# G2 (8-11) Holiday Homework Students Studying Chemistry at AS Level

The most important thing every student should do is **rest over the summer** for at least some of the time.

Often after a busy period people aim to do nothing, hoping that this is the most effective way to use their time to rest. Usually this is not how things turn out. A simple and efficient way to use this time is to instead plan to do fun and easy things that you can look forward to, but be accepting and easy going if you don’t do any of these things. Rest takes time and is essential to enjoying most the rest of your summer, but it is, like any activity, a skill, and with thoughtful and deliberate practice you can get better at it, allowing you to relax more effectively and more efficiently.

Meditation can be an incredibly effective way to rest, and do other things. There are many different ways to do it, but it is a profoundly useful skill that will improve almost all aspects of life. At its simplest it can just be thinking about your breathing, which undermines your brain’s ability to maintain a focus on the things that are stressing you out and allows other brain processes to slowly remove the chemicals which are creating the stress signals. Afterwards, you can still think about this difficult thoughts, but they are less prominent, so it become easier to think about other, less difficult things.

Afterwards you can reflect on the difficult things that you did and the challenges you overcame over the year and be grateful for your own efforts. You will need to motivate yourself later next semester, so understanding that you can still be proud of what you did regardless of the outcome, can be really helpful (do this before your grades come out).

When you get your grades, understand what they mean. They are an outcome of a group of exams in a given subject in a given time. The exact same student with easier circumstances would almost always do better. The exact same student with worse circumstances would almost always do worse. Regardless of what they are, they are a part of your past; if you are careful with how you understand them you can use them to improve on your future.

You should be prepared not only to work harder, but also a more advanced and complex way.

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## **Preparing for your Chemistry AS Course**

Make sure you think about why you are studying and think about what the course will lead to. This goal-oriented approach will help you to motivate yourself and explain why you are studying,

The first 3 topics of the AS course are these:

1. Atomic structure
2. Atoms, molecules and stoichiometry
3. Chemical bonding

If you feel your iGCSE Chemistry exams were easy and you did really well, you can work on the first AS topic (which is covered in Chapters 1 and 2 of the A Level textbook) which is covered in this website:

<https://www.chemguide.co.uk/atoms/propsmenu.html#top>

When you have read and made notes on this topic you can first try these questions that are harder than iGCSE, but a little easier than AS:

<https://www.smashingscience.org/_files/ugd/d26cc6_4341b5a99849405a8fc2afb65cb20436.pdf?index=true>

If you find those questions easy, you can try these questions which are closer to the ones you will see at AS:

<https://www.smashingscience.org/_files/ugd/d26cc6_4341b5a99849405a8fc2afb65cb20436.pdf?index=true>

If you found your iGCSE chemistry exams difficult, then it is essential that you study these iGCSE topics carefully to prepare properly for your AS Chemistry course:

1 States of matter

2 Atoms, elements and compounds

3 Stoichiometry

8 The Periodic Table

Resources to do this are in your textbook, the workbook I have created and my website:

<https://www.smashingscience.org/igcse-chemistry>

You should understand that AS levels are harder than iGCSEs, so if you struggled at iGCSE you will need to work much harder to succeed at AS level, but it is definitely possible. The work you do over the summer will be an important first step to making success happen!