A-Level Biology Transition Work

Congratulations on choosing to study A-Level Biology, it is now time to get prepared!

You have achieved highly in your Biology studies at GCSE and will have developed some excellent independent study skills that will help you over the next 2 years studying at A-Level. However, the step up from GCSE Biology to A-Level should not be underestimated and you will need to continue with this development in order to reach your potential. You will be expected to complete many different types of activities independently over the next 2 years and will learn to use your non-timetabled periods and private study sessions effectively. You will get support with this so don't worry!

Each Biology topic will include the following independent aspects:

Pre-Work – This is completed before attending a lesson. It usually involves creating a set of notes on a new topic and familiarising yourself with key concepts before they are explored in class. You may also complete some simple calculations using new equations.

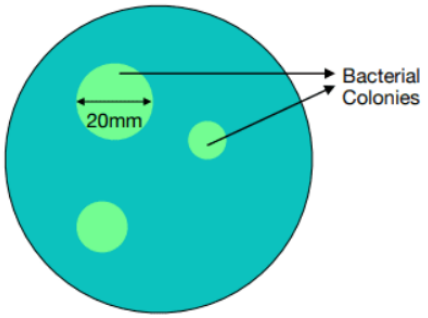
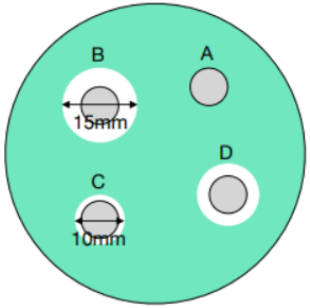
Exam Questions – Most lessons your A-Level Biology teachers may set specific exam questions for you to complete.

Research and extra reading – You will regularly be set journal articles and current news items to use to help you to connect together ideas and put your learning in context.

It is really important that you start the course with a positive attitude and approach and these transition activities are designed to help you with a smooth start to your studies. All of the content is based on knowledge and skills from GCSE Biology, so you will not be required to learn any Year 12 content before the course begins. Instead, this work will help you refresh and strengthen your existing understanding, ensuring that you are fully prepared for the start of your A-Level studies.

Have fun!

Mrs Oldham, Dr Orme, Mrs Allen, Mrs Fisher and Mr Martin

Task	Work to Complete
Microbiology	1) Draw and label a Prokaryotic cell. 2) Calculate the area of the largest bacterial colony.  3) Which antibiotic is the most effective and how do you know?  Fig 2. Petri Dish Showing the Different Sized Zones of Inhibition.
Preventing and Treating Disease	1) What is an antibody and how do they work? 2) How are monoclonal antibodies made in a lab? 3) Give 4 uses of monoclonal antibodies.

The Human Nervous System	1) Draw a labelled diagram of the eye. 2) Describe the following conditions and the treatment for each: ➢ Hyperopia ➢ Myopia 3) Give the function for the following parts of the brain: ➢ Cerebellum ➢ Cerebral Cortex ➢ Medulla
Plant Hormones	1) What is the role of the following plant hormones? ➢ Gibberellins ➢ Ethene ➢ Auxin
DNA	1) Why is DNA known as a polymer? 2) Draw and label a Nucleotide. 3) What is a mutation?
Speciation	1) Who was Alfred Russel Wallace? 2) Research how speciation occurred in the 'Grand Canyon Squirrels' 
Extension	Let us know something Biological that you have read/ researched/ know that you find fascinating