

Teaching plan: two teachers

This is a plan for teaching AS and A-level Chemistry (two teachers) from September 2015. The number of weeks is based on each teacher taking half of the timetabled lessons.

Year 1

Teacher A

| Specification ref | Topic | Content | Practical | No. of weeks |
|-------------------|--|---------------|---|----------------|
| 3.1.1 | Atomic structure | Physical (P) | | 3.0 |
| 3.1.2 | Amount of substance | P | 1 Make up a volumetric solution and carry out a simple acid-base titration | 9.0 |
| 3.1.4 | Energetics | P | 2 Measurement of an enthalpy change | 7.0 |
| 3.1.6 | Chemical equilibria and Le Chatelier's principle and K_c | P | | 4.0 |
| 3.1.7 | Oxidation reduction and redox equations | P | | 2.0 |
| 3.2.2 | Group 2, the alkaline earth metals | Inorganic (I) | | 2.0 |
| 3.2.3 | Group 7(17), the halogens | I | 4 Carry out simple test-tube reactions to identify cations and anions in aqueous solution | 3.0 |
| 3.2.1 | Periodicity | I | | 1.0 |
| | | | | Total: 31.0 |

Teacher B

| Specification ref | Topic | Content | Practical | No. of weeks |
|-------------------|-----------------------------------|-------------|--|----------------|
| 3.1.3 | Bonding | P | | 6.4 |
| 3.1.5 | Kinetics | P | 3 Investigation of how the rate of a reaction changes with temperature | 3.0 |
| 3.3.1 | Introduction to organic chemistry | Organic (O) | | 4.0 |
| 3.3.2 | Alkanes | O | | 2.8 |
| 3.3.3 | Halogenoalkanes | O | | 4.0 |
| 3.3.4 | Alkenes | O | | 3.8 |
| 3.3.5 | Alcohols | O | 5 Distillation of a product from a reaction | 4.0 |
| 3.3.6 | Organic analysis | O | 6 Tests for alcohol, aldehyde, alkene and carboxylic acid | 3.0 |
| | | | | Total: 31.0 |

Year 2

Teacher A

| Specification ref | Topic | Content | Practical | No. of weeks |
|-------------------|--|---------|--|--------------|
| 3.1.8 | Thermodynamics | P | | 6.0 |
| 3.1.12 | Acids and Bases | P | 9 Investigate how pH changes when a weak acid reacts with a strong base and when a strong acid reacts with a weak base | 6.0 |
| 3.1.11 | Electrode potentials and electrochemical cells | P | 8 Measuring the EMF of an electrochemical cell | 5.0 |
| 3.2.5 | Transition metals | I | | 11.0 |
| 3.2.6 | Reactions of ions in aqueous Solution | I | 11 Carry out simple test-tube reactions to identify transition metal ions in aqueous solution | 2.6 |
| 3.2.4 | Properties of Period 3 elements and their oxides | I | | 1.4 |
| | | | | Total: 32.0 |

Teacher B

| Specification ref | Topic | Content | Practical | No. of weeks |
|-------------------|--|---------|--|--------------|
| 3.3.7 | Optical isomerism | O | | 0.8 |
| 3.3.8 | Aldehydes and ketones | O | | 1.4 |
| 3.3.9 | Carboxylic acids and derivatives | O | 10 Preparation of a pure organic solid and test its purity a pure organic liquid | 7.0 |
| 3.1.9 | Rate equations | P | 7 Measuring the rate of a reaction by an initial rate method by a continuous monitoring method | 5.0 |
| 3.3.10 | Aromatic chemistry | O | | 2.4 |
| 3.3.11 | Amines | O | | 1.8 |
| 3.3.12 | Polymers | O | | 1.4 |
| 3.3.13 | Amino acids, proteins and DNA | O | | 3.0 |
| 3.1.10 | Equilibrium constant K_p for homogeneous systems | P | | 2.0 |
| 3.3.15 | Nuclear magnetic resonance spectroscopy | O | | 4.0 |
| 3.3.16 | Chromatography | O | 12 Separation of species by thin-layer chromatography | 1.2 |
| 3.3.14 | Organic synthesis | O | | 2.0 |
| | | | | Total: 32.0 |