

Scientific  
Research

Food  
Science

Accountant

Government

Cosmetic Industry

Aid Work

Pharmaceutical  
Industry

Forensics

Patent  
Attorney

# Chemistry

Energy  
Industry

Analytical Chemistry

Science  
Writing

Chemical  
Engineering

Education and Outreach

Environmental  
Work

Clinical  
Work

Science  
Communication

# Subject Combinations

## *Traditional*

Maths, Physics and Biology

## *Common*

Psychology, Geography and Geology

## *Possible*

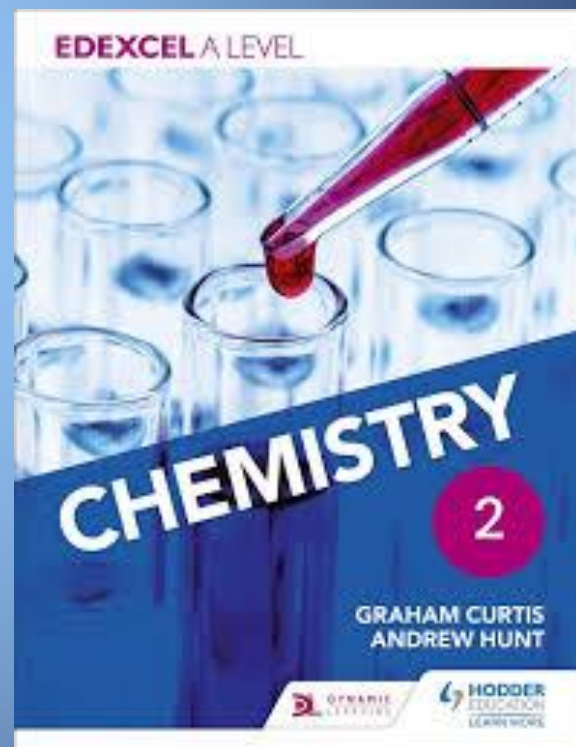
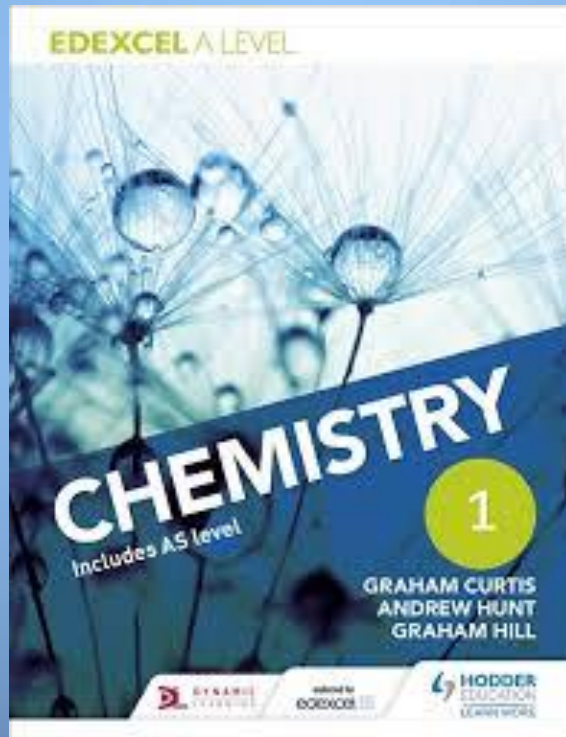
Modern Languages, History and English

## *Happened*

PE, Music, Dance and Drama

# EDEXCEL A LEVEL

Students must have achieved a minimum of a 7 in GCSE Chemistry or a 7,7 in GCSE Combined Science.



# Year 12

## *Autumn Term*

Topic 1 – Atomic structure and the periodic table

Topic 2 – Bonding and structure

Topic 4 – Inorganic chemistry and the periodic table

Topic 5 – Formulae, equations and amounts of substance

## *Summer Term*

Topic 13.1 - Lattice Energy

Topic 13.2 - Entropy

Topic 16 – Kinetics II

## *Spring Term*

Topic 3 – Redox I

Topic 6.1 – Introduction to organic chemistry

Topic 6.2 – Hydrocarbons: alkanes and alkenes

Topic 6.3 – Halogenoalkanes and alcohols

Topic 7 – Modern analytical techniques I

Topic 8 – Energetics I

Topic 9 – Kinetics I

Topic 10 – Equilibrium I

# Year 13

## *Autumn Term*

Topic 11 – Equilibrium II

Topic 12 – Acid-base equilibria

Topic 17.2 - Carbonyl compounds

Topic 17.1 – Chirality

Topic 17.3 - Carboxylic acids and their derivatives

Topic 18.1 – Arenes – benzene compounds

Topic 18.2 - Amines, amides, amino acids and proteins

Topic 18.3 - Organic synthesis

## *Spring Term*

Topic 14 – Redox II

Topic 15 – Transition metals

Topic 19 – Modern analytical techniques II

## *Exam*

**Paper 1** (9CHO/01) – Advanced Inorganic and Physical Chemistry  
1 hour 45 mins 30%

**Paper 2** (9CH0/02) – Advanced Organic and Physical Chemistry  
1 hour 45 mins 30%

**Paper 3** (9CH0/03) – General and Practical Principles in Chemistry  
2 hour 30 mins 40%

# Practical Endorsement (9CH0/04)

Students are internally assessed through the completion of Core Practicals.

## *Year 12*

- 1) Measuring the volume of a gas
- 2) Preparation of a standard solution from a solid acid
- 3) Finding the concentration of a solution of hydrochloric acid
- 4) Investigating the rates of hydrolysis of halogenoalkanes
- 5) The oxidation of ethanol
- 6) Chlorination of 2-methylpropan-2-ol
- 7) Analysis of some inorganic and organic unknowns
- 8) To determine the enthalpy change of a reaction using Hess' Law

## *Year 13*

- 9) Finding the  $K_a$  of a weak acid
- 10) Investigating some electrochemical cells
- 11) Redox titration
- 12) The preparation of a transition metal complex
- 13) Following the rate of the iodine-propanone reaction by titrimetric method
- 14) Finding the activation energy of a reaction
- 15) Analysis of some organic and inorganic unknowns
- 16) The preparation of aspirin

# Other Opportunities

## *In school*

A dedicated period of support a week  
Wednesday and Friday lunchtime clinics  
ChemSoc (student run)  
Research Club (IRIS linked)

## *Royal Society of Chemistry*

Learn Chemistry Partnership school  
ChemNet (for fourteen to eighteen year olds)  
Spectroscopy in a Suitcase  
Olympiad (Year 13)



**LearnChemistry**  
Enhancing learning and teaching





# Results

	A* - A	A* - B
2018	43%	64%
2017	43%	70%
2016	28%	63%
2015	34%	57%
2014	36%	62%



# Year 12 Experience

Myles Caddell and Haidee Owen

Questions?

