A Level Chemistry Curriculum Map

YEAR 13

PHYSICAL AND ORGANIC CHEMISTRY

- Equilibrium constant
- Amino acids, proteins and DNA

Links to GCSE:
Natural polymers, reversible reactions

Links to the outside world:
Chemical engineering, food science, enzymes, biochemistry

ORGANIC CHEMISTRY

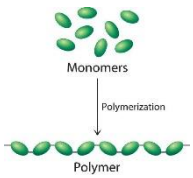
- NMR
- Chromatography
- Organic synthesis

Links to GCSE:
Chemical analysis

Links to the outside world:
Pharmaceuticals, chemical analysis, forensics

REVISION

REVISION & EXAMS



INORGANIC AND ORGANIC CHEMISTRY

- Properties of period 3
- Polymers

Links to GCSE:
Addition and condensation polymers

Links to the outside world:
Materials and their properties, manufacturing of materials, meeting demand for materials

INORGANIC AND ORGANIC CHEMISTRY

- Reactions of ions
- Amines

Links to GCSE:
Haber process, reduction and oxidation

Links to the outside world:
Pharmaceuticals, chemical manufacture

INORGANIC AND ORGANIC CHEMISTRY

- Transition metals
- Rate equations
- Aromatic chemistry

Links to GCSE:
Periodic table and rates of reaction

Links to the outside world:
Pharmaceuticals, chemical synthesis

PHYSICAL AND ORGANIC CHEMISTRY

- Electrode potentials
- Optical isomerism
- Carbonyl group

Links to GCSE:
Electrolysis and electrochemical cells

Links to the outside world:
Electric cars, sacrificial metals, drug manufacture

YEAR 12

INORGANIC CHEMISTRY AND ORGANIC REACTIONS

- Group 2 and 7
- Trends across the periodic table
- Alkenes and alcohols

Links to GCSE:
Periodic table, further organic

Links to the outside world:
Mechanisms for obtaining desired chemicals such as ethanoic acid from crude oil

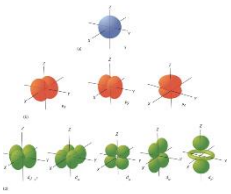
PHYSICAL CHEMISTRY

- Thermodynamics
- Acids and Bases

Links to GCSE:
Exothermic and endothermic reactions, chemical reactions and pH

Links to the outside world:
Maintaining pH in foods and medicines

YEAR 12 MOCKS



ORGANIC CHEMISTRY AND REACTIONS IN BALANCE

- Chemical equilibria
- Oxidation and Reduction
- Alkanes
- Halogenoalkanes

Links to GCSE:
Products of oil, reversible reactions

Links to the outside world:
Haber process, chemical synthesis, environmental chemistry and the ozone layer

CHEMICAL REACTIONS

- Energetics
- Kinetics
- Introduction to organic

Links to GCSE:
Chemical energy, rate of reaction, products from oil

Links to the outside world:
Chemical engineering, chemical manufacture, pharmaceuticals

FUNDAMENTALS OF CHEMISTRY

- Atomic structure
- Amount of substance
- Bonding

Links to GCSE:
Bonding and structure, quantitative chemistry

Links to the outside world:
Linking properties of materials to choices for chemical engineering

FURTHER STUDY

University – chemistry, medicine, chemical engineering
Apprenticeships – analytical chemistry

CAREER PATHS

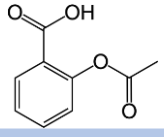
Chemical engineer, medicine, forensics science general science, researcher , pharmaceuticals

SKILLS

Research, analysis, practical/investigation, problem-solving

INTEREST

A continued passion and love of learning about chemistry



AO1

Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures

AO2

Apply knowledge and understanding of scientific ideas, processes, techniques and procedures

AO3

Analyse, interpret and evaluate scientific information, ideas and evidence