


# A Level Biology – Preparation for sixth form

Welcome to A Level Biology! You have picked an extremely exciting and rapidly developing subject with a central place in the future of our society. We hope this gives you some guidance as how best to prepare yourself for picking this subject. We are really looking forward to seeing you in the classroom soon.

You **must** complete every section of the **compulsory** work needed to support your transition into biology A level. It is also **highly recommended** that you complete the **suggested** preparation work.

**All tasks can be found on the school website.**

|            |               |   | Complete? |
|------------|---------------|---|-----------|
| Compulsory | GCSE revision | Your Y11 knowledge is essential in supporting your transition to A level. Complete the “Well, what do you know” activities (WS1 and WS2) attached. <b>Complete the WS1 <u>without</u> reference to textbooks or other resources.</b> These tasks will be reviewed in your first biology lesson.   |           |
| Suggested  | A Head Start  | <p>To get a head start and make the transition to Y12 easier, we recommend reading the following resource, and complete the questions at the bottom of each page:</p> <p style="text-align: center;"><b><u>Get a head start</u></b></p> <p>To make this task as useful as possible, you must self-assess your work and annotate your answers in a <b>different colour</b>. You can find the answers at the end of the booklet. If you have any questions about this work, please either email Mrs Birds (cbirds@ecgbert.sheffield.sch.uk), or speak to one of your teachers as soon as you start the course.</p>  |           |
|            |               | <p>Stretch and challenge article</p> <p>Read the “Big picture – Cells” article. This article covers important ideas that you will cover on the A Level Biology course. This article is challenging, so we don’t expect you to remember everything within it. Once you have read the article, have a go at answering the following questions:</p> <ul style="list-style-type: none"> <li>* What are cells for?</li> <li>* What are the structures of cells?</li> <li>* How do cells divide, develop and communicate?</li> <li>* What are stem cells and why are they important?</li> <li>* What happens when cells die?</li> </ul>  |           |

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| Ted Talks                                     | <p>Listen to the following <b>Ted Talks</b>:</p> <p>Why Bees are disappearing - <a href="https://www.ted.com/talks/marla_spivak_why_bees_are_disappearing">https://www.ted.com/talks/marla_spivak_why_bees_are_disappearing</a> Growing new organs - <a href="https://www.ted.com/talks/anthony_atala_growing_new_organs">https://www.ted.com/talks/anthony_atala_growing_new_organs</a> What would happen if you didn't drink water – <a href="https://www.ted.com/talks/mia_nacamulli_what_would_happen_if_you_didn_t_drink_water#t-72581">https://www.ted.com/talks/mia_nacamulli_what_would_happen_if_you_didn_t_drink_water#t-72581</a></p> <p>How enzymes could change the world – <a href="https://www.ted.com/talks/adam_garske_how_designing_brand_new_enzymes_could_change_the_world">https://www.ted.com/talks/adam_garske_how_designing_brand_new_enzymes_could_change_the_world</a></p> <p>There are <b>hundreds</b> of wonderful Ted Talks. Have a look for a talk that interests you personally.</p> <p><b>What have you learned? Do you agree with the main points?</b></p> |  |
| Documentaries                                 | <p><b>A perfect planet:</b><br/>Our planet is one in a billion. How incredible, awe-inspiring life is driven by its natural forces - and how we can ensure humans become a force for good. With David Attenborough. <a href="https://www.bbc.co.uk/iplayer/episodes/p08xc2lh/a-perfect-planet">https://www.bbc.co.uk/iplayer/episodes/p08xc2lh/a-perfect-planet</a></p> <p><b>Our changing planet:</b><br/>Seven years. Six habitats. One planet. Charting our world's most threatened ecosystems - a unique global portrait of extraordinary change and the hope of groundbreaking solutions. <a href="https://www.bbc.co.uk/iplayer/episodes/m0016t0g/our-changing-planet">https://www.bbc.co.uk/iplayer/episodes/m0016t0g/our-changing-planet</a></p> <p>You can also find plenty of interesting documentaries on BBC iPlayer. Blue Planet, The Natural World, Planet Earth, Life on Earth are just a few!</p> <p><b>(If you have Netflix.... Fantastic Fungi, The Mind Explained, Life in Colour.)</b></p>  |  |
| Magazines, articles, and interesting websites | <p><b>Biologist (RSB)</b> - <a href="https://thebiologist.rsb.org.uk/biologist">https://thebiologist.rsb.org.uk/biologist</a><br/><i>Helping you to understand the true value of biology and how it can contribute to improving life for all.</i></p> <p><b>Learn genetics by Utah:</b> <a href="https://learn.genetics.utah.edu/content/basics/">https://learn.genetics.utah.edu/content/basics/</a> <i>Possibly the best genetics website ever....with lots of well-pitched, interactive resources to explore.</i></p> <p><b>Science daily</b> - <a href="http://www.sciencedaily.com">www.sciencedaily.com</a> <i>Explore breaking science news and articles</i></p> <p><b>BBC News</b> - <a href="https://www.bbc.co.uk/news/science_and_environment">https://www.bbc.co.uk/news/science_and_environment</a><br/><i>Explore breaking science news and articles</i></p>  |  |
| Maths skills                                  | <p>Professional biologists routinely use a range of mathematical skills to allow them to carry out their everyday work. Have a go at the maths practice questions on P5 onwards in the <b>“maths skills questions”</b> booklet. There are mini tutorials before each set of questions, and the answers can be found at the bottom of the document.</p>  |  |
| COMBINED STUDENTS – OPTIONAL CATCH-UP WORK    | <p>If you studied combined science, complete the document named “Bridging the gap” to get you up to speed. You must self-assess your work and annotate your answers in a <b>different colour</b>. You can find the answers at the end of the booklet.</p> <p>Your teachers will ask to see evidence of this work. You can either print the booklet out and write your answers in the spaces provided OR write your answers in full sentences on lined paper (and include clear sub-headings.)</p> <p>If you studied separate science, it would not do you any harm if you had a go too!</p>   |  |