram of The National Grid</i></li> </ul>
<p><b>4-6</b></p>	<p>Particles Model of Matter</p> <ul style="list-style-type: none"> <li>The structure of an Atom</li> <li>Mass number, atomic number and isotopes.</li> <li>Measuring the density of regular and irregular objects.</li> </ul>	<ul style="list-style-type: none"> <li>Using and rearranging formulae to perform calculations.</li> <li>Accurate reading of the scale on a measuring cylinder.</li> <li>Calculating the volume of regular</li> </ul>	<p>20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.</p>	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</p>	<p>The development of the atom.</p> <p>Radioactive contamination</p>

**Curriculum Assessment Map****Year: 9****Subject: Science: Physics (AQA)**

	<p>Atoms and Nuclear Radiation</p> <ul style="list-style-type: none"><li>• Radioactive decay and nuclear radiation.</li><li>• Nuclear equations.</li><li>• Half life and the random nature of radioactive decay.</li></ul>	<p>objects.</p> <ul style="list-style-type: none"><li>• Use of a balance</li><li>• Zero error and Parallax errors.</li><li>• Probability</li></ul>		<p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</p>	<p>Topic work on the incident at Chernobyl.</p>
--	--	--	--	---	---

½ TERM	TAUGHT CURRICULUM	TAUGHT SKILLS	SUMMATIVE ASSESSMENT TITLE/TYPE	ASSESSMENT CRITERIA	LEARNED CURRICULUM
TOPIC					
1-3	<p><b>Cells</b></p> <ul style="list-style-type: none"> <li>• Magnification formula (<math>M = I/A</math>)</li> <li>• Cell specialisation</li> <li>• Differentiation</li> <li>• Diffusion gradients</li> <li>• Microorganisms</li> <li>• Cell division</li> <li>• Transport across a cell membrane -</li> <li>• Explain how temperature, concentration gradient and surface area affect the rate of diffusion.</li> <li>• Describe what is meant by a stem cell with examples (plant &amp; animal). explain the importance of stem cells for therapeutic reasons.</li> <li>• Describe some of the potential risks and objections associated with stem cell use.</li> </ul>	<p><b>Cells</b></p> <ul style="list-style-type: none"> <li>• Converting units</li> <li>• Microscopy practical (RP1)</li> <li>• Graph skills (RP3)</li> <li>• Calculate and compare surface area: volume ratios</li> <li>• Evaluate risks and benefits, as well as the social and ethical issues concerning the use of stem cells from embryos in medical research and treatments.</li> <li>• Apply knowledge of osmosis to unfamiliar situations and make predictions.</li> </ul>	20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</p> <p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</p>	<p><b>Cells</b></p> <ul style="list-style-type: none"> <li>• Parts of a cell</li> <li>• Functions of a cell</li> <li>• Parts of a microscope</li> <li>• Examples of specialised cells (plant and animal)</li> <li>• Define the terms 'diffusion' 'osmosis' and 'active transport'.</li> </ul>

# Curriculum Assessment Map

Year: 9

Subject: Biology [AQA](#)

	<p><b><u>Organisation</u></b></p> <ul style="list-style-type: none"> <li>• Use the 'lock and key model' to explain enzyme action</li> <li>• Describe the flow of blood through the heart.</li> <li>• Understand that the heartbeat is regulated by cells in the RA and that artificial pacemakers may be employed to correct irregularities in HR.</li> <li>• Describe and evaluate the treatments of CHD (drugs, stents, valve replacements, heart transplants &amp; artificial hearts)</li> </ul>	<p><b><u>Organisation</u></b></p> <ul style="list-style-type: none"> <li>• RP4 - food tests practicals</li> <li>• Use of equipment (e.g. water bath)</li> <li>• Risk assessments</li> <li>• RP5 - conditions affecting enzyme activity, identify variables</li> </ul>	<p>20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.</p>	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</p> <p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</p>	<p><b><u>Organisation</u></b></p> <ul style="list-style-type: none"> <li>• Explain how cells can form tissues, organs, organ systems.</li> <li>• Functions of Digestive system and Circulatory system</li> <li>• Be able to name, recognise and describe the constituents of blood. explain the function of each blood constituent and the adaptations of each blood cell.</li> <li>• Describe the symptoms of CHD including narrowing of the arteries, faulty valves and heart failure.</li> </ul>
<p>4-6</p>	<p><b><u>Communicable diseases</u></b></p> <ul style="list-style-type: none"> <li>• Vaccination</li> <li>• Antibiotics and Painkillers</li> <li>• Discovery &amp; Development of drugs</li> <li>• Discovery &amp; Development of drugs</li> </ul> <p><b><u>Bioenergetics</u></b></p> <ul style="list-style-type: none"> <li>• Rate of</li> </ul>	<p><b><u>Communicable diseases</u></b></p> <ul style="list-style-type: none"> <li>• Evaluating treatments of different diseases.</li> <li>• Analysing and evaluating the drug development cycle and studies.</li> <li>• RP1- Antiseptic technique and antibiotics.</li> <li>• Evaluate the</li> </ul>	<p>20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.</p>	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</p>	<p><b><u>Communicable diseases</u></b></p> <ul style="list-style-type: none"> <li>• Communicable Diseases</li> <li>• Viral Diseases</li> <li>• Bacterial Diseases</li> <li>• Fungal Diseases</li> <li>• Protist Diseases</li> <li>• Describe the physical and chemical barriers to infection ( wrt skin, nose, trachea</li> </ul>

**Curriculum Assessment Map**

**Year: 9**

**Subject: Biology [AQA](#)**

	<ul style="list-style-type: none"> <li>• photosynthesis understand that limiting factors are economically important to maximising profit AND maximising rate</li> <li>• Process of Aerobic Respiration and its implications</li> <li>• Process of Anaerobic Respiration and its implications.</li> <li>• Response to exercise</li> <li>• Metabolism</li> </ul>	<p>global use of vaccinations in disease prevention.</p> <ul style="list-style-type: none"> <li>• Use a model to explain herd immunity.</li> <li>• Interpret graph showing primary and secondary response to a pathogen; explain the responses.</li> <li>• Evaluate risk in relation to practical design and data review to avoid bias.</li> <li>• Evaluate risks related to vaccinations</li> <li>• Understand how scientific methods and applications develop over time. Evaluate personal, social and economic implications of drugs</li> </ul> <p><b><u>Bioenergetics</u></b></p> <ul style="list-style-type: none"> <li>• RP4 - Investigate the effect of light intensity on the rate of P/S - be able to plot and draw a graph AND measure and calculate rate of</li> </ul>		<p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</p>	<p>&amp; bronchi, stomach). Describe and explain the specific immune response including phagocytosis, antibody production, antitoxin production.</p> <ul style="list-style-type: none"> <li>• Suggest methods for preventing spread.</li> <li>• Use secondary evidence from text books, the internet and other sources to draw a timeline of antibiotic development.</li> </ul> <p><b><u>Bioenergetics</u></b></p> <ul style="list-style-type: none"> <li>• Equation of photosynthesis</li> <li>• Photosynthesis overview.</li> <li>• Use of glucose</li> <li>• Equation for aerobic respiration</li> <li>• Equation for anaerobic respiration.</li> </ul>
--	--	---	--	---	--

**Curriculum Assessment Map****Year: 9****Subject: Biology [AQA](#)**

		<p>P/S.</p> <ul style="list-style-type: none"><li>• Becoming familiar with equipment used to measure transpiration.</li><li>• Interpreting graphical data and drawing conclusions.</li><li>• Experiments based on increased heart/breathing rate- drawing tables and conclusions from data included.</li></ul>			
--	--	--	--	--	--



½ TERM	TAUGHT CURRICULUM	TAUGHT SKILLS	SUMMATIVE ASSESSMENT TITLE/TYPE	ASSESSMENT CRITERIA	LEARNED CURRICULUM
TOPIC					
1-3	<p>Atoms, Elements Mixtures and compounds:</p> <ul style="list-style-type: none"> <li>Atomic theory</li> <li>Electronic structure and configurations</li> <li>Periodic Table (development and structure)</li> </ul> <p>Bonding - Covalent, Ionic and Metallic:</p> <ul style="list-style-type: none"> <li>How bonding influences the properties of compounds</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Separation techniques (practical skills in filtration, chromatography, distillation, magnetism and crystallisation)</li> <li>Demonstration of group 1 metals</li> <li>Comparing and evaluating the different types of bonding</li> </ul>	<p>20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.</p> <p>20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.</p>	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</p> <p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures</p>	<ul style="list-style-type: none"> <li><i>Research the development of the atom and the periodic table</i></li> <li><i>Comparison of groups 7 and 0 to group 1</i></li> <li><i>Typical properties of the groups</i></li> <li><i>Research allotropes of carbon i.e uses of graphene, graphite, diamond and fullerenes.</i></li> </ul>
4-6	<p>Quantitative Chemistry:</p> <ul style="list-style-type: none"> <li>Relative Formula Mass</li> <li>Moles</li> <li>Chemical measurements</li> <li>Balancing Equations</li> <li>Concentration of solutions</li> </ul>	<ul style="list-style-type: none"> <li>Practical skills in magnesium oxide, conservation of mass and determination of volume.</li> <li>Chemical equations (balancing, Relative formula mass, % composition of a</li> </ul>	<p>20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.</p>	<p>AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p> <p>AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and</p>	<ul style="list-style-type: none"> <li>Use bitesize and past paper questions from the AQA website for quantitative chem practice.</li> </ul>

## Curriculum Assessment Map

Year: <9>

Subject: <Chemistry [AQA](#)>

	<p>Chemical changes:</p> <ul style="list-style-type: none"> <li>• Metal oxides, reactivity series, and extracting.</li> <li>• Acid reactions, soluble salts, (pH, neutralisation)</li> <li>• Electrolysis - molten and aqueous (copper chloride, aluminium oxide - cryolite etc)</li> <li>• Exothermic and endothermic - reaction profiles, bond-breaking and bond-forming</li> </ul>	<p>compound, moles (Avogadro's constant), chemical measurements (average, estimates, mean, anomalous results.)</p> <ul style="list-style-type: none"> <li>• Practical skills in soluble salts, neutralisation (titration), electrolysis, exothermic practical.</li> </ul>	<p>20 Marks of exam style questions in the final week of each half term. Full topic/progress lists available in pupils' exercise books.</p>	<p>procedures.</p> <p>AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures</p>	<ul style="list-style-type: none"> <li>• Research commercial applications of electrolysis in industry</li> <li>• Uses of Sodium hydroxide, chlorine and hydrogen from Brine</li> <li>• Recap year 7&amp;8 pH scale and neutralisations</li> <li>• Research the order of metals in the reactivity series</li> </ul>
--	---	---	---	---	--