

Year 12 Transition work AS Biology

This work is designed to introduce you to one of the first topics you will encounter in AS Biology. A good understanding of this topic is vital as it underpins many things you will learn about.

You will need to research using the internet to be able to complete this task properly.

Please find a suitable website aimed at post-16 students and NOT Wikipedia or Yahoo Answers (as it will be far too complicated or just plain wrong!).

Some examples of suitable resources include (you will probably need to use more than one to help you):

[AQA Biology A-level Topic 2: Cells Revision - PMT \(physicsandmathstutor.com\)](http://physicsandmathstutor.com)

[ENTIRE Topic 2 - A level Biology for AQA. Learn the whole topic in an hour! - YouTube](https://www.youtube.com/watch?v=...)



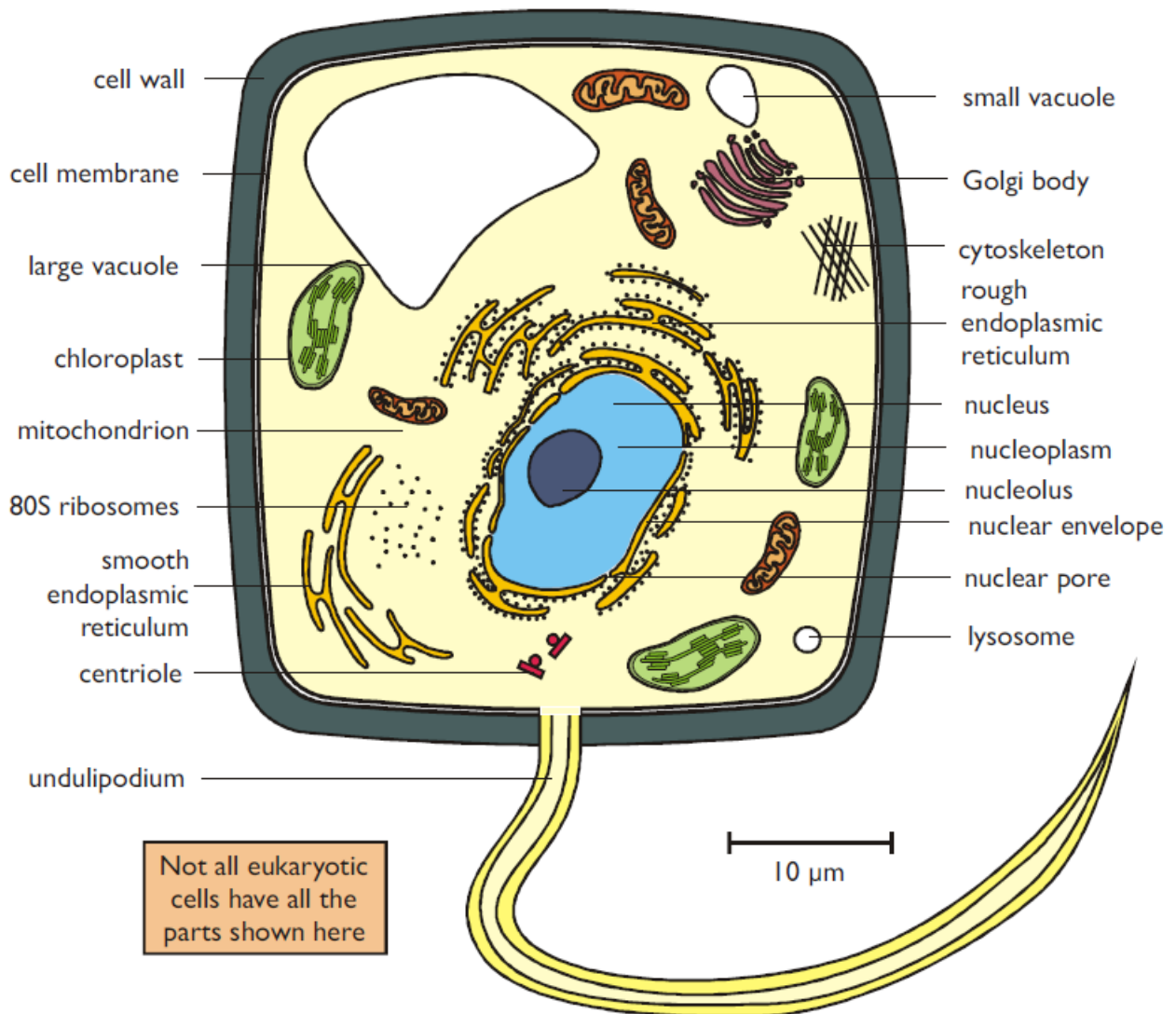
Cell Ultrastructure – Plant and Animal Cells

THE CELL CHALLENGE! This is what a cell really looks like!

The diagram below combines features of *both* plant and animal cells.

YOUR CHALLENGE: Research and label all of the cell parts ('organelles') below.

Euakryotic Cells



For the structures listed below. Give ONE SHORT SENTENCE to BRIEFLY describe what it's for:

Key Term	BRIEF description of what it is/what it does
Nucleus	
Nucleolus	
Ribosome	
Golgi apparatus	
Mitochondrion	
Chloroplast	
Rough endoplasmic reticulum	
Smooth endoplasmic reticulum	
Lysozome	
Cell Vacuole	
Flagellum	

Open Research Task

In discovering cells and their organelles, microscopes played an important part. There are three types of microscope you need to know about at A-level: 1) The light microscope 2) The transmission electron microscope and 3) the scanning electron microscope. **USE THE WEBSITE ON THE FIRST PAGE (or other suitable ones)** to find out about these 3 types of microscope and complete as much of the table below as possible:

1) What does 'magnification' mean?

2) What does 'resolution' mean (in terms of microscopes!)

	Light microscope	Transmission Electron Microscope (TEM)	Scanning electron microscope (SEM)
<i>Brief</i> description of how it works.			
How does the resolution and magnification compare with the other microscopes?			
Advantages of using this microscope			
Disadvantages of using this microscope			