**Long Term 2 Year Plan Greatfields Science Department**

**KS5 Route Chemistry OCR**

| | | HT1 | HT2 | HT3 | HT4 | HT5 | HT6 |
|---|---|---|---|---|---|---|---|
| **Y12** | **Teacher 1** (5 hours/ fortnight) | Introduction(1 hr)<br>2.1.1 Atomic structure and isotopes (2 hrs)<br>2.1.2 – Compounds, formulae and equations (3 hours)<br>2.1.3 Amount of substance (7 hours)<br>**PAG 1.2**<br>**PAG 1.3** | 2.2.2 Bonding and structure (6hrs)<br>4.1.1 – Basic concepts of organic chemistry (8 hrs) | 4.1.2 Alkanes (3hrs)<br>4.1.3 Alkenes (5 hrs)<br>**5.4 (future)** | 4.2.1 – Alcohols (6 hrs)<br>4.2.2 – Haloalkanes (6hrs) **PAG 5.1** | 4.2.3 Organic synthesis (8 hrs)<br>**PAG 5.2**<br>4.2.4 Analytical techniques (5 hrs) | Revision<br>6.1.1 Aromatic compounds (4 hrs) |
| | **Teacher 2** (4 hours/ fortnight) | Baseline test (1 hr)<br>2.2.1 Electron structure (3 hrs)<br>2.1.4 Acids (6 hrs)<br>**PAG2.1**<br>2.1.5 – Redox (4 hrs) | 3.1.1 Periodicity (5 hrs)<br>3.1.2 Group 2 (4 hrs) | 3.1.3 The halogens (5hrs)<br>3.1.4 Qualitative analysis (4 hrs)<br>**PAG 4.2** | 3.2.1 – Enthalpy changes (10 hrs)<br>**PAG 3.1**<br>**PAG 3.3**<br>3.2.2 – Reaction rates (4 hrs) | 3.2.2 – Reaction rates (6 hrs)<br>3.2.3 – Chemical equilibrium (6 hrs) | Revision<br>5.1.1 How fast? (4hrs) |
| Y13 | **Teacher 1** (5 hours/ fortnight) | 6.1.1 Aromatic compounds (10hrs)<br>**Pag 7.1**<br><br>6.1.2 Carbonyl compounds (6 hrs) | 6.1.3 Carboxylic acids and esters (6 hrs)<br>6.2.1 – Amines (4 hrs)<br>**Pag 7.2**<br>**Pag 7.3**<br>6.2.2 Amino acids, amides and chirality (4 hrs)<br>6.2.3 Polyesters and polyamides (4 hrs) | 6.2.4 Carbon–carbon bond formation (4 hrs)<br>6.2.5 Organic synthesis (4 hrs)<br>**PAG6.1** | 6.3.1 Chromatography and qualitative analysis ( 8 hrs)<br>PAG6<br>6.3.2 Spectroscopy (8hrs) | **Revision** | **Final Exams** |
| | **Teacher 2** (4 hours/ fortnight) | 5.1.1 How fast? (12 hrs)<br>**PAG 10.1**<br>**PAG9.1** | 5.1.2 How far? (8 hrs)<br>5.1.3 Acids, bases and buffers (4 hrs) | 5.1.3 Acids, bases and buffers (9 hrs)<br>**PAG11.1**<br>5.2.1 Lattice enthalpy (5 hrs) | 5.2.3 Redox and electrode potentials (8 hrs)<br>**PAG 8.1**<br>electrochemical cells<br>Section 5.3 – | Transition elements (9 hrs)<br>5.3.2 Qualitative analysis (2 hrs)<br>**PAG4.3** | **Final Exams** |

Module 2: Foundations in chemistry
Module 3: Periodic table and energy

Module 4: Core organic chemistry
Module 5: Physical chemistry and transition elements
Module 6: Organic chemistry and analysis