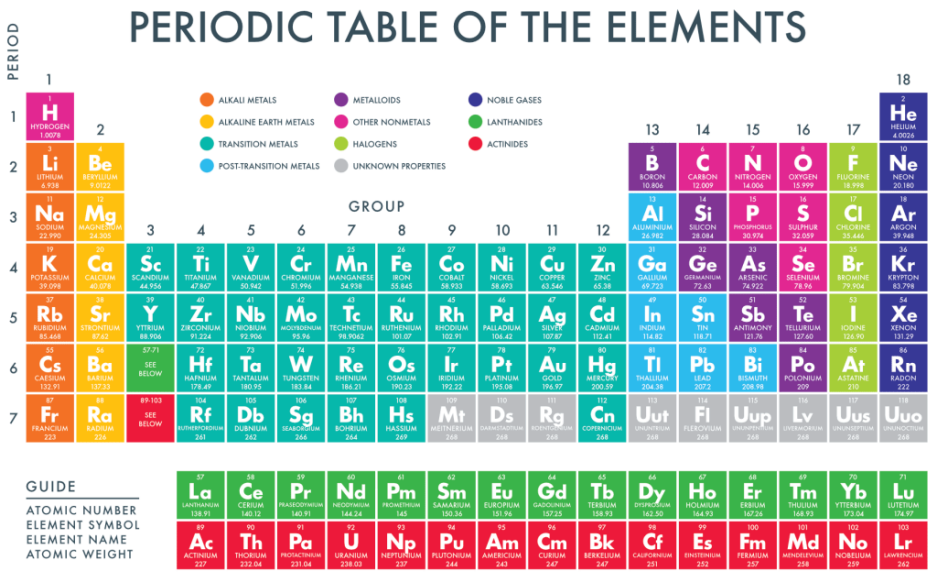
Kingsbridge Community College

Year 11 Bridging Work for A Level Chemistry (OCR Chemistry A)



Name: _____

These activities have been designed to help bridge the gap between GCSE Chemistry/Combined Science (Chemistry) and AS level. This jump in demand regularly catches out students early in the course so these activities are designed to link the content studied at GCSE with some of the material you will study at A Level during your first term. Hopefully, by working through this booklet and going back over some of the most important topics e.g. atomic structure, bonding, acids, energy, balancing equations and calculations, you will start to feel confident and well prepared for the AS Chemistry course. And if you have any questions about the A Level course, or need help with any of the activities, then please do not hesitate to contact me: angela.stephenson@kingsbridgecollege.org.uk

Many thanks, Miss Stephenson.

TASK 1 - Key areas from your GCSE Science work that you will need for AS Chemistry

Before you start any of the other tasks I would suggest that you revise the following GCSE topics by making revision cards / mind maps:

1) Atomic structure – protons, neutrons, electrons, atomic number, mass number, isotopes
2) Electron arrangement – how many electrons each shell can hold
3) Ionic compounds – dot and cross diagrams, properties, examples
4) Covalent compounds – dot and cross diagrams, properties, examples of simple and giant covalent molecules
5) Metallic bonding – labelled diagram, properties and uses of metals
6) Calculations – relative atomic mass, relative molecular mass, moles, empirical formulas, atom economy, percentage yield.
7) Organic compounds – alkanes and alkenes
8) Fractional distillation and cracking.
9) Rates of reaction – collision theory, how to speed up reactions, catalysts
10) Endothermic and exothermic reactions, bond energy calculations
11) Periodic table – overall arrangement in groups and periods

Please use your GCSE revision guides, the CGP Head Start to A Level Chemistry pages attached, and the following websites:

www.amazing-grades.com
www.creative-chemistry.co.uk
www.chemguide.co.uk
www.s-cool.co.uk
www.bbc.co.uk/schools/gcsebitesize/chemistry
www.rsc.co.uk
https://phet.colorado.edu

TASK 2 – Royal Society of Chemistry: Level 1 TITRATION Screen experiment

This is a brilliant, interactive acid-base (alkali) titration for you to work through.

Titration screen experiment (rsc.org)

Please select **Quick Start Level 1 Titration**, or you can register with the Royal Society of Chemistry if you want to save your work and come back to it.

TASK 3 – Royal Society of Chemistry "Starter for 10" Activity Sheets

Please complete Activity 1 - Balancing Equations

TASK 4 – AS Preparation Examination Questions (Hand in the completed booklet during the first week back in September 2024)