



Half term	TOPIC	CONTENT
1	Intro/ terminology	Introduction to the use of terminology and data analysis in Physics
	P3_1 Medical applications of physics	Use of X-rays and ultrasound in medicine, how they work and their dangers. The structure and function of the eye and use lenses to correct vision. Other uses of light.
	P3_2 Physics to make things work	Centre of mass, pendulums, calculating moments. How hydraulics are used and the calculation of pressure in a hydraulic system. Centripetal force and the factors that affect its size.
OCTOBER HALF TERM HOLIDAY		
2	P3_2 Physics to make things work continued	Centre of mass, pendulums, calculating moments. How hydraulics are used and the calculation of pressure in a hydraulic system. Centripetal force and the factors that affect its size.
	P3_3 Motor effect and transformers	Magnets and their fields, electromagnetic induction including the use of magnets in motors and Fleming's left hand rule. The structure and use of transformers in the national grid.
CHRISTMAS HOLIDAY		
3	Intro/ terminology	Introduction to the use of terminology and data analysis in Chemistry
	C3_1 The periodic table	The development of the periodic table. Properties and reactivity of the alkali metals, the transition metals and the halogens.
	C3_2 Water	What hard water is and how this hardness can be removed. Water treatment and issues relating to water softening and addition of chlorine and fluorine.
FEBRUARY HALF TERM HOLIDAY		
4	C3_2 Water continued	What hard water is and how this hardness can be removed. Water treatment and issues relating to water softening and addition of chlorine and fluorine.
	C3_3 Energy calculations	Comparing energy released by different fuels. Energy level diagrams and calculations of bond energies in endothermic and exothermic reactions
EASTER HOLIDAYS		
5	C3_4 Analysis and synthesis	Tests performed for positive and negative ions. How to perform a titration and the calculations associated with this process. The Haber process, making ammonia, including the optimum conditions required
	C3_5 Organic chemistry	The structure of alcohols, carboxylic acids and esters. The properties and uses of alcohols. Reactions of carboxylic acids and esters.
MAY HALF TERM HOLIDAY		
6	C3_5 Organic chemistry continued	The structure of alcohols, carboxylic acids and esters. The properties and uses of alcohols. Reactions of carboxylic acids and esters.
	ISAs	Practical investigation and written papers. (<i>controlled assessment</i>)