

# Year 11

## Spring 2<sup>nd</sup> Half-Term

### Maths

Students will consolidate their understanding of place value when working with very large or very small numbers, and when calculating with decimals. They will learn how to calculate with and interpret standard index form.

Students will use index laws to simplify and calculate the value of numerical expressions involving multiplication and division of integer powers, fractions and powers of a power. They will convert large and small numbers into standard index form and vice versa. They will perform all 4 operations in standard form and be able to interpret a calculator display and know how to enter numbers in standard form.

For the second part of the term, students will understand and use standard mathematical formulae and learn the difference between an equation and an identity. Students will learn how to rearrange any algebraic notation in order to change the subject of a formula, equation or identity.

### English

Pupils will revisit the Shakespearean text Macbeth in order to further their understanding of the themes that run throughout the play. Pupils will study the various dramatic techniques such as soliloquy and dramatic irony along with their effects. Pupils will analyse the text to uncover the central messages, through the analysis of language, structure and action. Pupils will identify symbolism, which aids meaning. By studying Macbeth pupils will refine their understanding of 16th century politics, societal organisations and questions about the themes of ambition, power and manipulation. Pupils will read independently and aloud as a whole class to appreciate the purpose of dialogue and stage directions in pushing the narrative forward. Pupils will use textual reference to structure their writing when responding to exam style questions in preparation for examinations. Students will also be required to refine their analysis of linguistics, dramatic techniques to provide a social commentary on how Shakespearean themes prevail into the 21st century, broadening their cultural capital.

### Science

Students will be able to explain Newton's three laws (inc calculations), and explain what stopping distance is and factors that affect it as well as solve momentum calculation problems applying principles of conservation of momentum. Students will distinguish between a pure substance and an impure substance using data, identify formulations, interpret chromatograms and suggest tests for common gases. Students will then explain what crude oil is, how it is processed using fractional distillation and various cracking methods. Students will look at the properties and reactivity trends of different lengths of hydrocarbons (inc giving general formulas for alkanes and alkenes).

Students will compare meiosis and mitosis and explain the structure of genes and how they are used to synthesise proteins.

## Art

This term students are investigating the theme of Power and Weakness. They are creating templates, artist research pages, annotation and spraying painting techniques around the theme. This work goes towards their GCSE portfolio, which will be marked in May.

## ICT

Students will consider different ICT systems and the features of different network types and the potential system strengths and weaknesses in each. *Functional Skills Level 2 content: use appropriate software to meet the requirements of a complex data-handling task / use communications software to meet requirements of a complex task.*

## PSHE

We will be developing independence, learning how to make responsible health choices, including how to assess risk and manage influence and personal safety. We will learn about the links between lifestyle and physical health, including the importance of screening, self-examination and how to access health services. We will learn and practice emergency first aid skills.

## PE

Tennis - Students will be able to demonstrate the variety of serves both forehand and backhand and be able to demonstrate these while they compete in a tennis match.

## Work Skills

Students will be producing a CV, they will also consider the types of information they should include based on their transferable skills, interests, and experience. Students will look at jobs sectors they are interested in and write a cover letter to apply for a job role they are interested in.

## Citizenship

Theme D: Power and Influence

Students will finish the unit by learning about the history and roles of various international bodies like the European Union and United Nations, exploring the UK's role on the world stage, and examining the advantages and disadvantages of global governance.

Theme C: Law and Justice

Students will then learn about the law-making process as well as the involvement of Parliament and begin to analyse the effectiveness of this process. Students will examine what the roles of people who enforce the law entail, and explore the use of technology in developing this process of law enforcement. Students will end the term by learning about the differences between civil and criminal law as well as how these laws are treated by the court systems. This knowledge will then be applied to a case study.

## Catering

Pupils will be recapping on their prior knowledge of how to avoid cross contamination, understanding product labelling and shelf life, salt in foods and understanding about good and bad fats. Pupils will learn how to pass on information they have learnt in home cooking and how to pass on recipes in a variety of ways. Pupils will learn how to send emails with attachments. Pupils will create recipe cards they can pass on to others.