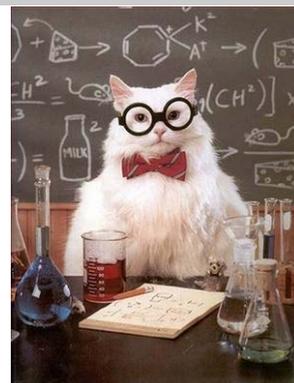


Chemistry

'Introduction to A Level' summer task:

In order to succeed at A Level you must have an excellent base knowledge and understanding of the fundamental concepts of chemistry that you covered at GCSE. With this in mind your task for the summer is to complete a series of questions based on GCSE content that will be needed at A-level giving you a head start to the course. Use your GCSE revision guides or research on the internet to help answer these.



Atomic Structure	<ol style="list-style-type: none"> 1) Draw the structure of an atom. 2) What is the charge on an ion formed when an atom loses two electrons? 3) Draw and write the electronic structure of the first 20 elements.
Periodic Table	<ol style="list-style-type: none"> 1) How many protons, electrons and neutrons in P? 2) Three Neutral isotopes of carbon have mass numbers 12,13 and 14. Find out the number of protons, electrons and neutrons in each. What is different? 3) Find the relative formula mass of NaF and CH₃Cl
Bonding	<ol style="list-style-type: none"> 1) What are the three types of bonding in molecules? 2) What are the types of bonding between molecules? 3) What are the structures in bonding Include diagrams and examples with properties for all
Chemical equations	<ol style="list-style-type: none"> 1) Balance this: $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$ 2) Write the balanced equation of combustion of CH₄
Moles	<ol style="list-style-type: none"> 1) Find out what a mole is (not the animal!!) 2) How many moles of NaCl are in 117g?
Energy in Reactions	<ol style="list-style-type: none"> 1) What is an endothermic and exothermic reaction 2) What can affect the rate of a reaction. 3) Explain each of the above using collision theory
Research	<ol style="list-style-type: none"> 1) Find 6 types of Organic molecules. Include examples. 2) What are the blocks on the periodic table? 3) What is empirical formulae, how do you work it out? 4) What is an Orbital?

The work must be your own, in language that you understand—text copied off the internet will not be accepted!

