



		Year 7 6 lessons per fortnight		
	Wk	Topic	Learning Content	Assessment
Autumn - rotation	1	Lab Safety	Describe how to safely work in a lab practical Explain how to correctly use a Bunsen burner To describe how to work scientifically	Bunsen Burner Licence
	2	Particles & Properties	Apply the particle model when considering states of matter. Explain diffusion.	
	3		Connect gas pressure to the particle model. Vocabulary:	
	4		Particle, element, atom, mixture, compound, periodic table, diffusion, concentration, pressure,	End of Topic Test
	5	Cells	Recognise specialised cells under a microscope. Explain how uni-cellular organisms are adapted.	
	6		Describe how to use a microscope Vocabulary:	
	7		Mitochondria, membrane, nucleus, vacuole, cytoplasm, surface area, nutrients, minerals	End of Topic Test
	8	Forces	Explain balanced & unbalanced forces Discover the effects of forces	
	9		Discover how friction & drag affect an object, including factors that affect the size of frictional or drag forces. Vocabulary: aerodynamic, downforce, equilibrium, friction, contact non-contact	
	10			End of Topic Test
	11	Elements	Identify substances that are elements Define atom, element & compound	
	12		Compare properties of atom, element & compounds Link behaviour of atoms to properties of a substance	
	13		Vocabulary: Atoms, element, compound, formula, mass	End of Topic Test Autumn Term Assessment
	14	Structure & Function of Body	Apply ideas of cells & their adaptations. Explain how the skeleton relates to its function & movement.	
15	Explain why some organisms need organ systems. Vocabulary: Skeletal, muscle, tendon, ligament, antagonistic, relax, contract, organism.			
1			End of Topic Test	
Spring - rotation	2	Sound & light	Explain how sound is made, transmitted, absorbed & reflected.	
	3		Explain how light is made, transmitted, absorbed & reflected. Investigate how light passes through transparent materials: reflection & dispersion.	
	4		Vocabulary: Transmit, absorb, reflect, refract, disperse, opaque, translucent, transparent.	End of Topic Test
	5	Reactions	Investigate exothermic & endothermic reactions. Explain why a reaction is an example of combustion or thermal decomposition.	
	6		Use a diagram of relative energy levels during a change of state. Vocabulary: Exothermic, endothermic, combustion, decomposition, sublimation, latent heat, freezing point.	
	7			
	8			End of Topic Test
	9	Human Reproduction	Know the organs of female & male that are involved. Explain how a foetus develops.	
	10		Consider changes as a child grows into adulthood. Describe causes of low fertility.	
	11		Vocabulary: Penis, vagina, ovary, testis, adolescence, fertilisation, foetus, contractions, cervix.	
	12			Spring Assessment End of Topic Test
	Summer - rotation	1	Plant reproduction	Identify parts of the flower & link their structure to their function. Describe plant reproduction.
2		Explain why seed dispersal is important. Vocabulary:		
3		Carpel, anther, stigma, style, stamen, pollen, ovum, ovary, fertilisation, pollination		End of Topic Test
4		Earth & Space	Identify objects in the night sky Describe the difference between seasons	
5			Explain & link properties & features the Solar System Describe what eclipses are	
6			Vocabulary: solar system, sun, moon stars astronomy, planet, dwarf planet	End of Topic Test
7		Acids & Alkalis	Litmus & UI as indicators. Identify the best indicator.	
8			Explain neutralisation reactions. Vocabulary:	
9			Acid, alkali, neutralisation, acidic, alkaline, sulphuric, hydrochloric, litmus, universal indicator.	
10				End of Topic Test
11			Guided Revision	End of year test
12			STEM Challenges	

		Year 8 6 lessons per fortnight		
	Topic	Learning Content	Assessment	
Autumn - rotation	The Periodic Table	Know how symbols & atomic numbers are used in the Periodic Table. Describe some properties of metals & non-metals Interpret data to describe properties of Group 1 Use patterns to predict properties of Group 0,1 & 7 Write word equations to represent displacement Vocabulary: Reactivity series, alkali metals, transition metals. Group, period, reactive	End of Topic Test	
		Health & Lifestyle	Describe healthy & unhealthy diets. Describe adaptations in the digestive system. Calculate the energy requirements of people Explain why testing food for starch, lipids, sugars & protein is important Describe the dangers associated in drug use & alcohol Vocabulary: Enzyme, protein, lipid, sugar, starch, recreational, alcohol, small intestine, villi	End of Topic Test
			Electricity & Magnetism	Investigate, voltage, current & resistance in a circuit. Calculate resistance. Investigate the strength of electromagnets. Examine & construct electrical energy transfers diagrams. Vocabulary: Resistance, ohms, electromagnet, core, repeatability, dissipated, transfer. positive charge, negative charge, attract, repel.
	Separation Techniques			Investigate mixtures, solutions, solubility, filtration, evaporation, distillation & chromatography. Vocabulary: solution, solvent, solute, chromatogram, chromatography, dissolve, pure, solubility
		Ecosystem Processes		Describe predator prey cycles Using food webs & chains, explain effects of environmental changes. Describe the process of respiration & photosynthesis Compare anaerobic & aerobic respiration Vocabulary: Energy, respiration, photosynthesis, mitochondrion, food chain, interdependence
			Energy	Describe how an object's temperature changes over time when heated or cooled. Define the three forms of heat transfer Explain how a method of thermal insulation works. Vocabulary: Increase, decrease, line graph, curve, latent heat, radiation, convection, conduction, exp&, insulation, energy transfer
	Metals & Acids			Describe what happens when metals react with acids Explain the test for hydrogen gas. Compare the reactions of different metals with oxygen Use the reactivity series to predict reactions. List some uses of ceramics Vocabulary: ceramic, displacement, metal, ore, reactivity series, polymer
		Adaptation & Inheritance		Explain the causes of extinction & natural selection. Consider the theories of survival of the fittest Describe the adaptations of common animals Explain how different adaptations supports the survival of animals in different environments Vocabulary: Inherit, traits, characteristics, genes, deoxyribonucleic acid, fertilisation, adaptations, Darwin, survival of the fittest, natural selection.
			Motion Pressure	Interpret distance time graphs Explain observations of pressure in fluids. Explain why objects either sink or float.. Calculate speed Vocabulary: pressure, stress, equation, atmospheric pressure, pascals,
	The Earth			Describe properties of the different layers of the Earth Compare sedimentary, metamorphic & igneous rock Explain how the rock cycle recycles material Explain why global warming happens Describe the process of recycling aluminium Vocabulary: atmosphere, cycle, weathering, crust, mantle, deforestation, greenhouse effect, igneous, lava, magma, mantle, physical, chemical, sediment
				Guided Revision
			STEM Challenges	