

Subject	Physics		
Interpretation of National Curriculum into Year group Endpoints			
Year	Term 1	Term 2	Term 3
9	<p>Students will describe and explain the concepts of:</p> <p>P3 Particle model of matter</p> <ul style="list-style-type: none"> relating models of arrangements and motions of the molecules in solid, liquid and gas phases to their densities melting, evaporation, and sublimation as reversible changes calculating energy changes involved on heating, using specific heat capacity; and those involved in changes of state, using specific latent heat <p>P1 Energy</p> <ul style="list-style-type: none"> energy changes in a system involving heating, doing work using forces, or doing work using an electric current: calculating the stored energies and energy changes involved power as the rate of transfer of energy conservation of energy in a closed system, dissipation calculating energy efficiency for any energy transfers renewable and non-renewable energy sources used on Earth, changes in how these are used. 	<p>Students will describe and explain the concepts of:</p> <p>P2 Electricity</p> <ul style="list-style-type: none"> measuring resistance using p.d. and current measurements exploring current, resistance and voltage relationships for different circuit elements; including their graphical representations quantity of charge flowing as the product of current and time drawing circuit diagrams; exploring equivalent resistance for resistors in series the domestic a.c. supply; live, neutral and earth mains wires, safety measures power transfer related to p.d. and current, or current and resistance. 	<p>Students will describe and explain the concepts of:</p> <p>P4 Atomic structure</p> <ul style="list-style-type: none"> the nuclear model and its development in the light of changing evidence masses and sizes of nuclei, atoms and small molecules differences in numbers of protons, and neutrons related to masses and identities of nuclei, isotope characteristics and equations to represent changes ionisation; absorption or emission of radiation related to changes in electron orbits radioactive nuclei: emission of alpha or beta particles, neutrons, or gamma rays, related to changes in the nuclear mass and/or charge radioactive materials, half-life, irradiation, contamination and their associated hazardous effects, waste disposal nuclear fission, nuclear fusion and our Sun's energy