SUBJECT: SCIENCE

YEAR 9 OVERVIEW

	Autumn 1	4	Autumn 2	Spring 1 S		Spring 2	Summer 1		Summer 2	
Topic (s)	9A Respiration	9B Reactivity	9C Engineering				Transiti			
	and circulation			B1	C1 States of		P1 Motion	B2 Cellular	C2 The Periodic	P2 Forces 1
				Microscopes	Matter and			transport	table	
				and cells	Separation					
					techniques					
Tonic	Know the structure and	Develop understanding	Understand the	To consolidate	To consolidate		Describe the motion	Consolidate	Understand and use	Analyse the forces
	function of organs involved	of chemical reactions	concept of pressure.	understanding of the	understanding of		of an object and	understanding of	the currently accepted	acting on an object and
Objectives	in gas exchange and	and how chemists	Learn about practical	structure of plant	particle model.		how it changes over	diffusion. To extend to	atomic model and	how they affect
	circulation in humans.	represent chemical	applications of levers	animal and bacterial	To explain the		time.	osmosis and active	Periodic Table.	motion.
	Understand the effect of	changes using	and hydraulics.	cells. To describe	techniques			transport		
	smoking and exercise. on	equations.		To use microscopes	techniques.					
	health.			and calculate sizes						
Acquired	Describe the structure and	Understand and apply	Identify and describe	Use microscopes to	Use particle model to		Describe the motion	Describe diffusion in	Describe a simple	Represent the forces
Kasudadaa	function of the lungs and	the principle of	movement of levers	consolidate the	represent solids,		of objects.	gases and liquids.	atomic model.	acting on an object
Knowledge	the mechanism of	conservation of mass in	and their function.	structure of plant	liquids and gases and		Use quantitative	Explain the factors that	Describe the modern	using vector diagrams.
/ Skills	Dreatning.	Write word equations	Calculate simple	and animal cells.	to describe changes of		relationships	Describe osmosis Use	it differs from	Explain why objects
	humans, including structure	to represent chemical	Describe pressure and	slides of cells.	Explain the difference		displacement.	mass change in potato	Mendeleev's version.	constant speed using
	of the heart, blood vessels	reactions, particularly	the factors that	Explain the	between a pure		velocity and	chips to explain	Use ideas about atomic	Newton's 1 st Law.
	and blood components.	those involving metals.	increase or decrease	difference between	substance and a		acceleration.	osmosis and find the	structure to describe	Use the mathematical
	Explain the differences	Write symbols and	the pressure acting on	prokaryotic and	mixture, including		Understand the	concentration of a	the difference between	relationship between
	between aerobic and	formula.	a surface.	eukaryotic cells.	interpretation of		difference between	potato cell.	Elements and between	force, mass and
	anaerobic respiration in terms of reactants, products	write balanced symbol	Calculate pressure	Explain the structure	melting point data.		scalars and vectors.	Explain active	isotopes of the same	acceleration (Newton's
	formed and implications for	Describe the structure	Use the particle model	and animal cells.	separation including		analyse graphs of	examples of where it	Explain the properties	Describe interactions
	the organism.	of polymers.	to explain pressure in	Calculate	distillation, fractional		motion.	occurs.	of simple molecular	between objects
	Explain the impact of	Evaluate impact of	gases and liquids.	magnification and	distillation and				and giant covalent	(Newton's 3 rd Law).
	exercise, asthma and	production and		image size using	chromatography.				structures using ideas	Measuring forces
	smoking on the human gas	disposal of plastics.		different units of	Describe how waste			University shows the	about covalent	
Practical	exchange system.	Make and record	Using newton meters	measurement.	he made notable		Measuring speed	Using mass change in	bonaing.	
skill	weasuring long capacity	observations for	to measure forces.	Making slides and	Chromatography		and acceleration.	osmosis.	Measuring physical	
JKIII		chemical reactions.		using microscopes.	Distillation.		Use of light gates.		properties	
Target	Respiration	Chemical	Lever	Magnification	Particle		Displacement	Diffusion	Atom	Balanced
Vocabulary	Breathing	Reaction	Pivot	Eye piece	Cooling curve		Scalar	Osmosis	Nucleus	Unbalanced
vocabulary	Diffusion	Equation	Moment	Objective lens	Filtration		Vector	Active transport	Electron	Weight
	Anaerobic	Displacement	Pressure	Fukarvotic	Distillation		Direction	Percentage change in	Neutron	Gravitational
	Lung capacity	Symbol	Atmospheric	Prokarvotic	Fractional distillation		Velocity	mass	Mass number	Friction
	Heart	Formula	Fluid	Flagellum	Purification		Acceleration		Atomic number	Thrust
	Artery	Rate	Surface	Plasmid	Potable		Deceleration		Isotope	Repulsion
	Vein	Energy	Hydraulic	Adaptations	Sedimentation		Gradient		Period	Attraction
	Capillary	Catalyst		Microvilli	Chlorination				Group	Kau Assassationali
Assessment	SA Key Assessed task: Lung	SB Key Assessed task: Rate of reaction	SC Key Assessed task:	Key Assessed task	Key Assessed t	ask	Key Assessed task	Key Assessed task	Key Assessed task	Key Assessed task
	(evaluation)	(evaluation)		microscopes	End of topic test C1		Speed minus	03110313	13010463	End of topic test P2
	<u></u>	End of term	1 test	End of topic B1 test	Baseline test B	B-2nd go	End of topic test P1	End of topic test B2	End of topic test C2	End of Year 9 test
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Note: due to restrictions regarding practical resources, different classes will cover the topics for each term in different order. All classes will have covered the same content by the end of each term.

