

The appliance of science

The expert



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Before the mocks

It is time to start studying in earnest. The following points will help you to achieve the maximum from your remaining time.

Get organised from the beginning. Organise your resources, books, exam papers and notes. Organise your time into weekly and nightly timetables that ensure that all the material will be covered in the remaining time.

Identify your weakest areas. Make a list of your most troublesome topics and ensure that these are given adequate attention in your timetables.

Disperse those least favourite or seemingly uninteresting topics with topics you enjoy so as to diffuse the challenge. Remember, avoidance may be your downfall, so ask for help from your teacher if you feel you need it.

Focus on definitions, diagrams, details and experiments. If you learn these main points from each chapter you should be able to answer the majority of exam questions that you could be faced with.

Be an active studier rather than a passive studier. Make

mind maps. These are a useful tool in which you summarise the chapter in a visual way, grouping related words and topics together. See the mind map for animal nutrition further on in this article.

Read with intent to learn, not just mindlessly going through text. Make notes, rhyming schemes, draw diagrams; anything that you find helps you to remember the text. Practise drawing the cell during mitosis.

Test yourself often during study to see if you are remembering what you have studied. Cover all chapters – biology is not an exam where shortcuts can be made. If you wish to achieve an A grade you have to be confident with every aspect of the course. Leaving out chapters is not an option.

Practise the exam scenario. On completion of a certain area of study, choose an appropriate exam question and attempt to complete it in the time allotted to it in the Leaving Certificate exam (Section A – short questions: 5 mins, Section B – experiment questions: 10 mins, Section C – long questions: 30 mins.) Either correct the questions yourself using your books or give them to your teacher to mark.

Ensure that you are completely familiar with the biology exam layout, and know how many questions are to be answered in each section, how much time to spend on each type of question, and how much you would be expected to write depending on the phrasing of the questions, eg for “name” a one word answer would suffice, “describe” requires all the relevant detail that you can remember.

During the Mocks

The day of the biology exam has arrived so how do you make the most of it?

Be fully prepared for every style of question that may be asked, and ensure that along with your pencil case essentials you bring a calculator and ruler in the case of formula or graph questions.

Read every question very carefully – with adrenaline pumping it is easy to make mistakes. All questions should be read twice before beginning your answers.

Try to be as precise as possible, no waffle will ever be

required. Learn your definitions, and accurately label your diagrams.

Attempt the easiest short questions first; these will help to get you into the swing of things without being too challenging. This will help to settle your nerves and give you a much-needed boost of confidence at the beginning of the exam.

When presenting your answers make an effort to be orderly. This will aid the corrector in getting you the best mark from your paper. Always leave three to four lines blank after each answer to enable you to include any additional points you may remember later during the exam.

Do not leave your exam early. If you have surplus time use this wisely to recheck your answers and attempt extra questions.

It is essential you remain as calm as possible throughout the exam – panicking is counterproductive. Deep breaths and a positive attitude could do wonders for your grade.

After the mocks

Learning from your past mistakes in the mocks will ensure that you don't repeat them in your Leaving Certificate exam. Discovering your weakest areas is important, so try to establish what these may be. Here is where your problems may lie:

- ◆ Certain styles of questions – short, experiment or long questions;
- ◆ Certain topics – respiration, genetics, etc;
- ◆ Definitions not learned precisely enough;
- ◆ Diagrams not labelled accurately;
- ◆ Misreading and therefore misunderstanding questions;
- ◆ Failure to stick to timing constraints.

Whichever of these or other problems you suffered from, it is essential that you take on board your mistakes of the past and do all you can to overcome these. Now is the time to either create from new or adjust your timetable for the final stretch towards the Leaving Certificate Exam. It is important that you don't give up on a section of material as a lost cause. If you need help in grasping a certain topic ask for help from your teacher.

SAMPLE SOLUTION – Q6 2004

Answer the following questions in relation to the human alimentary canal.

What is peristalsis?

Peristalsis is the wave like muscular contraction of the wall of the alimentary canal, which allows the movement of food and unwanted materials through the alimentary canal.

State one reason why a low pH is important in the stomach.

Reasons for the importance of a low pH in the stomach are: it helps to convert pepsinogen into pepsin; it provides the optimum pH for pepsin activity; it helps to kill many of the bacteria that may enter our body through the mouth.

Why is fibre important?

Fibre is important as it helps to stimulate waves of peristalsis especially in the colon, this helps to push along and remove any waste materials from the colon, thereby helping to reduce the incidence of constipation and colon cancer.

Name an enzyme that is involved in the digestion of fat.

Lipase is involved in the digestion of fat.

What are the products of fat digestion?

The products of the digestion of fat are glycerol and fatty acids.

What is the role of bile in fat digestion?

The role of bile in fat digestion is that it physically digests fat by emulsification.

State a role of beneficial bacteria in the alimentary canal.

A role of beneficial bacteria in the alimentary canal is that they can produce vitamins, for example vitamin K which is important in the clotting of blood.

A mind map of animal nutrition

