

Summer Work: A Level Biology

We would like you to complete a piece of research into two areas of Biology from the A Level course

Task 1: Biological Molecules

This will be preparation for the first week's lessons. You must produce a poster or a set of notes (with diagrams) showing the structure of various biological molecules. Answer the following questions in your poster or notes.

- 1) What is a **polymer** and **monomer**?
- 2) What is a **condensation reaction** and a **hydrolysis reaction**?
- 3) Draw out the structure of the following molecules:
 - a. **Alpha glucose** and **beta glucose**
 - b. **Triglyceride** and **phospholipid**
 - c. **Amino acid**

Task 2: A topic of your choice

This piece of work must come from one of the following areas of Biology:

- Health & disease
- Genetics
- Cells
- Ecology

When you have done your research you need to present this in the most **creative** way you can. For example you may wish to do a **model, poster or PowerPoint**. Try and be **as imaginative and creative** as possible but still have the **Science**.

It should be the equivalent to 2 sides of A4 writing (as if you were completing an essay)

Below are some ideas of what you might want to research.

Topic	Areas of study
Health & Disease	HIV & AIDS Diseases of the lungs How does the immune system work?
Genetics	Mitosis & Meiosis How do DNA mutations affect proteins? How natural selection leads to evolution
Cells	Prokaryote & Eukaryote Structures The Ultrastructure of a cell Light vs Electron Microscopes
Ecology	The importance of biodiversity What is a species? The environmental issues concerning fertilizers

- Any A Level textbook or website will help you.

You must bring your two tasks with you to your first Biology lesson in September.

We look forward to seeing your creations!