

## Biology Advice

- **How should I approach my revision for Biology?**

Biology is often considered to be a content heavy subject. There is a lot to remember and lots of terminology. To many students it doesn't come naturally and they have to work at it.

'Little and often' is key to revision – start early and break it down into manageable chunks.

Use a variety of approaches to revision – note taking, mind maps, words and meanings, scholar quizzes, past papers, essay practise.

- **Timing can be an issue in the exam. How should I divide up my time?**

In Higher and Higher Human Biology there are 130 marks to be completed in 2 hours 30 minutes. What follows is a **rough guide** of how to divide up the time in the exam.

Multiple Choice – 30 minutes

Short answer questions – 80 minutes

Essays – 30 minutes

Checking over the paper – 10 minutes

In Advanced Higher there are 100 marks to be completed in 2 hours 30 minutes. A **rough guide** of how to divide up the time in the exam could be:-

Multiple Choice – 35 minutes

Section B questions – 50 minutes

Essay on Units 1/2 - 25 minutes

Section C (optional unit) – 35 minutes

Checking over the paper – 5 minutes

You can choose to complete the paper in any order you wish. Perhaps look at the essays first and get them out of the way.

- **What do these words mean?**

Describe – tell me what you can from the data or tell me about structures/processes eg describe the structure of the chloroplast.

Explain – tell me why this happens. For example: Explain why RuBP accumulates at night during photosynthesis

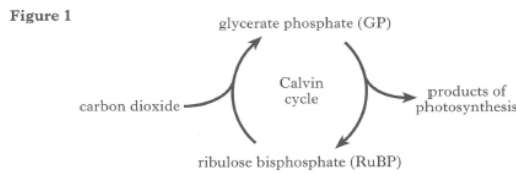
Account for – similar to explain. Tell me what is going on, give reasons or explanations

Using data from the ..... – YOU MUST DO THIS!!! When a question asks you to refer to a graph or table or diagram you must do this and quote figures if they are available.

- **When a question is worth 2 marks how much should I write?**

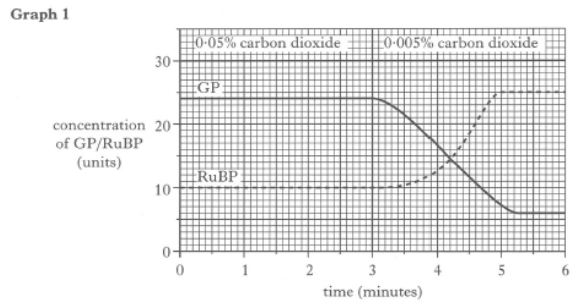
There is a bit more expected in Higher and Advanced Higher. Detail can be key. Look at the Higher Past Paper Question below

8. **Figure 1** shows how glycerate phosphate (GP) and ribulose bisphosphate (RuBP) are involved in the Calvin cycle.

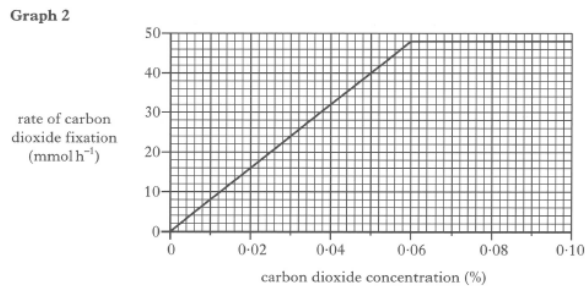


An investigation of the Calvin cycle was carried out in *Chlorella*, a unicellular alga.

**Graph 1** shows the concentrations of GP and RuBP in *Chlorella* cells kept in an illuminated flask at 15°C. The concentration of carbon dioxide in the flask was 0.05% for the first three minutes, then it was reduced to 0.005%.



**Graph 2** shows the rate of carbon dioxide fixation by *Chlorella* cells at various carbon dioxide concentrations.



Use values from **Graph 1** to describe the changes in the RuBP concentration over the first six minutes.

Here is the expected answer.....

**At 3 minutes** (accept range 3 mins to 3 mins 30 secs) concentration is 10 units

**At 5 minutes** (accept range 4 mins 54 secs to 5 mins)/2 minutes later, concentration is 25 units/increased by 15 units

All 4 values correct = 2 marks. 3 or 2 values correct = 1 mark

**Best advice:** Attempt some past papers questions worth 2/3/4 marks and then refer to the SQA markscheme to gauge the level of detail required.

- **Can I write my essays as bullet points?**

Yes you can. Diagrams can be used too. However, you may risk not getting the coherence and relevance marks in the essay if you do this.

**General Advice**

- Biology tries to link processes together. For example the link between oxygen concentration, respiration, ATP and active transport. You have to think about the bigger picture in some questions and look for the overlap between topics
- Take your time and read the question – what is it asking you to do – describe/explain etc
- Try and complete a full past paper in timed conditions to make sure you can fit everything in.