

**Year 7 Medium Term Plan Terms 5&6**

Unit Title and Lesson Number	Lesson Intent	Knowledge Goal	Practical Work	Steps to Success & Vocabulary	Assessment Opportunities & Homework
Biology Term 3 lesson 1	<p>To use keys to classify organisms.</p> <p><i>This feeds on from prior knowledge at key stage 2 where students learnt how to make and use simple keys.</i></p> <p><i>This feeds forward to our year 11 ecology unit where students use evolutionary trees and the classification systems.</i></p>	To classify organisms.		<ul style="list-style-type: none"> <li>I can use a key to identify an unknown organism.</li> <li>I can use a series of closed questions to construct a key.</li> </ul> <p><b><u>Vocabulary:</u></b> Characteristics, features, organism, vertebrate, invertebrate, plant, animal.</p>	Answers to retrieval questions.
Biology Term 3 lesson 2	<p>To describe continuous, discontinuous, inherited and environmental variation.</p> <p><i>This feeds on from key stage 2 where students learnt how to use variation to classify things.</i></p> <p><i>This feeds forward to our year 11 variation and inheritance unit where students learn how to predict the outcomes of different characteristics and</i></p>	To describe types of variation.		<ul style="list-style-type: none"> <li>I can describe how variation is caused.</li> <li>I can explain how variation can be continuous or discontinuous.</li> <li>I can state that genetic information is inherited.</li> <li>I can state that there is variation between and within species.</li> </ul> <p><b><u>Vocabulary:</u></b> Variation, continuous, discontinuous, inherited, environmental, genetic, species.</p>	<p>Answers to retrieval questions.</p> <p><b><u>Homework:</u></b> KS3 Science Workbook pages 61-63</p>

	inherited diseases.				
Biology Term 3 lesson 3	To investigate variation. This feeds on from previous year 7 units where students have learnt how to plan and carry out investigations. This feeds forward to all other year groups where students continue to use and develop these skills in investigations and required practicals.	To undertake a required practical.	Variation req prac.		Answers to retrieval questions.
Biology Term 3 lesson 4	To explain the structure and development of DNA. This feeds on from key stage 2 where students learnt to identify difference between organisms. This feeds forward to our year 11 variation unit where students learn about the complex structure of DNA, how its held together and how it replicates.	To describe DNA.	Be-bops	<ul style="list-style-type: none"> <li>I can simply describe heredity.</li> <li>I can describe the roles of DNA, genes and chromosomes in heredity.</li> <li>I can discuss the roles of Watson, Crick, Franklin and Wilkins in discovering the structure of DNA.</li> </ul> <p><b><u>Vocabulary:</u></b> Double helix, chromosome, gene, phosphate, sugar, deoxyribonucleic acid.</p>	Answers to retrieval questions.  Answers to homework questions.
Biology Term 3 lesson 5	To explain how adaption's leads to survival. This feeds on from key	To describe how organisms are adapted.	Bird beaks prac.	<ul style="list-style-type: none"> <li>I can recognise that variation allows some individuals to compete better.</li> </ul>	Answers to retrieval questions.  Exit Ticket 1

	<p>stage 2 where students learnt about how organism are suited to their environment.</p> <p>This feeds forward to year 11 variation where students learn about how adaptation has caused organisms to change over time.</p>			<p><b><u>Vocabulary:</u></b> Beak, shape, size, adaptation, competition.</p>	<p><b><u>Homework:</u></b> 6 mark question on adaptation.</p>
<p>Biology Term 3 lesson 6</p>	<p>To explain the term survival of the fittest.</p> <p>This feeds on from key stage 2 where students learnt about how organism are suited to their environment.</p> <p>This feeds forward to year 11 variation where students learn about how adaptation has caused organisms to change over time.</p>	<p>To describe natural selection.</p>		<ul style="list-style-type: none"> <li>I can explain how variation and environmental pressures lead to evolution.</li> </ul> <p><b><u>Vocabulary:</u></b> Natural selection, adaptation, survival.</p>	<p>Answers to retrieval questions.</p>
<p>Biology Term 3 lesson 7</p>	<p>To use evidence to support how organisms have changed.</p> <p>This feeds on from key stage 2 where students learnt about how organism are suited to their environment.</p> <p>This feeds forward to</p>	<p>To explain how organisms have evolved.</p>		<ul style="list-style-type: none"> <li>I can state where evidence for evolution comes from.</li> <li>I can explain how variation and environmental factors lead to evolution.</li> </ul> <p><b><u>Vocabulary:</u></b></p>	<p>Answers to retrieval questions.</p>

	year 11 variation where students learn about how adaptation has caused organisms to change over time.			Evolution, extinction, predator, competition, disease, dodo.	
Biology Term 3 lesson 8	To explain how we get desired characteristics. This feeds on from key stage 2 where students learnt about how organism are suited to their environment. This feeds forward to year 11 variation where students learn about how adaptation has caused organisms to change over time.	To describe selective breeding.		<ul style="list-style-type: none"> <li>I can identify desired characteristics.</li> <li>I can explain why some characteristics are desirable.</li> <li>I can discuss advantages and disadvantages of selective breeding.</li> </ul> <p><b><u>Vocabulary:</u></b> Selective, desirable, variation, vulnerable.</p>	<p>Answers to retrieval questions.</p> <p>Feedback on 6 mark question.</p> <p><b><u>Homework:</u></b> Sammelweis and germ theory reading and comprehension task.</p>
Biology Term 3 lesson 9	To describe the factors leading to extinction. This feeds on from key stage 2 where students learnt about how organism are suited to their environment. This feeds forward to year 11 variation where students learn about how adaptation has caused organisms to change over time.	To describe extinction.		<ul style="list-style-type: none"> <li>I can identify factors that can cause extinction.</li> <li>I can explain how competition can lead to extinction.</li> <li>I can apply my knowledge of extinction to specific organisms.</li> </ul> <p><b><u>Vocabulary:</u></b> Predator, competition, disease, environmental.</p>	<p>Answers to retrieval questions.</p>
Biology Term 3 lesson 10	To describe the factors affecting biodiversity. This feeds on from key	To explain biodiversity.		<ul style="list-style-type: none"> <li>I can describe what a gene bank is.</li> <li>I can apply my</li> </ul>	<p>Answers to retrieval questions.</p>

	<p>stage 2 where students learnt about how organisms are suited to their environment.</p> <p>This feeds forward to year 11 variation where students learn about how adaptation has caused organisms to change over time.</p>			<p>knowledge of genetics to explain the role of gene banks.</p> <p><b><u>Vocabulary:</u></b> Biodiversity, species, genetics, sustainable.</p>	Answers to homework questions.
Biology Term 3 lesson 11	To consolidate all of our learning in the unit.	To prepare for assessment		<ul style="list-style-type: none"> <li>I can identify my areas to develop.</li> <li>I can use a variety of resources to support my revision.</li> </ul>	<p>Answers to retrieval questions.</p> <p>Exit Ticket 2</p> <p><b><u>Homework:</u></b> Revision (Seneca, mats, bitesize)</p>
Biology Term 3 lesson 12	To check what we know.	To undertake assessment	Low stakes assessment and go through identifying misconceptions.		Low stakes end of topic assessment.
Chemistry Term 3 lesson 1	<p>To interpret data on metals and non-metals.</p> <p>This feeds on from key stage 2 where students learnt how to compare materials on the basis of their properties.</p> <p>This feeds forward to year 10 structure and</p>	To describe the properties of metals and non-metals		<ul style="list-style-type: none"> <li>I can list the properties of metals and non-metals.</li> <li>I can locate metals and non-metals in the Periodic Table.</li> <li>I can explain the properties of metals and non-metals with reference to their structure.</li> </ul>	<p>Answers to retrieval questions.</p> <p><b><u>Homework:</u></b> Radium Girls reading and comprehension task.</p>

	<p>bonding where students learn how to describe bonding based on whether an element is metal or non-metal.</p>			<ul style="list-style-type: none"> <li>I can relate the properties of metals and non-metals to their uses.</li> </ul> <p><b><u>Vocabulary:</u></b> Electrons, regular, free moving, malleable, ductile, conductor, insulator, melting point, boiling point.</p>	
<p>Chemistry Term 3 lesson 2</p>	<p>To know how reactivity series are created.</p> <p>This feeds on from key stage 2 where students learnt how to compare materials on the basis of their properties.</p> <p>This feeds forward to year 10 chemical changes where students have to be able to use reactivity series predict the likelihood of a reaction taking place.</p>	<p>To explain the reactivity series.</p>	<p>Alkali metals, metals in oxygen, metals in acid.</p>	<ul style="list-style-type: none"> <li>I can state that some materials are more reactive than others.</li> <li>I can order metals in terms of their reactivity.</li> <li>I can describe the reactivity series.</li> <li>I can use evidence to support the ordering of metals by their reactivity.</li> </ul> <p><b><u>Vocabulary:</u></b> Rate, speed, evidence, reactivity, highest, lowest,</p>	<p>Answers to retrieval questions.</p>
<p>Chemistry Term 3 lesson 3</p>	<p>To use the reactivity series to predict displacement reactions.</p> <p>This feeds on from key stage 2 where students learnt how to compare materials on</p>	<p>To predict and explain displacement reactions.</p>	<p>Metal powders and metal sulphate reactions. Thermite and silver tree.</p>	<ul style="list-style-type: none"> <li>I can describe simple displacement reactions using the order of metals in the reactivity series.</li> <li>I can explain how metals can be obtained from metal oxides using carbon</li> </ul>	<p>Answers to retrieval questions.</p> <p>Answers to homework questions.</p>

	<p>the basis of their properties.</p> <p>This feeds forward to year 10 chemical changes where students have to be able to use reactivity series predict the likelihood of a reaction taking place.</p>			<p>when given the reactivity series.</p> <ul style="list-style-type: none"> <li>I can discuss and suggest methods that may be used to extract metals more reactive than carbon.</li> </ul> <p><b>Vocabulary:</b> Extraction, native, ore, mineral, electrolysis, reduction, oxidation.</p>	
Chemistry Term 3 lesson 4	<p>To interpret pH data on oxides.</p> <p>This feeds on from key stage 2 where students learnt how to compare materials on the basis of their properties.</p> <p>This feeds forward to year 10 chemical changes where students have to recognise oxide and hydroxides as being basic substances.</p>	To identify trends in data.	pH testing of period 3 oxides.	<ul style="list-style-type: none"> <li>I can describe how metal and non-metal oxides react with water.</li> <li>I can explain how metal and non-metal oxides react with water using symbol equations.</li> <li>I can recognise patterns and the chemical forms which result in the solution being either acidic or alkaline.</li> </ul> <p><b>Vocabulary:</b> Acidic, alkaline, basic, indicator, oxide.</p>	<p>Answers to retrieval questions.</p> <p><b>Homework:</b> 6 mark question on the reactivity series.</p>
Chemistry Term 3 lesson 5	<p>To classify reactions as exo/endothermic.</p> <p>This feeds on from key stage 2 where students learnt how to compare materials on</p>	To describe energy changes in reactions.	<p>Permanganate and glycerol, ammonium chloride and barium hydroxide.</p> <p>Exo/endo reactions prac.</p>	<ul style="list-style-type: none"> <li>I can state that during reactions energy maybe released or absorbed.</li> <li>I can explain</li> </ul>	<p>Answers to retrieval questions.</p> <p>Exit Ticket 1</p>

	<p>the basis of their properties.</p> <p>This feeds forward to year 9 energy changes where students have to calculate the energy change taking place.</p>			<p>whether a reaction is exothermic or endothermic.</p> <p><b>Vocabulary:</b> Exothermic, endothermic, absorbed, released, temperature, energy, bonds.</p>	
Chemistry Term 3 lesson 6	<p>To investigate energy changes in reactions.</p> <p>This feeds on from previous year 7 units where students have learnt how to plan and carry out investigations.</p> <p>This feeds forward to all other year groups where students continue to use and develop these skills in investigations and required practicals.</p>	To undertake a required practical.	Energy Changes req prac.	<ul style="list-style-type: none"> <li>I can follow procedures and collect valid data.</li> <li>I can process information.</li> <li>I can use my data to classify results as exothermic and endothermic.</li> </ul> <p><b>Vocabulary:</b> Initial, final, change, insulator, surroundings, exothermic, endothermic.</p>	Answers to retrieval questions.
Chemistry Term 3 lesson 7	<p>To explain reasons for using catalysts.</p> <p>This feeds on from key stage 2 where students learnt how to compare materials on the basis of their properties.</p> <p>This feeds forward to year 11 rates of reaction where students explain how catalysts work to</p>	To describe how catalysts work	Elephants toothpaste, transition metal catalysts exp.	<ul style="list-style-type: none"> <li>I can name some ways to speed up chemical reactions.</li> <li>I can describe factors that affect reaction rate with reference to particles and collisions.</li> <li>I can explain how collision are random and must be successful in order for a reaction to occur.</li> </ul>	<p>Answers to retrieval questions.</p> <p>Feedback on 6 mark question.</p> <p><b>Homework:</b> KS3 Science workbook pages 126-129</p>



	change the rate.			<p><b><u>Vocabulary:</u></b> Collison, activate, successful, initiate, random, particles, catalyst</p>	
Chemistry Term 3 lesson 8	<p>To classify changes as chemical or physical. This feeds on from key stage 2 where students learnt how to compare materials on the basis of their properties. This feeds forward to year 10 quantitative chemistry where students learn about the conservation of mass and balancing equations.</p>	To describe types of change.	Chemical/physical changes exp.	<ul style="list-style-type: none"> <li>I can describe the difference between chemical and physical changes.</li> </ul> <p><b><u>Vocabulary:</u></b> Reversible, irreversible, change, chemical, physical.</p>	Answers to retrieval questions.
Chemistry Term 3 lesson 9	<p>To explain choices of monitoring the rate of a reaction. This feeds on from key stage 2 where students learnt how to compare materials on the basis of their properties. This feeds forward to year 11 rates of reaction where students have to select and explain how to measure the rate of a chemical change.</p>	To describe methods of observing reactions.	Monitoring reactions exp.	<ul style="list-style-type: none"> <li>I can identify methods to measure the speed of a reaction.</li> <li>I can describe how a method can determine the rate of a chemical reaction.</li> <li>I can evaluate a method to measure the rate of a chemical reaction.</li> </ul> <p><b><u>Vocabulary:</u></b> Rate, extent, time, volume, mass, advantage,</p>	<p>Answers to retrieval questions.</p> <p>Answers to homework questions.</p>

				disadvantage, suitability,	
Chemistry Term 3 lesson 10	To explain combustion and thermal decomposition reactions. This feeds on from key stage 2 where students learnt how to compare materials on the basis of their properties. This feeds forward to year 11 organic chemistry where students learn about different types of combustion.	To describe combustion.	Demo burning fuels and thermal decomposition of copper carbonate.	<ul style="list-style-type: none"> <li>I can describe combustion, displacement, neutralisation and thermal decomposition as examples of chemical reactions.</li> <li>I can explain the conditions and uses of different types of chemical reaction.</li> </ul> <p><b><u>Vocabulary:</u></b> Combustion, displacement, neutralisation, thermal decomposition, condition, applications</p>	Answers to retrieval questions.
Chemistry Term 3 lesson 11	To explain methods of corrosion prevention. This feeds on from key stage 2 where students learnt how to compare materials on the basis of their properties. This feeds forward to year 10 chemical changes where students learn about oxidation and reduction.	To describe oxidation and reduction reactions.	Rusting demo.	<ul style="list-style-type: none"> <li>I can identify the condition required for corrosion.</li> <li>I can explain the difference between corrosion and rusting.</li> <li>I can suggest methods of preventing corrosion.</li> <li>I can explain how different methods of prevention work.</li> </ul> <p><b><u>Vocabulary:</u></b> Corrosion, rusting, oxidation, reduction, prevention, sacrificial.</p>	Answers to retrieval questions.
Chemistry	To consolidate all of	To prepare for		<ul style="list-style-type: none"> <li>I can identify my</li> </ul>	Answers to retrieval

Term 3 lesson 12	our learning in the unit.	assessment		<p>areas to develop.</p> <ul style="list-style-type: none"> <li>I can use a variety of resources to support my revision.</li> </ul>	<p>questions.</p> <p>Exit Ticket 2</p> <p><b>Homework:</b> Revision (Seneca, mats, bitesize)</p>
Chemistry Term 3 lesson 13	To check what we know.	To undertake assessment	Low stakes assessment and go through identifying misconceptions.		Low stakes end of topic assessment.
Physics Term 3 lesson 1	<p>To calculate the particles in an atom.</p> <p>This feeds on from year 7 term 2 where students learnt about the structure of the atom.</p> <p>This feeds forward to all key stage 4 chemistry units where the structure of the atom is a core piece of knowledge.</p>	To describe the structure of an atom.		<ul style="list-style-type: none"> <li>I can state the sub-atomic particles in an atom.</li> <li>I can calculate the number of each sub-atomic particle.</li> <li>I can describe the nuclear model of the atom.</li> </ul> <p><b>Vocabulary:</b> Proton, electron, neutron, charge, location, attraction.</p>	Answers to retrieval questions.
Physics Term 3 lesson 2	<p>To explain static electricity in terms of particles.</p> <p>This feeds on from key stage 2 where students learnt about electrical components in simple circuits.</p> <p>This feeds forward to year 9 electricity</p>	To explain how static electricity is produced.	Van der graaf generator and accessories.	<ul style="list-style-type: none"> <li>I can explain how objects become charged.</li> <li>I can describe electrostatic forces as affecting objects inside the electric field of a charged object.</li> <li>I can discuss the</li> </ul>	<p>Answers to retrieval questions.</p> <p><b>Homework:</b> 6 mark question on static electricity.</p>

	where students learn about how static electricity is used.			<p>applications of static electricity.</p> <ul style="list-style-type: none"> <li>• I can link current to the structure of atoms.</li> <li>•</li> </ul> <p><b>Vocabulary:</b> Conductor, insulator, charge, spark, electron, friction, static.</p>	
Physics Term 3 lesson 3	<p>To determine rules for series circuits.</p> <p>This feeds on from key stage 2 where students learnt about electrical components in simple circuits.</p> <p>This feeds forward to year 9 electricity where students learn to solve problems in complex circuits.</p>	To describe relationships in series circuits.	Locktronics	<ul style="list-style-type: none"> <li>• I can recall that circuits must be complete.</li> <li>• I can identify a series circuit.</li> <li>• I can identify common circuit symbols.</li> <li>• I can describe how to connect ammeters and voltmeters.</li> <li>• I can state what current and potential difference do in a series circuit.</li> </ul> <p><b>Vocabulary:</b> Series, component, voltmeter, ammeter, current, potential difference.</p>	Answers to retrieval questions.
Physics Term 3 lesson 4	<p>To determine rules for parallel circuits.</p> <p>This feeds on from key stage 2 where students learnt about electrical components</p>	To describe relationships in parallel circuits.	Locktronics	<ul style="list-style-type: none"> <li>• I can state the effect of a higher potential difference on bulbs.</li> <li>• I can describe the potential difference in a parallel circuit.</li> </ul>	<p>Answers to retrieval questions.</p> <p>Exit Ticket 1</p>

	<p>in simple circuits.</p> <p>This feeds forward to year 9 electricity where students learn to solve problems in complex circuits.</p>			<ul style="list-style-type: none"> <li>I can describe current in a parallel circuit.</li> </ul> <p><b><u>Vocabulary:</u></b> Parallel, equally, unequally, identical, route.</p>	
Physics Term 3 lesson 5	<p>To deduce current and voltage readings using circuit rules.</p> <p>This feeds on from key stage 2 where students learnt about electrical components in simple circuits.</p> <p>This feeds forward to year 9 electricity where students learn to solve problems in complex circuits.</p>	To use rules in circuits.	Knotted rope model.	<ul style="list-style-type: none"> <li>I can define the terms current, potential difference and resistance.</li> <li>I can recall the current and potential difference rules for series and parallel circuits.</li> <li>I can use the circuit rules to solve missing ammeter and voltmeter readings in series and parallel circuits.</li> </ul> <p><b><u>Vocabulary:</u></b> Parallel, series, current, voltage, equal shared.</p>	<p>Answers to retrieval questions.</p> <p>Feedback on 6 mark question.</p> <p><b><u>Homework:</u></b> Georg Ohm reading and comprehension task.</p>
Physics Term 3 lesson 6	<p>To manipulate Ohms law equation.</p> <p>This feeds on from key stage 2 where students learnt about electrical components in simple circuits.</p> <p>This feeds forward to year 9 electricity where students learn to solve problems in complex</p>	To explain resistance.	Resistance tray model and fuse wire	<ul style="list-style-type: none"> <li>I can recall the units for current, resistance and potential difference.</li> <li>I can describe the effects of increased resistance.</li> <li>I can identify the direction of current flow.</li> <li>I can calculate</li> </ul>	Answers to retrieval questions.

	circuits using Ohms law.			<p>current and resistance.</p> <ul style="list-style-type: none"> <li>I can calculate quantities by rearranging equations.</li> </ul> <p><b><u>Vocabulary:</u></b> Ohm, atoms, electrons, flow, resist, friction, heating effect.</p>	
Physics Term 3 lesson 7	<p>To investigate factors affecting resistance.</p> <p>This feeds on from previous year 7 units where students have learnt how to plan and carry out investigations.</p> <p>This feeds forward to all other year groups where students continue to use and develop these skills in investigations and required practicals.</p>	To undertake a required practical.	Resistance req. prac.	<ul style="list-style-type: none"> <li>I can discuss resistance in terms of conductors and insulators.</li> <li>I can link conduction and insulation with atomic structure.</li> <li>I can suggest applications for materials of higher and lower resistance.</li> </ul> <p><b><u>Vocabulary:</u></b> Application, suitability, insulator, conductor.</p>	<p>Answers to retrieval questions.</p> <p>Answers to homework questions.</p>
Physics Term 3 lesson 8	<p>To explain magnetic field strengths.</p> <p>This feeds on from key stage 2 where students learnt about the attraction and repulsion between magnets.</p> <p>This feeds forward to year 11 magnetism</p>	To describe magnetism.	Magnetic fields exp.	<ul style="list-style-type: none"> <li>I can name three magnetic materials.</li> <li>I can state how poles behave.</li> <li>I can find the shape of a magnetic field.</li> <li>I can show the direction of field lines.</li> <li>I can describe the earth and compasses</li> </ul>	<p>Answers to retrieval questions.</p> <p><b><u>Homework:</u></b> KS3 Science workbook pages 211/212</p>

	where students learn how to calculate forces exerted by magnetic fields.			as examples of magnets.  <b><u>Vocabulary:</u></b> Compass, poles, magnetic, attraction, repulsion, field.	
Physics Term 3 lesson 9	To compare permanent magnets and electromagnets. This feeds on from key stage 2 where students learnt about the attraction and repulsion between magnets. This feeds forward to year 11 magnetism where students use the idea of electromagnets to explain how motors and transformers work.	To describe how electromagnets work.	Demo magnetic fields around a wire. Demo electromagnets.	<ul style="list-style-type: none"> <li>I can list uses of electromagnets.</li> <li>I can recognise how electromagnets work.</li> <li>I can describe temporary and permanent magnets.</li> <li>I can describe how field lines distance indicate strength.</li> </ul> <b><u>Vocabulary:</u></b> Permanent, temporary, electromagnet.	Answers to retrieval questions.
Physics term 3 lesson 10	To investigate the factors affecting electromagnets. This feeds on from previous year 7 units where students have learnt how to plan and carry out investigations. This feeds forward to all other year groups where students continue to use and	To undertake a required practical.	Electromagnets required prac.	<ul style="list-style-type: none"> <li>I can describe how to make an electromagnet and increase its strength.</li> <li>I can support my conclusions with valid data.</li> </ul> <b><u>Vocabulary:</u></b> Core, turns, potential difference, current.	Answers to retrieval questions.  Answers to homework questions.

	develop these skills in investigations and required practicals.				
Physics Term 3 lesson 11	To consolidate all of our learning in the unit.	To prepare for assessment		<ul style="list-style-type: none"> <li>I can identify my areas to develop.</li> <li>I can use a variety of resources to support my revision.</li> </ul>	<p>Answers to retrieval questions.</p> <p>Exit Ticket 2</p> <p><b>Homework:</b> Revision (Seneca, mats, bitesize)</p>
Physics Term 3 lesson 12	To check what we know.	To undertake assessment	Low stakes assessment and go through identifying misconceptions.		Low stakes end of topic assessment.