



## How to help with Science studies at AHS: a guide for KS4 parents/carers and students

Parents/carers/siblings/friends can all really help to support our AHS students on their language-learning journey. It doesn't matter if you know any Science yourself or not! There are still lots of ways you can help...

### Vocabulary learning

There is a lot of specific language associated with Science and we encourage students to keep a list of key words with their definitions. Knowing the key words helps students to understand the question as well as answering it. These key words and definitions can be learned in a similar way to languages.

- ★ Get your daughter to write out the words on post-it notes, flashcards or as a list on a piece of paper - then actively test her! For example, you say the word in English and she writes down the definition, or vice versa. You could even turn it into a game!

### Practical and mathematical skills

- ★ We ensure that every module is used as a vehicle to teach valuable key skills that students need to be successful in science and beyond. These are taught within the required content, providing a range of contexts to which skills can be applied.
- ★ Some of these skills are scientific skills (all those listed in the AQA guidance are covered by our curriculum model and more!)- e.g. devising experimental procedure, identifying experimental variables, working safely etc. We also focus on numeracy skills- we have worked extensively with the maths department to develop coherent procedures for teaching key maths skills and continue to do so in order to continually improve current practice.

### Useful resources for science learning...

- ★ **[Google Classroom](#)** - all homework should be posted here as an assignment with a clear due date. Lesson materials can also be posted here, so if you are absent or miss a lesson, you could ask for them to be added to the Google Classroom if they are not already there.
- ★ **[BBC bitesize](#)** - the key information for each Science and each topic is here and there are helpful videos and quizzes.

- ★ [Physics and Maths Tutor](#) - there are a wide range of resources here. Click on the subject in the Revision box (middle of the page).
- ★ [Seneca Learning](#) - you can select the year group, subject and exam board using the drop-down menus on the left-hand side. Science at GCSE follows the AQA specification.
- ★ Kerboodle textbook - the school subscribes to these for the majority of GCSE subjects. Make sure you select Science 9-1 Biology, Chemistry or Physics (not Foundation or Trilogy).
- ★ [Cognito](#) - you are doing AQA GCSE Triple Higher. There are lessons you can follow and it will track your progress. There are also past exam questions.
- ★ [Videos](#) - there are a great many available, these are some we recommend; [Amoeba sisters](#), [Freesciencelessons](#),

### Help with reviewing, consolidating and revision

- ★ When completing homework spend the first few minutes reviewing the lesson content. If you are not sure you understand you could look at some of the useful resources above, you could use the online textbook (using your Kerboodle login). If you are still unsure then talk to your teacher.
- ★ It is really useful to make your own notes from the lesson and your workbook. It is hard to revise from the booklet as the information is spread over several pages.
- ★ Really focus and engage with the homework, it is part of the learning and should not be something to 'get out of the way'.
- ★ Be organised, if you have tests coming up then you need to plan.
- ★ Make a list of what you need to revise before the test. The AQA specification can really help with this. There are also checklists in Kerboodle. RAG rate it (Green = confident, Red = really not sure) and focus first on the red, this will require more time, then amber. Green may only need a quick check.
- ★ Plan what days you intend to revise what parts. This spreads it out and means you are not trying to cram the night before. It also means you have time to ask any questions you have.
- ★ Learning mats are a good way to revise as they have all the parts of a topic on one page. This helps you to see how they connect. [Here](#) is an example.
- ★ Get someone to test you or look at questions on [Physicsandmaths](#) tutor

### Which, why, describe, explain

Use the structure below to help you revise processes. You don't have to answer all parts, it is just a guide.

Eg

Which compound would you use to line a furnace CO<sub>2</sub> or NaCl?

Ans - NaCl

Why: It has a high melting point it has a giant structure made up of strong ionic bonds

Describe: NaCl is a giant structure made up of ionic bonds

Explain: Ionic bonds are strong electrostatic forces of attraction between oppositely charged ions so a lot of energy is needed to break the bonds

Summary:

NaCl would be used to line a furnace because it has a high melting point. This is due to it having a giant structure made up of strong ionic bonds between the oppositely charged ions which need a lot of energy to break