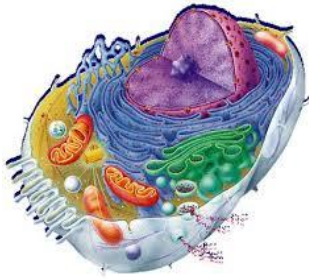


Getting Ready for A Level Biology



A levels are a big jump from GCSEs which require a very good foundation at GCSEs in Science, English and Maths and so it is important your foundations are solid.

This summer you need to consolidate your core knowledge and skills before you start the course. A lot of success at A level Science is down to being proactive, consistently working hard reflecting on how to improve. This guide will signpost you to recommended activities and textbooks at the end.

Task 1: GCSE Common Misconceptions

You need to have a solid grasp of GCSE Science at higher paper in order to do well at A levels.

1. Check out this [YouTube video by Bio Rach](#) about GCSE Common Misconceptions (Time: 1.5 hours).
2. As you are watching, write some questions on the content, e.g. define hypertonic. Answer these questions 24 hours later and check with the video which were correct.
3. Need a recap? Go directly to assessments on GCSE Bitesize for the specification you studied at GCSE. You can also access some [science video lessons](#) from Pearsons.
4. Choose a higher tier exam paper GCSE Biology paper and markscheme from any exam board website e.g. OCR, AQA or Pearsons. Answer the questions (not using notes). Now self-mark and identify why you did not get the correct answer. A levels requires independent study skills, you need to be able to analyse the mark schemes by *understanding why you* have not gained the marks.

Task 2: Preparing for A levels - Transition Maths skills and knowledge

There will be maths in all A Level science courses. The future of all scientific fields, including psychology, depend on this.

The OXFORD UNIVERSITY PRESS has shared transition packs "[Preparing for Science Pack](#)" for Biology Chemistry and Physics.

This pack can help you to consolidate core knowledge and skills you will need when you start your science courses. Here are the direct links for [Biology and Chemistry](#).

Task 3: Science Skills Transitions worksheets help connect what you know from GCSEs to A level

[A level Science Skills Pack](#) for both Biology and Chemistry.

Please look at the OCR topic support. For Physics look at AQA.

Task 4: Maths is essential for any science career, including biology, which is why 10% of your Biology exams have maths.

[Maths Skills for A Level Biology](#) is free until September. Please work through the maths questions, in chapter 1 and chapter 2 at page 41- 43.

Task 5: Cells

1. Introduction to cells: <https://www.youtube.com/watch?v=gFuEo2ccTPA>

2. Organelles are specialised structures inside living cells. Complete the [word search below](#):

Cells: Organelles

L	E	S	N	U	C	L	E	O	L	U	S	E	S
O	N	T	N	N	T	S	P	D	E	C	M	E	U
L	U	U	T	L	E	E	I	C	U	E	M	R	T
L	L	R	E	C	E	O	E	S	E	R	I	I	A
A	N	H	E	R	E	A	A	S	V	T	T	P	R
W	N	U	C	L	E	U	S	R	E	L	O	R	A
L	R	I	C	B	I	O	L	E	S	E	C	O	P
L	L	U	O	N	I	A	R	R	I	I	H	K	P
E	N	A	N	T	L	N	R	A	C	E	O	A	A
C	R	L	S	U	O	L	E	U	L	G	N	R	I
P	D	N	A	K	W	E	R	N	E	O	D	Y	G
P	E	E	A	A	A	N	G	P	S	E	R	O	L
O	E	T	O	Y	R	A	K	U	E	A	I	T	O
I	U	R	I	B	O	S	O	M	E	S	A	E	G

DNA
RIBOSOMES
MITOCHONDRIA
NUCLEOID
SER
PROKARYOTE
EUKARYOTE
CELLWALL
NUCLEUS
NUCLEOLUS
GOLGIAPPARATUS
VESICLES
RER

Play this puzzle online at : <https://thewordsearch.com/puzzle/1315503/>

A plasma membrane is known as a cell membrane. A cell-surface membrane is the membrane on the surface of the cell.

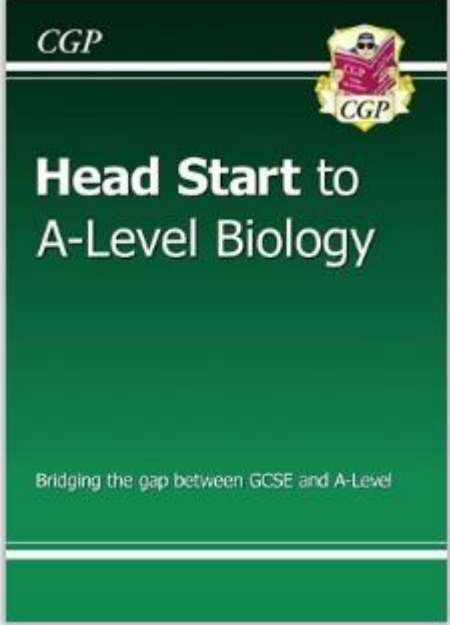
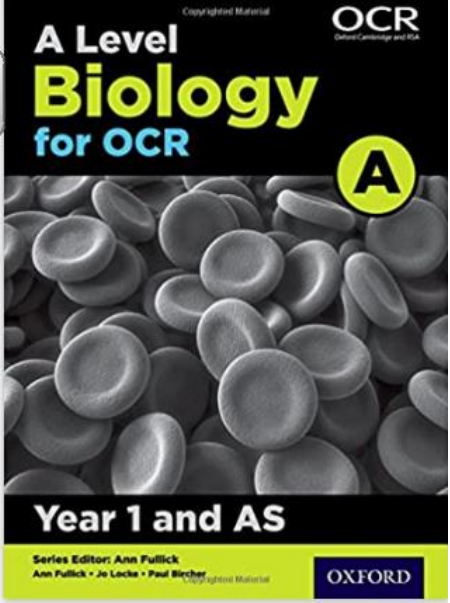
Using the internet find out which of the above organelles have their own plasma membrane.

- Now watch this [video on cell structure](#) and create a poster about prokaryotes and label organelles.
- View the animations on microscopy:
[View microscopy animation 1](#)
[View microscopy animation 2](#)

Make a table comparing the two types of microscopes. You can use the Biology transitions worksheets above using task 2.

BOOKS

There are books to help you prepare for A levels. These are available from Amazon, CGP, booksellers and bookshops.

Head Start to A-level Biology by CGP	A Level Biology for OCR A: Year 1 Student book by Oxford Anne Fullick The main textbook A revision guide in this series is recommended.
	

The main text we use in class is the Oxford book, this is also available as an online digital book via Kerboodle for both Biology and Chemistry. We also occasionally use other Biology texts such as OCR A Biology year 1 by Hodder.

The chemistry equivalent of these books will also be used.

Things to watch, read and listen

Resources

- [OCR A Level Biology Specification](#)
- [A Level Science Resources for Practical Assessments \[birmingham.ac.uk\]](#)
- [Memory Techniques - The Learning Scientist](#)

Useful websites

- [Into Biology](#) - the Into Biology website offers a wealth of resources on keeping up to date with current biological research, with advice on how to 'read around the subject'.
- [Medical Mavericks](#) - the Medical Mavericks offers great career advice and have even brought their medical equipment to South & City College for workshops.

Talks, podcasts, films and publications

- [BBC Science Hour Podcasts](#)
- [TED Talks](#) - check out the talks on immunity, biodiversity and stem cell technology.
- [Catalyst Magazine: STEM Learning for Students 14-19](#)
- Films to watch: Lorenzo's Oil, Hidden Figures, GATTACA

From the Royal Institute - Christmas Lectures (approx. 1 hour each)

[Plant Wars](#) - The 300 million year war. A series of lectures on how plants have evolved. Lectures 1-3 are relevant to A level Biology.

[Does size matter?](#) - Lecture 1, Elephants can't dance but hamsters can skydive.