

Year 11 to 12 Chemistry Transition Work

Welcome to A-Level Chemistry, we hope you're looking forward to getting started on your studies in Chemistry again! Chemistry is an interesting and challenging A-Level in which you will need a wide range of skills that you will have already started to acquire during your GCSE studies. In order to get you even more prepared, you can start to have a look at the following tasks:

Task 1

Read and summarise the Chemistry Fact Sheet titled 'Basic Atomic Structure'. In September you will begin with a recap on atomic structure where you will need to know a bit more detail than GCSE on how the model of the atom was proposed. Ensure you summarise the key points when you read this article, have a look at the following website which give you an idea how to summarise an article.

<https://www.scribbr.com/working-with-sources/how-to-summarize/>

Task 2

Good mathematical skills are vital for A-level chemistry course. Below is a list of the skills which you should be confident with based on your GCSE science studies. Please check through the list and revise any areas you find difficult. We will recap some of these skills in September and have a short test to assess these. To help you with this you could look back over your GCSE notes or use websites such as BBC Bitesize to help you.

- Calculate the relative formula mass (M_r) of a compound from its formula
- Calculate the percentage of an element in a compound, given its formula
- Calculate the masses of individual products from a given mass of a reactant and the balanced symbol equation.
- Calculate percentage yields of reactions
- Find the gradient of a straight line
- Draw a tangent to a curve
- Calculate the chemical quantities in titrations involving concentrations (in moles per dm^3) and masses (in grams per dm^3).
- Calculate the energy transferred in reactions using supplied bond energies.
- Calculations involving moles of a gas.
- Rearranging mathematical equations.

If you are confident on these skills, read through and practice the calculations in the Chemistry Fact Sheet titled 'Moles and Equations'. This goes through some example calculations, then has some practice questions and answers at the end.

Task 3- Study Skills

Read the document from Hodder Magazines on 'Study Skills'. You do not need to make notes or summarise this. Just ensure you have an idea of the breadth of skills that are needed for you to succeed in your A-Levels. Pages 4-8 on developing study skills and pages 16-19 on applying these in homework and exams will be really useful.

Task 4- Going Further (Optional)

If you want to go further you could begin to have a look through some articles on Chemistry World Magazine for some insights in recent research in chemistry (you will need to make an account):

<https://www.chemistryworld.com/>

Or similarly you could have a look at New Scientist Magazine:

<https://www.newscientist.com/>

Begin to have a look through the A-Level Specification on the AQA website. In your first term you will be looking at topics on Atomic Structure, Periodicity, Amount of Substance, Bonding, Introduction to Organic Chemistry and Alkanes.

<https://www.aqa.org.uk/subjects/science/as-and-a-level/chemistry-7404-7405/specification-at-a-glance>

If you have any questions about any of the tasks, just drop me an email. Have a lovely break and see you in September!

Mr Clements (Subject Leader Chemistry)

j.clements@kechg.org.uk