



# A Level Chemistry Curriculum Map



## 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

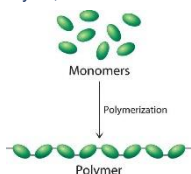
- NMR
- Chromatography
- Organic synthesis

### Links to GCSE:

Chemical analysis

### Links to the outside world:

Pharmaceuticals, chemical analysis, forensics



REVISION

## REVISION & EXAMS



## FURTHER STUDY

University – chemistry, medicine, chemical engineering

Apprenticeships – analytical chemistry

## CAREER PATHS

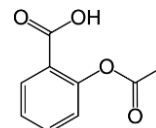
Chemical engineer, medicine, forensics science general science, researcher, pharmaceuticals

## SKILLS

Research, analysis, practical/investigation, problem-solving

## INTEREST

A continued passion and love of learning about chemistry



## 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



## 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

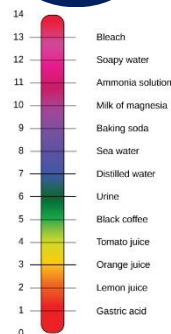
### Links to the outside world:

Maintaining pH in foods and medicines



## YEAR 12 MOCKS

YEAR 13



## 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

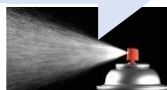
- Energetics
- Kinetics
- Introduction to organic

### 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

YEAR 12

A01

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

A02

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

A03

Analyse, interpret and evaluate scientific information, ideas and evidence