Subject: GCSE Chemistry Triple Science

Year: 10

Autumn HT1 (approx. 21 lessons)	**Autumn HT2 (approx. 21 lessons)**	**Spring HT1 (approx. 15 lessons)**	**Spring HT2 (approx. 12 lessons)**	**Summer HT1 (approx. 12 lessons)**	**Summer HT2 approx. 6 lessons)**
1. Elements and compounds 2. Formulae and equations 3. Mixtures 4. History of the atom 5. Structure of the atom 6. Ions, atoms and isotopes 7. Electronic structure 8. Development of the periodic table 9. Metals and non metals 10. Exploring group 0 11. Exploring group 1	1. Graphene and fullerenes 2. Metallic bonding 3. Properties of metals and alloys 4. Nanoparticles and applications 5. Metal oxides 6. Reactivity series 7. Displacement 8. Extraction of metals and reduction 9. Acids and metals 10. Neutralisation 11. Soluble salts 12. RP making a salt	1. RP Electrolysis 2. Electron transfer 3. Balancing equations 4. Conservation of mass 5. Relative formula mass 6. Moles 7. Amounts of substances 8. Moles to balance equations 9. Concentrations of solutions 10. Limiting reactants	1. Volume of gases 2. Endothermic and exothermic reactions 3. RP temperature changes 4. Energy level diagrams 5. Energy change calculations 6. Cells and batteries 7. Fuel cells 8. Measuring rates 9. Collision theory and rates 10. The effect of temperature	1. Reversible reactions and energy change 2. Equilibrium 3. Changing concentration and equilibrium 4. Changing temperature and equilibrium 5. Changing pressure and equilibrium 6. Crude oil and hydrocarbons 7. Fractional distillation 8. Properties of hydrocarbons 9. Combustion	1. Carboxylic acids 2. Additional polymerisation 3. Condensing polymerisation 4. Amino acids 5. DNA 6. Pure substances 7. Formulations 8. Chromatography 9. Tests for gases

12. Exploring group 7 13. Reaction trends and predicting reactions 14. Transition metals 15. States of matter 16. Ionic bonding 17. Properties of ionic compounds 18. Covalent bonding 19. Properties of small molecules 20. Polymer structures 21. Giant covalent structures	13. pH and neutralisation 14. Titration 15. Strong and weak acids 16. The process of electrolysis 17. Electrolysis of molten ionic compounds 18. Using electrolysis to extract metals 19. Electrolysis of aqueous solutions	11. Percentage yield 12. Atom economy	11. The effect of concentration and pressure 12. The effect of catalysts 13. RP rate of reaction	10. Cracking and alkenes 11. Structure and formula of alkenes 12. Reactions of alkenes 13. Alcohols	