



| Yr 13 | Aut 1  | Aut 2  | Spring 1  | Spring 2 | Summer 1 | Summer 2 |
|-------|--|--|---|----------|----------|----------|
|       | YEAR 12 catch up: RP 5 Distillation of a product from a reaction                     | 3.3.12 Polymers  | Periodicity   |          |          |          |
|       | YEAR 12 catch up: RP 6 Tests for alcohols, aldehydes, alkene and carboxylic acid     | Amino acids, Proteins and DNA  | 3.2.4 Properties of Period 3 elements and their oxides  |          |          |          |
|       |  | 3.3.13.2 Proteins  | TEST 3.2.4  |          |          |          |
|       |  | 3.3.13.3 Enzymes   | Consolidating lesson  |          |          |          |
|       | PPE exams (Early oct)  | 3.3.13.4 DNA   | Transition Metals   | EXAM     |          |          |
|       |  | 3.3.13.5 Action of anti-cancer drugs                                       | 3.2.5.4 Formation of coloured ions  |          |          |          |
|       | Aromatic chemistry, amines, polymers   | 3.3.12 and 3.3.13  | 3.2.5.5 Variable oxidation states   |          |          |          |
|       | 3.3.10 Aromatic Chemistry  |  | 3.2.5.6 TM catalysts  |          |          |          |
|       |  | Organic synthesis and analysis & Structure determination                   |   |          |          |          |
|       | RP10 Preparation of 1. a pure solid and test of its purity                           | 3.3.15 Nuclear magnetic resonance spectroscopy                             | Reactions of ions in aqueous solution   |          |          |          |
|       | Amines   | RP12 Separating of species by thin-layer chromatography                    | RP11 Carry out simple test-tube reactions to identify transition metal ions in aqueous solution |          |          |          |
|       | 3.3.11 Amines  | TEST 3.3.14 and 3.3.15   | TEST 3.2.4, 3.2.5 3.2.6   |          |          |          |
|       | Consolidating lesson   | Consolidating lesson   |   |          |          |          |
|       | TEST 3.3.10 3.3.11   |  |   |          |          |          |
|       |  |  |   |          |          |          |
|       | Kinetics   | Acids, bases and buffers   | Electrode potentials and electrochemical cells  |          |          |          |
|       | 3.1.9.1 Rate equations AND Arrhenius   | 3.1.12 Acids and bases   | 3.1.11.1 Electrode potentials and cells   |          |          |          |
|       | 3.1.9.2 Determination of rate equation   | 3.1.12.1 Brønsted-Lowry acid-base equilibria in aqueous solutions          | 3.1.11.2 Commercial applications of electrochemical cells                                       |          |          |          |
|       | RP7a and 7b Measuring the rate of reaction by initial rate AND continuous monitoring | 3.1.12.3 The ionic product of water, $K_w$                                 | RP8 Measuring the EMF of an electrochemical cell  |          |          |          |
|       | TEST 3.1.9   | 3.1.12.4 Weak acids and bases $K_a$ for weak acids                         | TEST 3.1.11   |          |          |          |
|       | PPE exams (Early oct)  | 3.1.12.5 pH curves, titrations and indicators                              | Consolidating lesson  |          |          |          |
|       |  | 3.1.12.6 Buffer action   |   |          |          |          |
|       | Equilibrium constant $K_p$   | 3.1.12.3 The ionic product of water, $K_w$                                 |   |          |          |          |
|       | 3.1.10 Equilibrium constant $K_p$ for homogeneous systems                            | 3.1.12.6 Buffer action   |   |          |          |          |
|       | TEST 3.1.10  | RP9 Investigate how pH changes when a weak acid reacts with a strong base. |   |          |          |          |
|       | Consolidating lesson   | TEST 3.1.12  |   |          |          |          |
|       |  | Consolidating lesson   |   |          |          |          |