

Temperance Term

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	HALF TERM	
Topic	P3 Particle Model of Matter				P4 Atomic Structure					
Challenge Objective and Content (for all learners)	<p>P3 – Use the particle model to predict the behaviour in solids, liquids and gases.</p> <ul style="list-style-type: none"> -Students should be able to explain the differences in density between the different states of matter in terms of the arrangement of atoms or molecules. -RP5 Determine the densities of regular and irregular objects and liquids. -MS 1a, 3b,c,d, Calculate change in thermal energy using specific heat capacity 				<p>P4 – Describe the structure of the atom, the nuclear forces and atom stability.</p> <ul style="list-style-type: none"> -Describe the structure of the atom, with reference to atomic number and mass number -Describe the discovery of the electron led to the plum pudding model of the atom. The plum pudding model suggested that the atom is a ball of positive charge with negative electrons embedded in it. -Describe the properties of alpha, beta and gamma radiation -Use nuclear equations to represent radioactive decay -Calculate half life -Describe the sources of radiation and their dangers and uses 					
Inspire Opportunities	P3 - Explain the differences in density between the different states of matter in terms of the arrangement of atoms or molecules.				P4 - Compare and contrast isotopes using the correct nomenclature.					
Assessment Opportunities	End of Topic Test				End of Topic Test					

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	CHRISTMAS
Topic	P5 – Forces						
Challenge Objective and Content (for all learners)	<ul style="list-style-type: none"> -Identify and measure forces acting on objects -Describe the differences between contact and non-contact forces. -MS 3b,c Calculate weight and work done -MS1c, WS 4.5 Convert between newton-meters and joules -RP6 Investigate the link between force and extension with springs. -MS 3c Describe a moment as a turning force and be able to calculate moment using force and distance. 						
Inspire Opportunities	Use force-extension graphs to calculate elastic potential energy						
Assessment Opportunities	End of Topic Test						

Justice Term

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	HALF TERM
Topic	P5 – Forces						
Challenge Objective and Content (for all learners)	<ul style="list-style-type: none"> -Identify and measure forces acting on objects -Express a displacement in terms of magnitude and direction -MS 3b, c Calculate speed using distance travelled and time -Draw and interpret velocity time graphs -Apply Newton’s Laws 						
Inspire Opportunities	Determine speed, acceleration and distance from multiple graphs using mathematical tools such as area under line and gradient.						
Assessment Opportunities	End of Topic Test						

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	EASTER
Topic	P5 – Forces		P6 – Waves				
Challenge Objective and Content (for all learners)	<ul style="list-style-type: none"> -Identify and measure forces acting on objects -Express a displacement in terms of magnitude and direction -MS 3b, c Calculate speed using distance travelled and time -Draw and interpret velocity time graphs -Apply Newton’s Laws 		<p>Show how changes in velocity, frequency and wavelength, in transmission of sound waves from one medium to another, are inter-related</p> <ul style="list-style-type: none"> -Provide examples of transfers of energy by electromagnetic waves - Explain the uses and dangers of electromagnetic waves. 				
Inspire Opportunities	Determine speed, acceleration and distance from multiple graphs using mathematical tools such as area under line and gradient.		Explain that a perfect black body is an object that absorbs all of the radiation that hits it. No radiation is reflected or transmitted.				
Assessment Opportunities	End of Topic Test		End of Topic Test				

Courage Term

	Week 1	Week 2	Week 3	Week 4	Week 5	HALF TERM
Topic	P7 Magnetism and Electromagnetism				Revision	
Challenge Objective and Content (for all learners)	P7-Explain how electromagnetic effects are used in a variety of devices -Describe the differences between permanent and induced magnetism Draw the magnetic field pattern of a bar magnet -Describe how the magnetic effect of a current can be demonstrated					
Inspire Opportunities	P7 - Show that Fleming's left-hand rule represents the relative orientation of the force, the current in the conductor and the magnetic field					
Assessment Opportunities	End of Topic Test					

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	SUMMER
Topic	Y10 Mocks	P8 - Space Physics					
Challenge Objective and Content (for all learners)		-Explain the evidence for the expanding universe and the life cycle of a star -Describe and explain the life cycle of stars, including the idea of fusion -Explain how the size of the orbit depends on the objects speed. -Explain the red shift and how it provides evidence for the Big Bang model					
Inspire Opportunities		Explain the red shift and how evidence suggests the whole universe appears to be expanding					
Assessment Opportunities		End of Topic Test					