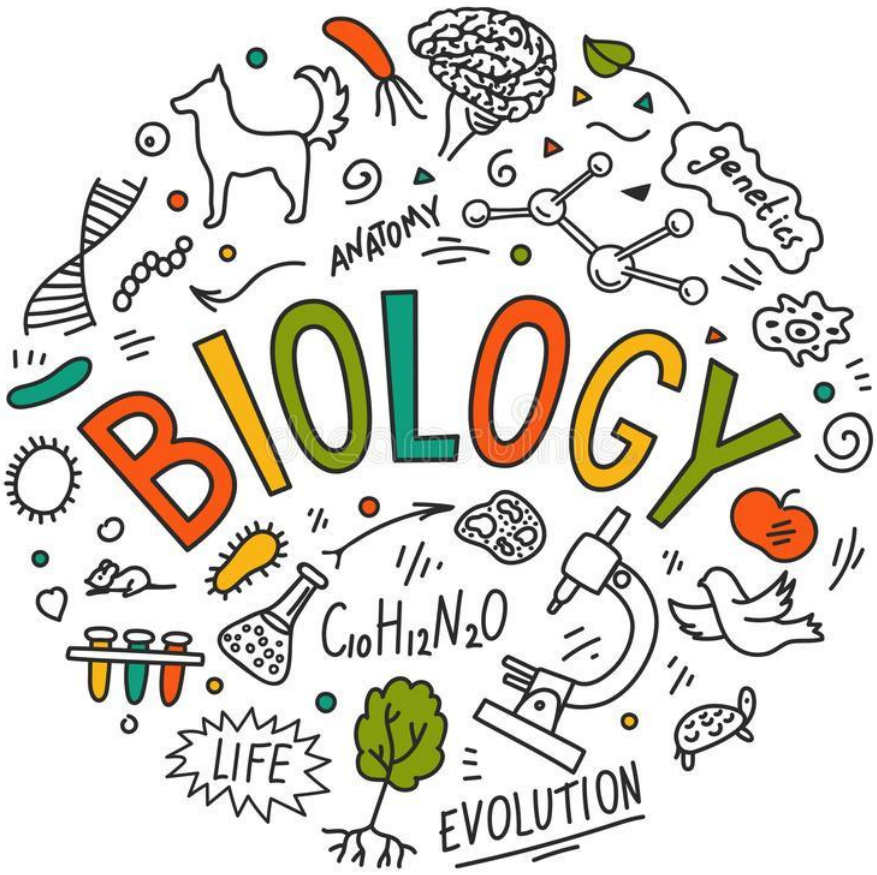
Name:	Date:

Well done on choosing Biology as an A Level! We look forward to meeting you in September – in the meantime please have go at the activities in this pack to give you an idea of the sorts of topics we will cover in your first term.



Biochemistry & Biological molecules

In this topic we will take a look at biology at the molecular level. It has some important cross-over with Chemistry and will form the basis of how we understand biological phenomena.

To get you started please look up and draw the structure of a molecule of glucose. Include the shape, the number of carbon, oxygen, and hydrogen atoms and the types of bonds present.

Extension: if you want to go a step further look up the isomers a glucose and b glucose and describe how they differ.

Cell structure & function

In this topic we build on what you have already done at GCSE looking at cell organelles and different cell types. We will spend some time preparing slides and learning how to calculate actual size of cells and doing biological drawings of different cell types.

To get you started use the space below to compare an animal and a plant cell. Include the following organelles: nucleus, mitochondria, chloroplasts, ribosomes, vacuole, cell wall, cell membrane, Golgi body and endoplasmic reticulum (*hint – you will probably have to look up some of these!*).

Extension: to go a step further can you add the function of each of the parts of the cells you have drawn?

Looking ahead

Lastly, we would like to you to look ahead at the topics you will study as an A Level Biology Student and tell us what you are most looking forward and why.

Using the list of topics below, pick your favourite topic and do some reading on it. Create a summary poster (complete with diagrams, interesting facts, and why you chose it!) to show us what you have found out and what you are most looking forward to learning about. Be as creative as possible and the best will be selected to be displayed in the Biology Laboratory.

Core concepts: Biochemistry; Cell structure; Transport across membranes; Enzymes; Nucleic acids

Energy for life: ATP; Photosynthesis; Respiration; Microbiology; Populations and ecosystems; Human impact

Continuity for life: Biodiversity; Cell division; Human reproduction; Plant reproduction; Inheritance; Evolution; DNA technology

Requirements of life: Gas exchange; Transport in plants; Transport in animals; Nutrition; Homeostasis and kidney; Nervous system; Musculo-skeletal system