

# A-Level Biology

## The Course

The WJEC A level in Biology provides a wide breadth of knowledge which touches on many varied aspects of a range of topics from the internal workings of organisms in physiology and the interdependence of living things in ecology, to social issues including human influence on the environment and the ethical considerations of genetics. The study of biology encourages an appreciation of these issues and their implications as well as providing an insight into the living world.

## Tasks

As a department, we have created a Team for you to access the 'Pre-Reading' materials. This is the most effective way for you to access materials, ask questions to staff directly before the start of your A-Level.

**To join this Team please use the code: [3k2mu12](#)**

In this team you will find specific tasks to refresh your understanding of GCSE topics which will be developed upon in Y12. Your subject teachers will add further resources to this as we draw closer to the start of your course.

Your study of A-level Biology would benefit from an awareness of key biological issues including but NOT exclusively the corona virus. There are many excellent podcasts that can be accessed via BBC Sounds and videos and animations on You Tube.

For example:

- BBC Inside Science
- The Material World and
- The Curious Cases of Rutherford and Fry.
- <http://www.ibiblio.org/virtualcell/index.htm> – An interactive cell biology site
- The strange new world of Nanoscience narrated by Stephen Fry
- An introduction to vitamins and minerals Khan Academy video

Ted Talks and TedEd animations such as:

- Christine Kleinberg 'How polarity makes water behave strangely'
- Richard J wood 'How do carbohydrates impact your health?' and
- Nazy Pakpour 'Cell membranes are way more complicated than you think' would also be a great introduction to KS5 Biology.

We would like you to view at least 5 of the above on a range of biological issues during your summer break before joining the Sixth Form. You should make brief notes or a mind map on each.

### Pre course task

1. Research the detailed, ultrastructure of a typical animal and plant cell using the list of structures below.
2. Draw large, labelled diagrams of a plant cell and an animal cell.
3. State the structure, size and function of each of these structures, called organelles.

Rough endoplasmic reticulum (RER)	Plasma (cell surface) membrane
Smooth endoplasmic reticulum (SER)	Centrioles
Golgi apparatus	Nuclear envelope
Mitochondria	Nucleus
Ribosomes	Nucleolus
Lysosomes	Flagella
Chloroplasts	Cilia
	Cytoplasm

4. Plant cells and animal cells have a number of similarities and differences. Devise a table to highlight these.

## Pre-Course 'Reading'

Please download the **FREE KINDLE EDITION** of CGP Head Start to A-Level Biology from the following link:

[https://www.amazon.co.uk/Head-Start-level-Biology-Level-ebook/dp/B00VE2NIOI/ref=nav\\_ya\\_signin?dchild=1&keywords=cgp+headstart&qid=1585576356&s=books&sr=1-4&](https://www.amazon.co.uk/Head-Start-level-Biology-Level-ebook/dp/B00VE2NIOI/ref=nav_ya_signin?dchild=1&keywords=cgp+headstart&qid=1585576356&s=books&sr=1-4&)

**Useful Websites:** Useful websites include:

1. <http://www.biology4all.com/>
2. <http://www.biologymad.com/>
3. <http://cellsalive.com/>
4. <http://www.biozone.co.uk/>