



Year 7 Science Learning Journey

When?	Knowledge	Understanding	Assessment
September	Will be able to: <ul style="list-style-type: none"> • Work safely in the Lab and carry out simple practical procedures • Be able to plan an investigation and evaluate evidence in a variety of ways. 	Students will learn the basic practical skills required to work safely in the lab as well as how to work scientifically through questioning and evaluating practical investigations	AQA Transition test (105 marks)
Topic 1 B/C/P	Will be able to: B1Ch1 Cells <ul style="list-style-type: none"> • Describe the components of animal and plant cells • Describe how substances move in and out of cells • Be able to use a microscope P1 Ch1 Forces <ul style="list-style-type: none"> • State and describe the different types of contact and non contact forces • Describe balanced and unbalanced forces 	Students will carry out a range of practical experiments during these topics. B1Ch1 Cells key vocabulary: Amoeba cells concentration diffusion microscope nerve cell nucleus organisms red blood cell root hair cell specialised cell sperm cell unicellular P1 Ch1 Forces key vocabulary: air resistance balanced contact force drag force driving force elastic limit electrostatic force equilibrium friction gravity	B1 Ch1 test (40 marks) C1 Ch1 test (40 marks) P1 Ch1 test (40 marks)

When?	Knowledge	Understanding	Assessment
	<p>C1 Ch1 Particles and their behaviour</p> <ul style="list-style-type: none"> Describe the different changes of state in terms of particles Describe diffusion in liquids and gases and gas pressure. 	<p>Hooke's Law magnetic force newton (N)</p> <p>C1 Ch1 Particles and their behaviour key vocabulary: boiling point change of state condense diffusion evaporate freezing gas liquid melting melting point mixture particle solid states of matter sublime</p>	
<p>Topic 2 B/C/P</p>	<p>Will be able to:</p> <p>B1 Ch2 Structure and function of body systems</p> <ul style="list-style-type: none"> Describe the levels of organisation in the body Describe the different body systems and specific mechanisms within these body systems. 	<p>Students will carry out a range of practical experiments during these topics.</p> <p>B1 Ch2 Structure and function of body systems key vocabulary: alveolus antagonistic muscles bone cartilage diaphragm (breathing) gas exchange inhale joint ligament lungs multicellular organism organ system respiration tendon</p>	<p>B1 Ch2 test (40 marks) C1 Ch2 test (40 marks) P1 Ch2 test (40 marks)</p>

When?	Knowledge	Understanding	Assessment
	<p>C1 Ch2 Elements, Atoms and Compounds</p> <ul style="list-style-type: none"> Define and explain the terms element, atom and compounds Write compound names and chemical formulae <p>P1Ch2 Sound</p> <ul style="list-style-type: none"> Describe the properties of waves including the effects of differing amplitude and pitch Describe the applications of sound waves including echoes and ultrasound. 	<p>C1 Ch2 Elements, Atoms and Compounds key vocabulary:</p> <p>atom chemical formula chemical symbol compound element molecule Periodic Table</p> <p>P1Ch2 Sound key vocabulary:</p> <p>amplitude auditory canal compression decibel ear echo hertz incident wave longitudinal loudness medium pitch rarefaction reflected wave reflection sound speed of light speed of sound superpose transmitter transverse trough</p>	
<p>Topic 3 B/C/P</p>	<p>Will be able to:</p> <p>B1Ch3 Reproduction</p> <ul style="list-style-type: none"> Describe the reproductive 	<p>Students will carry out a range of practical experiments during these topics.</p> <p>B1Ch3 Reproduction key vocabulary:</p> <p>adolescence cervix embryo fertilisation</p>	<p>B1 Ch3 test (40 marks) C1 Ch3 test (40 marks) P1 Ch3 test (40 marks)</p>

When?	Knowledge	Understanding	Assessment
	<p>cycle from conception to birth.</p> <ul style="list-style-type: none"> Describe asexual reproduction in plants and the process from ovum to seed, followed by seed dispersal. <p>C1Ch3 Reactions</p> <ul style="list-style-type: none"> Describe the difference between chemical reactions and physical changes Describe different chemical reactions including exothermic and endothermic reactions and specific examples such as combustion and thermal decomposition. <p>P1 Ch3 Light</p> <ul style="list-style-type: none"> Investigate how light waves travel in different conditions including reflection and refraction Understand the workings of 	<p>fetus gametes germination implantation menstrual cycle period placenta pollination puberty seed dispersal sexual intercourse sperm cell</p> <p>C1Ch3 Reactions key vocabulary: balanced symbol equation chemical reaction combustion conservation of mass decomposition endothermic change exothermic change fossil fuel non-renewable oxidation physical change product reactant word equation</p> <p>P1 Ch3 Light key vocabulary: angle of incidence angle of reflection converging convex cornea diffuse reflection dispersion emit frequency incident ray</p>	

When?	Knowledge	Understanding	Assessment
	the eye.	law of reflection luminous non-luminous opaque optic nerve primary colour prism reflected ray refraction	
Topic 4 C/P	Will be able to: C1Ch4 Acids and Alkalis <ul style="list-style-type: none"> • Describe the properties of acids and alkalis, their reactions and how to identify them using pH. • Give word equations and practical instructions for making salts. P1Ch4 Space <ul style="list-style-type: none"> • Describe the features of the night sky. • Describe how night and day and seasons occur on Earth. 	Students will carry out a range of practical experiments during these topics. C1Ch4 Acids and Alkalis key vocabulary: acid alkali base concentrated corrosive dilute indicator neutral neutralisation pH scale salt universal indicator P1Ch4 Space key vocabulary: artificial satellite asteroid astronomer constellation dwarf planet Earth ellipse galaxy gas giant gravity lunar eclipse Mars Mercury	C1 Ch3 test (40 marks) P1 Ch3 test (40 marks)

When?	Knowledge	Understanding	Assessment
		Milky Way Moon natural satellite partial eclipse phases of the Moon planet season solar eclipse Solar System total eclipse Universe	