



Transition Work for A Level Biology

This pack contains activities and resources to prepare you to start A level in Biology in September. It is aimed to be used after you complete your GCSEs to ensure you are ready to start your course in September.

All the links have been checked and recently updated but please email Mrs Barker if you have problems with any of them.

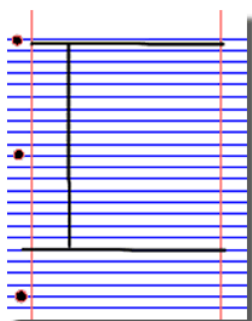
barkera@Guilborough.nortants.sch.uk



How to make notes

Research, reading and note making are essential skills for A level Biology study. As you complete the following tasks you might like to try the 'Cornell Notes' style of note taking to summarise your reading (details below). Using this style of note making is optional.

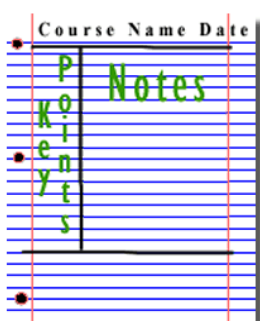
1. Divide your page into three sections like this



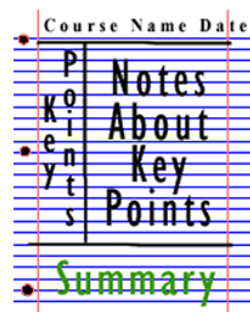
2. Write the name, date and topic at the top of the page



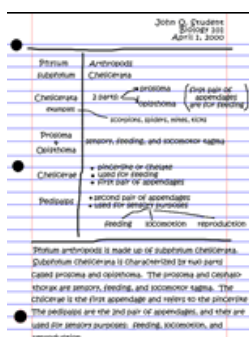
3. Use the large box to make notes. Leave a space between separate ideas. Abbreviate where possible.



4. Review and identify the key points in the left hand box



5. Write a summary of the main ideas in the bottom space



Images taken from <http://coe.jmu.edu/learningtoolbox/cornellnotes.html>

A level Biology will use your knowledge from GCSE and build on this to help you understand new and more demanding ideas. **Complete all the following tasks to make sure your knowledge is up to date and you are ready to start studying.**

Task 1: Pre-Knowledge Topics

Cells

The cell is a unifying concept in biology, you will come across it many times during your two years of A level study. Prokaryotic and eukaryotic cells can be distinguished on the basis of their structure and ultrastructure. In complex multicellular organisms cells are organised into tissues, tissues into organs and organs into systems. During the cell cycle genetic information is copied and passed to daughter cells. Daughter cells formed during mitosis have identical copies of genes while cells formed during meiosis are not genetically identical

Read the information on this website (you could make more Cornell notes if you wish):

<http://www.s-cool.co.uk/a-level/biology/cells-and-organelles>

And take a look at these videos:

<https://www.youtube.com/watch?v=vwAJ8ByQH2U>

<https://www.youtube.com/watch?v=cj8dDTHGJBY>

<https://www.youtube.com/watch?v=9UvIqAVCoqY>

Task:

Produce a one page revision guide summarising one of the following topics:

Cells and Cell Ultrastructure or Prokaryotes and Eukaryotes.

Whichever topic you choose, your revision guide should include:

- **Key words and definitions**
- **Clearly labelled diagrams**
- **Short explanations of key ideas or processes.**

Task 2: Key Terms and Maths Skills

Complete the **all** the tasks on the Word document 'Biology Transition work Key Terms and Maths Skills'.

You can print the maths question pages if you want to (no need to print the whole document) or if you prefer you can write/type your answers on a separate piece of paper.

Use the mark scheme at the end to self-assess your answers (please use a purple pen for the self- assessment)

Task 3: A Level Biology Transition Baseline Assessment

Lastly complete **all** the questions on the next 4 slides 'A Level Biology Transition Baseline Assessment'.

You can look up the answers to these questions if you are stuck.

We will mark this work in the first Biology lesson in September.

You can print these slides if you want to or if you prefer you can write/type your answers on a separate piece of paper.

A Level Biology Transition Baseline Assessment

The following 40 minute test is designed to test your recall, analysis and evaluative skills and knowledge.
Remember to use your exam technique: look at the command words and the number of marks each question is worth.

1. a) What are the four base pairs found in DNA?

..... (2)

b) What does DNA code for?

..... (1)

c) Which organelle in a cell carries out this function?

..... (1)

2. a) What theory did Charles Darwin propose?

..... (1)

b) Why did many people not believe Darwin at the time?

..... (1)

c) Describe how fossils are formed.

.....
.....
..... (3)

d) The fossil record shows us that there have been some species that have formed and some that have become extinct.

i) What is meant by the term 'species'?

..... (2)

ii) Describe how a new species may arise:

.....
.....
..... (3)

3. Ecologists regularly study habitats to measure the species present and the effect of any changes. One team of ecologists investigated the habitat shown in the picture below:

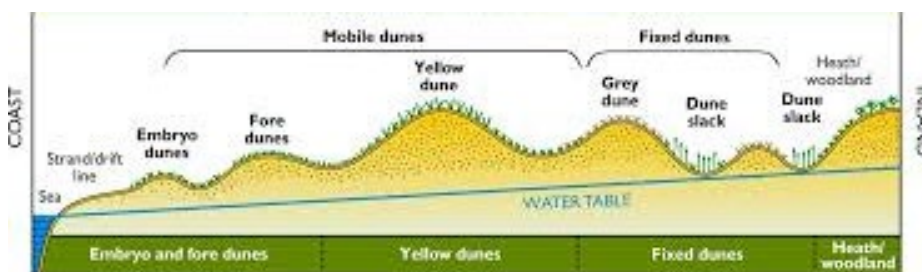


Image taken from <http://www.macaulay.ac.uk/soilquality/Dune%20Succession.pdf>

a) Define the following keywords:

i) Population

.....

ii) Community

.....

(2)

b) Give an example of one biotic factor and one abiotic factor that would be present in this habitat

Biotic:

Abiotic:

(2)

c) Describe how the ecologists would go about measuring the species present between the coast and the inland.

.....

(6)

4. Every living organism is made of cells.



Image taken from <http://prestigebox.com/worksheet/label-an-animal-cell-worksheet>

a) Label the following parts of the animal cell:

- 2
- 5
- 8

(3)

b) Describe how is the structure of the cell membrane related to its function?

.....

(3)

5. A medical research team investigated how quickly the body deals with glucose after a meal. They studied the blood glucose concentration of people who exercised versus those who did not. Here are their results:

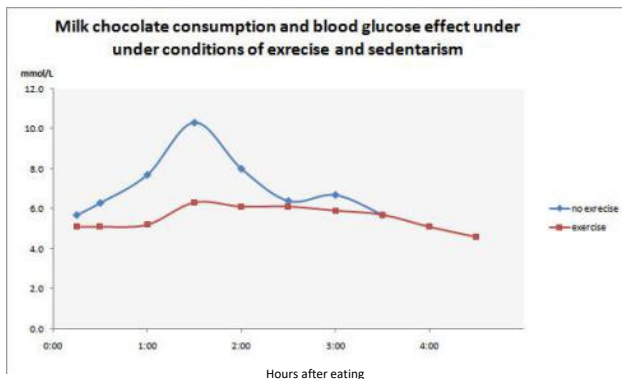


Image taken from <https://memoirsofanamnesic.wordpress.com/category/blood-glucose/>

a) What organ in the body regulates blood glucose concentration?

.....

(1)

b) Explain how the stages that would bring about a return to normal blood glucose concentrations.

.....

.....

.....

.....

(4)

c) Name one variable the researchers will have controlled.

.....

(1)

d) The researchers made the following conclusion:

“Blood glucose returns to normal values for all people after 4 hours”

To what extent do you agree with this conclusion.

.....

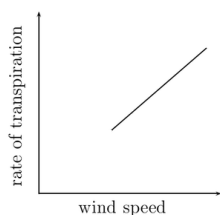
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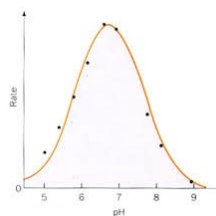
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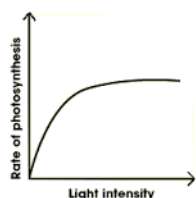
6. Scientists need to be able to interpret data in graphs to decide if there are trends in the results. For each graph below, describe the trend.



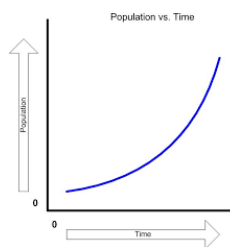
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.....(4)