

Year 9

Timing	Unit Title	Key Question	Knowledge	Assessing understanding
Autumn	Changes of State and the Particle Model Conservation and Dissipation of Energy Energy Changes in Systems	How are particles arranged in matter and how do they behave? How does heat energy transfer? What is the Specific Heat Capacity of a substance and how do we measure it?	<ul style="list-style-type: none"> • Introduction to kinetic theory - particles • Solids, Liquids and Gases • Density theory • How do we measure Density (RP5) <ul style="list-style-type: none"> • Internal energy, conduction and Insulation • Insulation experiment - RP2 • Radiation - absorption, emission and reflection <ul style="list-style-type: none"> • Lesley Cube demonstration temperature of different colour surfaces <ul style="list-style-type: none"> • SHC Theory • SHC Practical • Power and Energy • Changes of State 	How understanding is assessed Students will be assessed on their ability to: <ul style="list-style-type: none"> • Recall the knowledge covered • Explain the Physical processes covered. • Interpret graphical and experimental data • Plan and describe valid experiments • Evaluate experimental procedures and results Skills <ul style="list-style-type: none"> • Description • Explanation • Evaluation • Comparison • Planning and carrying out investigations • Manipulating Mathematical Formulae Assessment point information Based on: <ul style="list-style-type: none"> • Home works during the term • Test on Solids, Liquids, Gases and Heat Transfer
Spring	Energy Changes in Systems		<ul style="list-style-type: none"> • Specific Latent heat • Evaporation 	How understanding is assessed Students will be assessed on their ability to: <ul style="list-style-type: none"> • Recall the knowledge covered • Explain the Physical processes covered.

	<p>Pressure in gases</p> <p>Further Energy Changes</p>	<p>What does the pressure of a gas depend on?</p> <p>How does Energy transfer?</p>	<ul style="list-style-type: none"> Pressure and volume in gases Boyle's law Pressure and volume in gases experiment Pressure and Temperature in gases Energy stores and pathways introduction Kinetic Energy GPE and converting from it to KE and back 	<ul style="list-style-type: none"> Interpret graphical and experimental data Plan and describe valid experiments Evaluate experimental procedures and results <p>Skills</p> <ul style="list-style-type: none"> Description Explanation Evaluation Comparison Planning and carrying out investigations Manipulating Mathematical Formulae <p>Assessment point information</p> <p>Based on:</p> <ul style="list-style-type: none"> Home works during the term Test on Specific Heat Capacity, Latent Heat, Evaporation and Pressure
Summer	Further Energy Changes	How does Energy transfer?	<ul style="list-style-type: none"> Stretching a spring and elastic energy Hooke's Law Required Practical More about elastic energy Power and efficiency 	<p>How understanding is assessed</p> <p>Students will be assessed on their ability to:</p> <ul style="list-style-type: none"> Recall the knowledge covered Explain the Physical processes covered. Interpret graphical and experimental data, Make connections between different areas of understanding. <p>Skills</p> <ul style="list-style-type: none"> Description Explanation Evaluation Comparison Planning and carrying out investigations

				<ul style="list-style-type: none">• Carrying out statistical tests and applying maths formulae <p>Assessment point information</p> <p>Based on:</p> <ul style="list-style-type: none">• Home works during the term• End of Year Exam on all topics studied so far.
--	--	--	--	--