



Waseley
Sixth

A Level Biology Bridging Course

Preparing for A- Level Biology

An understanding of Biology is crucial for everyday life. Whether it is in order to understand health and medical advice, or protecting our planet from climate change through conservation measures. The role all aspects of Biology play in our lives is ever increasing. You have chosen to study this amazingly varied and relevant subject. To make the transition to studying Biology at this level you must complete the first section of this document – ‘Preparing for A Level biology’. The second section – ‘Developing as a Biologist’ provides some ideas for developing your all round biological knowledge, which is vital for the synoptic aspect of the course and achieving the very highest grades at A2. Keep this list of resources so you can dip in and out of it throughout the course. We don’t expect you to tackle all of these suggestions over the Summer holidays!

SECTION 1 Preparing for A Level biology - Starting to explore the topics and their foundations which will be studied in the A Level course.

1. Complete the AQA transition guide
2. If you are not confident in completing Activities 5 and 7 in the transition guide above
Review your GCSE work by making revision resources on cells and cell transport. Use the following BBC Bitesize pages to help.

<https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1>

<https://www.bbc.co.uk/bitesize/guides/zc7k2nb/revision/1>

OR

Extension – If you have a good understanding of cells and cell transport at GCSE level.

Research different types of cells, find or draw labelled diagrams showing the ultrastructure of cells.

Which extra organelles are present in plant and animals cells when they are viewed under an electron microscope?

Describe the differences between Eukaryotic and prokaryotic cells.

Outline some examples of specialised cells. What are their adaptations and how do these help them function?

SECTION 2 Developing as a Biologist

To be a brilliant Biologist you need to develop your ability to think synoptically, being able to see the bigger picture and how everything begins to link together. Biology stretches from the microscopic to whole ecosystems. Biology is not just about studying cells or even whole organisms but the interactions at every level.

At GCSE you have covered a lot of the key concepts. A Level will now enable you to gain greater depth by exploring topics in greater detail but also encouraging you to see and explore the links between topics.

This guide has been designed for you to be able to start to develop key skills needed by a Biologist and explore some of the topics we will be looking at in Year 12 and 13. Also so you can do some valuable background into general issues, current events and their significance.

Below includes, a range of resources which provide a great way of staying inspired and engaging with all aspects of Biology.

WEBSITES

The Royal Society of Biology - <https://www.rsb.org.uk/students>

Welcome Trust – big pictures articles- <https://www.stem.org.uk/big-picture/resource-collection>

READ

THE CONVERSATION.COM <http://theconversation.com/uk> It provides up-to-date articles from academics and specialists in the field written in a way that is accessible to all, summarising key points in short but insightful articles.

BBC NEWS <https://www.bbc.co.uk/news> An excellent source of up-to-date articles – explore the key headings such as Science, as well as the UK, World and other stories.

NEWSPAPER WEBSITES SUCH AS The Guardian <https://www.theguardian.com/uk> and iNews <https://inews.co.uk/>

Many useful articles and logically ordered – keep an eye on the Environment, Science, Health stories in particular

WATCH

Ameoba sisters clips – available on You tube

Alice Roberts Don't die young – available on you tube especially, lungs, heart, kidney

<https://www.youtube.com/watch?v=v-NPxRjbNSY&list=PLXuOP0f9aQqhviWgtFXM-Ab98p-J6Rjdd>

Understanding viruses – very topical! <https://www.youtube.com/watch?v=8q68qHiKKYw>

Royal Institute Christmas lectures, especially Who am I 2018, Life fantastic 2013, Staying Alive 1998,

Chicken, egg and molecules 1980 – [https://www.rigb.org/christmas-](https://www.rigb.org/christmas-lectures/watch?utm_source=youtube&utm_medium=social&utm_term=description)

[lectures/watch?utm_source=youtube&utm_medium=social&utm_term=description](https://www.rigb.org/christmas-lectures/watch?utm_source=youtube&utm_medium=social&utm_term=description)

The genius of Charles Darwin, episodes on you tube https://www.youtube.com/watch?v=F_IhC_5FfbE 24

hours in A&E Heart special – on Channel 4 player <https://www.channel4.com/programmes/24-hours-in-a-e-heart-special>

LISTEN

The cell – radio 4 <https://www.bbc.co.uk/programmes/b01mk8vh>