

TRIPLE SCIENCE SUMMER HOMEWORK

You are being asked to complete a selection of tasks over the summer to support your learning so far in GCSE science, and to boost you towards exam success. Each subject contains several tasks that will take you approximately 30-40 minutes each. Please take your homework to your first science lesson in the new school year.

BIOLOGY

In year 9 you were taught some of the fundamentals of biology such as the difference between the cells of a plant, an animal and a single celled organism. Before you can understand the more complicated subjects such as how your body or that of a plant works, your knowledge of cells and their function needs to be secure.

Over the summer we are asking you to review your knowledge and understanding of cells so that when you come back to college you can pick up where you left off and continue to learn about some of the more intriguing and fascinating aspects of life. You can access your biology work here: <https://tinyurl.com/TECC-biology>

CHEMISTRY

In chemistry, the knowledge of what makes an atom and how this relates to their position on the periodic table is possibly the most important of all. With a sound understanding of how to read the periodic table and discuss trends, you will be able to apply it to a whole range of questions on the GCSE papers.

Over the summer period, you can review your understanding of the fundamentals of chemistry and come back to school with a confidence you may not have had before. As these principles are taught in Y9, they are often overlooked and forgotten.

Within this booklet you will be challenged to review your thoughts of what makes up an atom, why the periodic table is so useful and how we can describe properties of elements and compounds using the periodic table.

To begin, you will review the **structure of an atom**, which you will then use to link to its position on the periodic table. You will look at the **model of the atom** and the **development of the periodic table**, followed by how to describe the **trends in the periodic table**.

There will be definitions of key words and past paper questions included to test your ability to implement your knowledge into an exam scenario. You can access your chemistry work here: <https://tinyurl.com/TECC-chemistry>

PHYSICS

This year we are asking you to use your Summer holiday to reflect and revise the Energy and Resources unit of work from Physics, this is because, as teachers, we find that more students struggle with their understanding of this unit and also because it was studied at the start of year 10 and is therefore the most likely to have escaped your minds!

This unit is divided into three sections; Energy stores and transfers, Energy transfer by heating and Energy resources. Each of these sections can be taken as an individual piece of work and can therefore be attempted individually or as part of a larger piece of work. Each section should take 30-40 minutes to complete.

In order to get the most out of this homework you should spend some time reading your notes from school, using your revision guide or using an online revision resources such as [BBC bitesize](#) or [Physics and Maths tutor](#). When you are confident that you understand the unit to the best of your ability, you should then attempt to complete the questions attached. You can access your physics work here: <https://tinyurl.com/TECC-physics>