

Year 12 Induction work AS Biology

This work is designed to introduce you to the first topics you will encounter in AS Biology. A good understanding of these topics is vital as it underpins everything you will learn about.

You will need to research using the internet to be able to complete this task properly.

Please find a suitable website aimed at post-16 students and NOT Wikipedia or Yahoo Answers (as it will be far too complicated or just plain wrong!!).

Some examples of suitable resources include (you will probably need to use more than one to help you):

[A level Biological Molecules - Learn the ENTIRE topic in this video. AQA A level Biology Revision - YouTube](#)



[AQA Biology A-level Topic 1: Biological Molecules - PMT \(physicsandmathstutor.com\)](#)

Welcome to AS level biology – the buck stops with you now.

Part 1a: Biological Molecules - Carbohydrates

1) List the elements that make up all carbohydrates:

2) Complete the table:

Key Term	Definition
Monosaccharide (give 2 examples)	
Disaccharide (give 2 examples)	
Polysaccharide (Give 1 example)	
Monomer	
Polymer	

3) **Glucose:** By hand, draw a diagram of the structure of a glucose molecule (google images could help here!). Include the positions of the elements C, H and O.

4) What is glucose used for in the body?

5) What is a 'condensation reaction' when talking about carbohydrates?

6) Sucrose is a disaccharide. From which 2 monosaccharides is it formed?

7) In the space below, draw a diagram to show how sucrose is formed from these 2 monosaccharides (this is an example of a condensation reaction)

Part 1b: Biological Molecules - Proteins

1) List the elements that make up all proteins:

2) Complete the table:

Key Term	Definition
Primary Structure	
Secondary structure	
Tertiary structure	

3) All proteins are made from amino acids. How many different amino acids are there?

4) Draw the general structure of an amino acid:

5) What is the name of the chemical bond that forms between the amino acids in a protein?

6) Give 3 examples of proteins in the human body:

Part 1c: Biological Molecules - Lipids

1) List the elements that make up all lipids:

2) Complete the table:

Key Term	Definition
Saturated fatty acid	
Unsaturated fatty acid	

3) Give 3 examples of uses for lipids in the body:

4) In the space below show how fatty acids and glycerol combine to form a **triglyceride**: