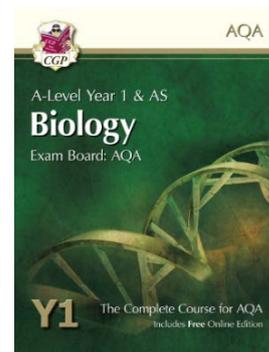


A-level Biology

Welcome! For A-Level Biology we use the **AQA Specification**.

The content in A-level Biology is divided into 8 topics over two years:

- | | |
|---------------------------|-----------------------------|
| 1) Biological Molecules | 5) Energy Transfers |
| 2) Cells | 6) Stimuli and Responses |
| 3) Exchange of Substances | 7) Genetics and Populations |
| 4) Genetic Information | 8) Gene Expression |



Prospectus information: You can find more information about A-level Biology at Woking College, and the GCSE entry requirements for the course at the college website:

<https://woking.ac.uk/courses/full-time-a-levels/science-mathematics-computing/biology/>

Specification and exam papers: You can read a copy of the A-level specification and see past exam papers at the AQA website:

<https://www.aqa.org.uk/subjects/science/as-and-a-level/biology-7401-7402>

Textbooks: After you enrol on the course, you will need to purchase textbooks. We use the CGP A-level books, and some students also like to have the Oxford books too. If you'd like to see a bit more of what the textbooks are like – use the 'look inside' feature on Amazon.

CGP: <https://www.amazon.co.uk/Level-Biology-AQA-Student-Online/dp/1782943145>

Oxford: <https://www.amazon.co.uk/AQA-Biology-Level-September-2015-ebook/dp/B0868MQGPQ>

We don't recommend you purchase textbooks before enrolling at college. If you purchase your CGP textbooks through college, we can normally get a large discount for you.

The rest of this page contains some suggestions for things to do to help prepare for the step up from GCSE and keep you engaged with biology over the summer. The number of bees indicates the level of difficulty of each task.

Choose whatever sounds most appealing to you, and most importantly – have fun!

We'd like you to bring your investigation(s) to enrolment in August. If you'd like to get in touch with any questions about the work, the course or college life, please email Rob Harris at rha@woking.ac.uk. Enjoy!

	<p>A step up from GCSE, let's you practice some an important skill for biology. You might need to do some independent research to complete this.</p>
	<p>A more challenging task that gives you a taste of some of the topics and skills required for A-level Biology</p>
	<p>This is a larger project that will require a bigger investment of time, but with more flexibility.</p>



Summarising biological information

One of the most important skills to develop in biology is clear and precise communication in writing.

Watch all or part of one of these biology videos from the BBC iPlayer collection of David Attenborough documentaries.

Choose an organism – plant or animal – that is shown in the programme.

By researching online, find out a bit more about your chosen organism and write a paragraph of about 300 words describing the organism's habitat (where it lives) and any unusual adaptations it has.

Make sure to underline any keywords you didn't know before doing this task and explain any of these words clearly in your summary.

Sir David Attenborough box sets on iPlayer: <https://www.bbc.co.uk/iplayer/group/p06m42d9>

Transition from GCSE to A-level Biology

This document will let you practice some of the skills that will be assessed in Biology A-level exams.

<https://bit.ly/EdexcelBiologyTransition2>



You can check your GCSE Biology knowledge using the test on pages 7 – 18. You can see some examples of good answers and common errors on pages 19-24.



If you want to extend your knowledge and skills beyond GCSE Biology, try one of the sections on **cells**, **molecules** or **human biology**. For each of these topic, the booklet contains A-level information, some skills activities and a short test to check your understanding. Read the information pages first, then do the comprehension activities before trying the test.

- For **cells**, look at pages **27-37**
- For **molecules**, look at pages **40 - 46**
- For **human biology**, try pages **49 - 56**



Independent research project

How about designing and carrying out your own research project and potentially winning an award? CREST awards are a nationally recognised scheme for student-designed projects in science, technology and engineering subjects. Its aim is to encourage young scientists to carrying out their own projects to develop scientific thinking skills. CREST is run by the British Science Association.

There are three levels of award: Bronze, Silver and Gold. In year 11, you should be looking at the Silver level of award. These can be assessed by one of the teachers in the science department. If your project meets the required standard you can receive a Silver award for a fee of £10.

1. Visit the CREST website at <https://www.crestawards.org/crest-silver>
2. Read the links about 'Silver student guides' and the 'What's expected at Silver level, with examples', so you know the level of detail required and what the assessor will be looking for in your work.
3. **Choose a project:** Click the link for 'resource library'. Look at the projects in the 'biology', 'environment, plant & animals', 'healthy living and medicine' tabs. Many of these projects need a school lab, but they will give you ideas of the sort of topics you could choose. There are some other suggestions below, but the best thing about this project is that you are free to come up with your own topic!
 - a. **Bee behaviour** – research the different species of UK bees. Which ones can you find near where you live? Do certain species of bee prefer particular colours, shapes or species of flowers? Can you gather data to see if the weather or time of day affect the number of bees in a particular area? What might be the reasons for these differences?
 - b. **Coronavirus** – where does the name coronavirus come from? How does the virus spread between people and cause disease in people that are infected? Why do the different pieces of health advice that the government has told people to follow help to reduce the spread or danger of the disease? Do you think the communication from the government (e.g. in speeches, posters, radio and TV advertisements or on social media) have been clear and easy for people to understand? Which ones are better and why? You could create an online survey to see what your friends and family think. Does everyone have the same opinion as you? If not, are there patterns in which communications people prefer (maybe younger people prefer different kinds of communication from older people?).
 - c. **Milk alternatives** – what alternatives are available for people that don't want to drink standard cow's milk? What are the reasons that people want or need alternatives? How do the nutritional content of different milk alternatives compare? Are some better or worse for the environment? Why? Is there any evidence that some are better or worse for people's health? If you are able to – you could see if milk alternatives taste different from one another – which do you prefer? Do other people in your household agree?