

Year 10

Autumn 2nd Half-Term

Maths

This term we will be learning about algebra and graphs. Students will consolidate KS3 algebraic learning to become fluent in forming expressions and equations from worded problems, substitution into simple formulae, expanding and factorising linear equations. The second part of the term will focus on drawing and interpreting tables, charts and graphs such as pie charts and scatter graphs. We will discuss correlations and how we can apply averages to the data.

English

Pupils will analyse the poetry anthology Power and Conflict. Pupils will explore themes such as loss, war and Tyranny. They will identify and use poetic techniques through detailed annotation using quotations in structured responses. Pupils will analyse structure and contemplate how it aids meaning. Pupils will learn how to compare and contrast different themes looking for similarities and differences.

Science

Students will do the following:

Explain the structure and adaptations of the heart including arteries, veins and capillaries, coronary heart disease and treatment. I am able to explain the major plant structures including xylem, phloem and root hair cells. Describe using photosynthesis symbol equation, what happens during photosynthesis and use graphs to explain how limiting factors affect the rate of photosynthesis as well as re-call respiration and metabolism.

Also explain how different components of the nervous and endocrine system are used to undertake voluntary and involuntary actions, including the reflex arc, how blood glucose level and the menstrual cycle is regulated. Able to evaluate type 1 and 2 diabetes and the menstrual cycle. To explain the formation of crude oil and how it's processed using fractional distillation and describe the property and reactivity trends of different lengths of hydrocarbons (inc giving general formulas for alkanes and alkenes). Students will explain the differences between direct and alternating voltage and current, explaining how electricity is transmitted efficiently in the national grid, and explain the construction and safety mechanisms in a three-core cable as well as calculate and interpret electrical power and energy transfer by electrical work for electrical appliances.

Art

This term students are investigating the theme of Power and Weakness. They are creating mind maps, artist research pages and photomontage around the theme. This work goes towards their GCSE portfolio, which will be marked in Y11 or taken to their next school.

ICT

We will be learning why we should be using computers safely - What are employer's responsibilities? How we can identify false information and consider Malware and Security. *Functional Skills Level 1 content: manage information storage / follow and demonstrate understanding of the need for safety and security practices.*

PSHE

Living in the Wider World

Financial decision making

We will be exploring the impact of financial decisions, debt, gambling and the impact of advertising on financial choices. We will learn skills to manage influence, assess risk and effectively budget.

PE

Badminton - To understand how and when to use front-court techniques understand the amount of power and force needed for the following badminton shots; Lift Shot, Net Shot, Net kill shot, Flick. Students will learn how to use the above shots in the most effective way during competition. students will learn to compete against one another using the above techniques.

Work Skills

Dress code – appropriate / inappropriate to the job / environment

General demeanour / professionalism – interacting with co-workers / managers / customers. Personal possessions at work 'dos' and 'don'ts'. How to get advice that is needed / who to ask. Codes of practice – absence / lateness / breaks / eating / use of phones etc. How this is in practice across a range of workplaces / employment settings.

Citizenship

Theme A: Living together in the UK

This term we will explore how and why the UK is so diverse, looking at the benefits and challenges of living in a diverse society and introduce the effects of immigration and its impact. We will also discuss the importance of mutual respect and tolerance and ways of building mutual understanding and examine the impact of inequality and discrimination and ways to prevent it. Finally we will explore how diversity, integration and community cohesion can lead to unity and also look at the challenges and opportunities of a changing and diverse society.

Catering

Pupils will deepen their knowledge of food hygiene and safety. We will be recapping how to keep up personal hygiene standards within the kitchen. We will be making sure we know how to correctly read food labels and store the products correctly. Pupils will create safety announcements on how to avoid cross-contamination and what can happen. Pupils will be explaining the general safety rules when working in a kitchen for their BTEC Level 1.