

# GCE A(S) Chemistry Topics Preview Sheet

Exam board: AQA

Syllabus code: 7405

Year 12

## Part 1 (Autumn)

### Physical chemistry

Atomic Structure

Amount of Substance

### Organic chemistry

Introduction to Organic Chemistry

Alkanes

## Part 2 (Autumn)

### Physical chemistry

Bonding

Energetics

### Organic chemistry

Halogenoalkanes

Alkenes

## Part 3 (Winter)

### Physical chemistry

Kinetics

Equilibria

Oxidation, Reduction and Redox Reactions

### Organic chemistry

Alcohols

Organic Analysis

### Inorganic chemistry

Periodicity

Group 2, Alkaline Earth Metals

Group 7, Halogens

## Parts 4-6 (Winter-Summer)

Revision (completion of content equivalent to AS syllabus)

Experiments

### Required practicals

Acid-base titration

Measurement of enthalpy change

Reaction rate change of temperature

Qualitative tests for aqueous ions

Distillation of a product from a reaction

# GCE A(S) Chemistry Topics Preview Sheet

**Year 13**

**Part 1 (Autumn)**

**Physical chemistry**

Thermodynamics

Kinetics

**Organic chemistry**

Nomenclature and Isomerism

Carbonyls

**Part 2 (Winter)**

**Physical chemistry**

Kinetics

Equilibrium

**Organic chemistry**

Aromatic (arenes)

Amines

**Part 3 (Winter)**

**Physical chemistry**

Electrode Potentials and Electrochemical Cells

Acids, Bases and Buffers

**Organic chemistry**

Polymerisation

Biochemistry (Amino acids, proteins, DNA)

**Part 4 (Winter)**

**Inorganic chemistry**

Periodicity

Transition Metals

Reactions of Inorganic Compounds in Aqueous Solutions

**Organic chemistry**

Organic syntheses routes

Analytical chemistry (NMR, chromatography)

**Part 5 (Spring)**

Revision

Experiments

**Required practicals**

Qualitative tests for alcohol, aldehyde, alkene, carboxylic acid

Reaction rate (kinetics)

EMF electrochemical cell

pH acid-base titration

Organic solid purity

Qualitative tests for aqueous transition metals ions

TL/paper chromatography

