

Welcome to A level Biology

Pre-induction activity

A level Biology

TASK 1

Activity: **Microscopes**

1. Use the link to remind yourself how to use a microscope to view cells
<https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/4>
2. Produce a table to compare
 - a light microscope
 - a transmission electron microscope
 - a scanning electron microscope

You could include how they work, advantages and disadvantages

3. What rules do you need to follow to produce a biological drawing of what you see down the microscope?



Now that we've done a little work on microscopes, it's time to think about what we can use them to view by creating your own cell

TASK 2

Activity: **Making a cell**

1. **Make a model cell containing the following parts**
 - cell-surface membrane
 - nucleus
 - mitochondria
 - Golgi apparatus and Golgi vesicles
 - lysosomes (a type of Golgi vesicle that releases lysozymes)
 - ribosomes
 - rough endoplasmic reticulum and smooth endoplasmic reticulum



2. What parts would you need to add to transform your creation into a plant cell?

In complex multicellular organisms, cells become specialised for specific functions. Specialised cells are then organised.

TASK 3

Activity: Organisation

Research the following questions

1. Define tissue, organ and organ system
2. Give an example from the body of each
3. Produce a fact sheet on the digestive system



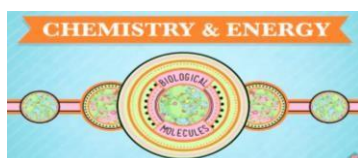
There are many different areas that nurses can specialise in, if you were to become a nurse which area would interest you and why?

We start the course looking at Biological molecules. Make sure you are fully prepared for the start of the year by watching the following videos and carrying out the tasks on Seneca Learning below.



Welcome to Biology

<https://www.youtube.com/watch?v=7L7x0BAqWis>



Biological molecules

<https://www.youtube.com/watch?v=H8WJ2KENIK>

Protein folding <https://www.youtube.com/watch?v=hok2hyED9go>



Access Seneca Learning (if the link does not work then copy and paste into your browser)

<https://app.senecalearning.com/classroom/course/d0ce0c30-6417-11e8-8edc-d9cd1c890408/section/d4230390-6417-11e8-8edc-d9cd1c890408/session>

Complete Biological Molecules sections 1.1 and 1.2

Equipment list

You must come to college prepared to learn with the following equipment every lesson:

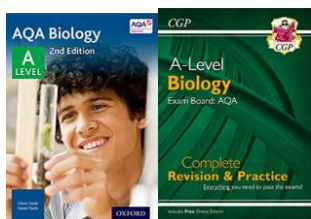
Black pen; red pen; pencil; sharpener; A4 ruler; eraser; scientific calculator; highlighter; lab coat (optional).

A4 Lined paper pad.

A4 lever arch file with at least 11 dividers – This is to keep all of your work in.

Recommended books and wider reading

The biology department will provide printed theory booklets with exam-style question packs for all students, however wider reading resources are required. Please see the recommended materials below. You will be able to order and pay for textbooks and revision guides with the college.



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@newscientist