Year 11 – Science Autumn Term 1

Chemistry Unit 9: CC13-15 Groups, Rates and Energy Changes			
Chemistry Unit 9	CC13 Groups	Week 1	What are the properties of group 1 elements? Why do they have different properties?
			How do alkali metals react with water?
			How do the properties of group 7 elements change as you go down the group?
		Week 2	How can displacement reactions be used to work out the reactivity of halogens? How can we explain the reactivity? (2 lessons)
			Why are group 0 elements unreactive? What properties do they have that allow us to use them?
	CC14 Rates		What has to happen for two particles to react? How do we determine the rate of a chemical reaction?
			What are the factors that affect the rate of reaction?
		Week 3	Core Practical: Investigating reaction rates – gases. (2 lessons)
			Core Practical: Investigating reaction rates – colour changes. (2 lessons)
		Week 4	What is a catalyst and how do they work? (2 lessons)
	CC15 Energy Changes		What are exothermic and endothermic reactions?
			How can exothermic and endothermic reactions be modelled and explained?
		Week 5	**How are energy changes in reactions calculated? (HT)**
			Review and practice of Groups and Rates (2 lessons)
Physics Unit 9: CP9 Electricity and Circuits, CP10 Magnetism and the Motor Effect, CP11 Electromagnetic Induction			
Physics Unit 9	CP9 Electricity and Circuits	5	What are circuits, how do we draw them?
		Week 6	How is current measured? What happens to current as it passes around a circuit? (2 lessons)
			What is the connection between current and charge?
			What is resistance?
		Week 7	How does PD affect current and resistance in different components?
			Core practical: Investigating Resistance
			How do we calculate key values in circuits?
			How is energy transferred around circuits?
		Week 8	What is power and what units are used to measure it?
			How is electricity transferred around circuits?
			How do we stay safe with electricity?
			Review and Practise