

Term	Week	Focus	Summary	Learning Outcomes	Learning skills
Term 1.1	1	Cells	A1 Cells and organs	Understand eukaryotic cells, inheritance and the control of homeostasis	Learners develop the ability to break down a research task and decide on a suitable approach (ACP Analysing) when researching cells.
	2	Cells	A2 Inheritance	Understand eukaryotic cells, inheritance and the control of homeostasis	Learners develop the ability to be flexible and open-minded when exploring new content in relation to inheritance.
	3	Cells	A3 Homeostasis, control and communication	Understand eukaryotic cells, inheritance and the control of homeostasis	<p>Learners will practise the ability to demonstrate confidence and experiment with novel ideas such as Homeostasis (VAA Agile).</p> <p>Learners will practise the ability to work with big ideas related to electrostatic forces of attraction and atomic structure from previous lessons (ACP Linking).</p> <p>Learners will develop their ability to train and prepare through working on past exam questions in order to become more proficient (VAA Hardworking).</p>
	4	Structure and Bonding	B1 Atomic structure	Understand atomic structure, the periodic table and chemical reactions	<p>Learners will develop the ability to work effectively within the rules of the atomic structure (ACP Analysing) when drawing crystal structures.</p> <p>Learners will practise to use connections from their knowledge of ionic, covalent and metallic bonding to seek generalisations about giant covalent structures and their properties (ACP Linking).</p>

					Learners will have the opportunity to develop their use of scientific language with such ease that it no longer requires active thinking (ACP Realising).
	5	Structure and Bonding	B2 Periodic table	Understand atomic structure, the periodic table and chemical reactions	<p>Learners will be able to generate ideas from their knowledge of sub-atomic particle charges and bonding to create shapes of molecules in 3 dimensional space (ACP Creating).</p> <p>Learners will practise the ability to work with big ideas related to electrostatic forces of attraction and atomic structure from previous lessons (ACP Linking).</p> <p>Learners will develop their ability to train and prepare through working on past exam questions in order to become more proficient (VAA Hardworking).</p>
	6	Structure and Bonding	B3 Chemical reactions	Understand atomic structure, the periodic table and chemical reactions	Learners will develop their ability to train and prepare through working on past exam questions in order to become more proficient (VAA Hardworking).
	7	Chemical Reactions	The s Block Elements Trends and Reactivity of s Block Elements	Describe the appearance and physical properties of s block elements Describe the reactivity of s block elements with water and predict the products formed Predict the reaction of s block elements with oxygen, restricted to simple oxides and name the products formed	<p>Learners will develop the ability to use the Periodic Table with such ease that identifying key information no longer required active thinking (ACP Realising).</p> <p>Learners practise the ability to analyse what is happening in one element to extrapolate and generate general descriptions (ACP Linking).</p>

				<p>Write equations for displacement reactions involving s block elements and their ions</p> <p>Perform flame tests of ions and identify s block ions</p> <p>Predict solubility of s block hydroxides and sulfates</p> <p>Explain the trends in physical and chemical properties down the s block group</p> <p>Compare physical and chemical properties of s block elements with transition metals such as iron and copper</p> <p>Write balanced chemical equations for all reactions involving s block elements</p>	
Term 1.2	1	Chemical Reactions	<p>The Halogens</p> <p>Trends and Reactivity of Halogens</p>	<p>Describe the appearance and physical properties of halogens</p> <p>Explain the reactivity of halogens with metals and their ability to undergo displacement reactions</p> <p>Explain the reaction of metal halides with concentrated sulfuric acid and how this can be used to identify the halide ion</p> <p>Describe the test for halide ions using acidified silver nitrate and ammonia solution</p> <p>Identify trends in physical and chemical properties of halogens down the group</p> <p>Write balanced chemical equations for all reactions involving halogens</p>	<p>Learners develop the ability to be flexible and open-minded when exploring the reactivity of halogens in relation to their knowledge of the atomic structure (VAA Agile).</p>

	2	Energy		Understand energy and electromagnetic waves Forms of energy including examples of: o thermal o electrical o light o sound of mechanical (kinetic and potential) o nuclear.	Learners practise the ability to analyse what is happening in one element to extrapolate and generate general descriptions of chemical and physical changes (ACP Linking).
	3	Energy	C1 Energy and energy stores Oxidation States	Understand energy and electromagnetic waves Justify energy stores: o chemical o kinetic (in a moving object) o gravitational potential o elastic potential (stretched or compressed spring) o thermal (warm object) o nuclear.	Learners will have the opportunity to work effectively within the rules of assigning oxidation states (ACP Analysing). Learners will be able to transfer knowledge from one known reaction to an unknown reaction when assigning oxidation states (ACP Metathinking). Learners will be able to assign oxidation states with speed and accuracy (ACP Realising).
	4	Energy	C1 Energy and energy stores Oxidation States	Understand energy and electromagnetic waves Critically Analyse energy transfers: o mechanical (force moves through a distance) o electrical (electrical devices) o conduction (temperature differences) o convection (currents in a fluid) o radiation, e.g. infrared.	Learners will have the opportunity to work effectively within the rules of assigning oxidation states (ACP Analysing). Learners will be able to transfer knowledge from one known reaction to an unknown reaction when assigning oxidation states (ACP Metathinking). Learners will be able to assign oxidation states with speed and accuracy (ACP Realising).
	5	Electromagnetic waves	C2 Energy transfers and transformations	Understand energy and electromagnetic waves Experiment with wave characteristics and units: o amplitude o frequency o wavelength o wave speed o calculations.	Learners will be able to break down a task, decide on a suitable approach and then use their problem solving skills to achieve a numerical answer (ACP Analysing).

					<p>Learners will have the opportunity to monitor, evaluate and self-correct their work (ACP Metathinking).</p> <p>Learners will be able to work at speed and with accuracy to achieve maximum marks in calculation questions (ACP Realising).</p>
	6	electromagnetic waves	C3 Waves and the electromagnetic spectrum	<p>Evaluate the harmful effects of excessive exposure to e.m. radiation:</p> <ul style="list-style-type: none"> o microwaves cause internal heating of body cells o infrared causes skin burns o ultraviolet damages surface cells and eyes, leading to skin cancer and eye conditions o X-rays and gamma rays cause mutation or damage to cells in the body 	<p>Learners will learn to be able to work in teams and take a variety of roles by evaluating their own ideas and contributions when working in groups for the practical (VAA Empathetic).</p> <p>Learners will develop their ability to train and prepare through working on past exam questions in order to become more proficient (VAA Hardworking).</p>
	7	electromagnetic waves	C3 Waves and the electromagnetic spectrum		<p>Learners will develop their ability to train and prepare through working on past exam questions in order to become more proficient (VAA Hardworking).</p>