Year 10 Summer Term 1 (April – May 2024)

Curriculum Overview

Core Subjects – All learners

English

Language

Reading non-fiction (Paper 2)

- Understand and summarise a range of 20th- and 21st-century non-fiction texts (including literary non-fiction).
- Develop skills to analyse, evaluate and compare non-fiction extracts.

Literature

Conflict Poetry (Paper 1)

- Maintain a critical style and develop an informed personal response connected to the conflict poems.
- Use textual references, including quotations, to support and illustrate interpretations.
- Analyse the language, form and structure used by the poets to create meanings and effects, using relevant poetic terminology.
- Compare the themes and big ideas expressed within the poems.
- Show understanding of the relationships between the poems and the contexts in which they were written.

Mathematics

Foundation Mathematics Curriculum

Number (revisit) :

Recap Finding HCF and LCM by listing & Product of Primes
Use Venn Diagrams and PFD to find the HCF and LCM of Large Numbers
Solve HCF LCM Worded Problems (Problem Solving)
Add, subtract, Times and Divide with Negatives
Add, Subtract, Times and Divide Fractions
Convert Between Improper Fractions and Mixed Numbers (4 Operations)
Convert between Fractions, Decimals, Percentages and Ratios
Finding simple Percentages and Using Multipliers
Convert and Order Fractions, Decimals & Percentages
Find Simple Interest
Find Compound Interest (repeated percentage change method)
Find a Percentage Change & Solve Worded Problem

Algebra (revisit) :

Simplify (incl. Powers)
Expand Single Brackets (incl. 2 Singles & Simplify)
Factorise Single Brackets
Solve 1 & 2 Step Equations (incl. Brackets) and Solve with Unknown on Both Sides (incl. Brackets)
1 and 2 Step Inequalities
Linear Sequences
Rearrange Expressions
Expand Quadratics

Higher Mathematics Curriculum

Proportion:

Solving Problems with Similarity
Using a SF to Find a Missing Length, Area, Vol
Congruence and Rules of Congruence
product rule for counting

Probability:

Sample Space Diagrams - Complete and Find Probabilities
Solve Probability Problems Incl. Relative Frequency
Probability/Frequency Trees Problems
Finding Probabilities Using Venn Diagrams including Set Notation

Vectors:

Writing & Drawing Vectors (incl Column Vectors)
Magnitude of a Vector

Core Subjects

Combined Science	**B11 Hormonal control (Organisms)** • Identify the major glands in the human body. • Define the term hormone. • Explain how blood glucose is regulated. • Explain how blood glucose control is affected in diabetic patients. • Explain how hormones regulate the menstrual cycle. • Explain how the hormones of the female reproductive system can be used in contraception or in treating infertility. **C8 Rates of chemical reactions (Matter)** • Use the particle model to describe how the rate of a reaction can be altered. • Describe and explain how surface area, temperature, concentration, gas pressure and catalysts can affect the rate of a reaction. • Describe reversible reactions in terms of reactants and products. • Define the term equilibrium in terms of rates of reaction. • Explain factors that can affect the position of equilibrium **Energy changes** • How do reactions affect temperature? Students learn about exothermic and endothermic reactions **Molecules and matter** • Why do some materials float? Students learn about the structure of materials, density, pressure and how the energy of particles cause changes of state. **P7 Radioactivity (Energy)** • Define radioactivity in terms of decay of unstable nuclei. • Describe types of radiation in terms of particles, charges, ionisation power and penetration. • Use balanced equations to represent the decay of nuclei by emitting α, β and γ radiation. • Define and explain the term half-life of a radioactive sample. • Describe the dangers and safety measure associated with using radioactive materials.
Core Physical Education	**Self-Reflection** For students to understand what is meant by the term 'self-reflection and to be able to apply this knowledge to PA, Sport and further aspects of life. **Self-Care** Students will understand what is meant by the term 'self-care' and to be able to apply this knowledge to PA, Sport and further aspects of life. **Self-Appraisal** Students will gain an understanding of the term 'self-appraisal and will to be able to apply this knowledge to PA, Sport and further aspects of life. **Self-Improvement** Students will understand what is meant by the term 'self-improvement' and to be able to apply this knowledge to PA, Sport and further aspects of life.

Humanities

History	**Crime and Punishment Through Time 1000-Present** • Saxon England, The Norman Conquest, Trial by Ordeal, Gunpowder Plot, Witchcraft, Transportation, Robert Peel, Pentonville Prison, Conscientious Objectors, Abolition of Capital Punishment, Jack the Ripper, Whitechapel in the 1880s. • Describe the changes in punishments over time • Explain how authorities deal with crime and punishments over time • Analyse how attitudes towards crime and punishment have changed over time
Geography	**Changing Economic World** • Global variations in economic development and quality of life. • Various strategies exist for reducing the global development gap. • An example of how the growth in tourism in an LIC or NEE helps to reduce the development gap. • Major changes in the economy of the UK have affected and will continue to affect, employment patterns and regional growth Students will know: • How global economies are different. • What factors affect global economies. • The methods to effectively manage global economies.
Philosophy and Ethics	**Paper 1 Section 2: Marriage & the Family** • Equality – the difference between prejudice & discrimination, the different Christian views about gender equality. • Christian Attitudes to Gender Roles – how roles & views have changed over time. **Paper 1 Section 4: Matters of Life & Death** • Christian teachings about the origins and value of the universe & life: scientific explanations for the origins of the universe & life and Christian responses to them. • Sanctity of life: why human life is holy; how the Bible can be interpreted to show life as special, the importance of sanctity of life today. • Abortion & Euthanasia – nature of each, Christian responses, biblical teachings, ethical theories. • Christian teachings and beliefs about life after death & beliefs that support the existence of a life after death (including remembered lives, paranormal, logic, reward, comfort and meeting loved ones who have passed on). • Christian responses to non-religious arguments against life after death: why Christians reject them (including as a source of comfort, lack of evidence). • Issues in the natural world – threats to the world, including pollution, global warming, and the use of natural resources; stewardship and humanity's role as stewards. Animal rights (inc. experimentation & food).

Modern Foreign

French	**10.9 Charity Work** • Retrieval of reflexive verbs in the present and past tense to discuss daily routines. • Introduction to ***'ce que'*** to add extra detail to our sentences. • Discussion on the advantages of completing charity work in our local community and abroad. • Use of present participles of regular verbs. **10.10 Parent and Sibling Relationships** • Revisiting direct and indirect object pronouns. • Use of ***'dont'*** to express 'whose'. • Revision of the comparative and superlative to compare family members. • Use of the imperfect tense to describe past relationships.

	Spanish	**10.9 Charity Work** • Retrieval of reflexive verbs in the present and past tense to discuss daily routines. • Introduction to ***'lo que'*** to add extra detail to our sentences. • Discussion on the advantages of completing charity work in our local community and abroad. • Use of present participles of regular verbs. **10.10 Parent and Sibling Relationships** • Revisiting direct and indirect object pronouns. • Use of ***'cuyo'*** to express 'whose'. • Revision of the comparative and superlative to compare family members. • Use of the imperfect tense to describe past relationships.
Design Technology	3D Product Design	**Major Project:** Term 3: Developing ideas and refining techniques. **Focused Research** • Artist research • In-depth topic research **Contextual Links** • Artist/designer studies • Analysing artists/designer work **Developing Ideas** • Sketching designs • Additional photography • Digital designs • Analysis of ideas • Compare designs Students will be considering ways to develop their ideas in personal and meaningful ways. This can begin with inspiration from contextual studies and learning how other artists/designers have developed similar ideas and concepts. Students will then combine and refine successful areas of their project into meaningful ideas to develop into potential outcomes. Throughout Y10 students will learn about new artists/designers and develop their knowledge of the meaning behind many works of art/design.
Design	Engineering	**R038 – Principles of Engineering Design.** • This unit provides the opportunity for students to develop their understanding of the requirements of design briefs and design specifications for the development of new products. • Topics/Skills covered in the R038 unit include: • The reasons for the use of modelling, virtual and physical modelling of design ideas. Manufacture or modification of models and prototypes. Including the comparison of the model and prototype against the requirements of the design brief and specification • Types of criteria in and engineering design specification. Including the difference between needs and wants, the difference between quantitative data and qualitative data and the reasons for the product criteria (ACCESS FM). **R039 – Communicating Designs** • This unit develops techniques in generation, concept development and the communication of design ideas using hand rendering and computer-based presentation techniques including computer aided design software.

	• Production of an assembly drawing for a design proposal with an exploded view and a sectional view. Including isometric projection, parts list of up to 4 parts, number referencing, assembly instructions • Production of a 3D CAD model of a design proposal to include compound 3D shapes, rendering and a complex shape which includes dimensions, lines, and angles. • Production of 3D CAD assemblies of components including multiple components, mate tools, constraints, and animation
Textiles	**Major Project:** Term 3: Developing ideas and refining techniques. **Focused Research** • Artist research • In-depth topic research **Contextual Links** • Artist/designer studies • Analysing artists/designer work **Developing Ideas** • Sketching designs • Additional photography • Digital designs • Analysis of ideas • Compare designs Students will be considering ways to develop their ideas in personal and meaningful ways. This can begin with inspiration from contextual studies and learning how other artists have developed similar ideas and concepts. Students will then combine and refine successful areas of their project into meaningful ideas to develop into potential outcomes. Throughout Y10 students will learn about new textile artists and designers and develop their knowledge of the meaning behind many works of textile art and design.
Food Technology	**Food Science** This unit will enable students to develop an understanding of the different scientific processes that are involved in food production and preparation. Topics and Skills Covered: • Why food is cooked and the different methods of heat transfer. • Students will learn a range of preparation and cooking methods, alongside the importance of time, to achieve the desired characteristics in practicals. • Students will study the functional and chemical properties of food, including denaturation, coagulation, gluten formation, foam formation, gelatinisation, dextrinization, caramelisation. • Students will understand the use and importance of chemical and mechanical raising agents. • Students will gain exam question practise

Performance

Art	**Major Project:** Term 3: Developing ideas and refining techniques. **Focused Research** • Artist research • In-depth topic research **Contextual Links** • Artist/designer studies • Analysing artists/designer work **Developing Ideas** • Sketching designs • Additional photography • Digital designs • Analysis of ideas • Compare designs Students will be considering ways to develop their ideas in personal and meaningful ways. This can begin with inspiration from contextual studies and learning how other artists have developed similar ideas and concepts. Students will then combine and refine successful areas of their project into meaningful ideas to develop into potential outcomes. Throughout Y10 students will learn about new artists and develop their knowledge of the meaning behind many works of art.
Physical Education	**2.2 Sports Psychology** • Characterisation of a skill • Classification • Goal Setting **2.2 Sports Psychology** • Mental Preparation • Types of guidance • Types of feedback **Practical Assessment** Athletics Table tennis
Health and Social Care	**Learning outcome A:** **Understand human growth and development across life stages and the factors that affect it.** **Coursework** Pearson sets the assignments for the assessment of this component. The assignment for this component consists of four tasks. • In response to Task 1, learners will demonstrate their knowledge and understanding of the PIES growth and development through the life stages. • In response to Task 2, learners will demonstrate their knowledge and understanding of the impact of different factors on PIES growth and development through the life stages. • In response to Task 3a, learners will demonstrate their knowledge and understanding of the impact of life events on PIES growth and development. • In response to Task 3b, learners will demonstrate their knowledge and understanding of how individuals adapt to life events.

Business and IT

Business	**Unit 4** **Operations Management** This content area focuses on the various factors that influence the operations management decisions a business makes. Pupils will learn about: • Outsourcing tasks to another business • Lean production methods **Unit 5** **Business Growth** This content area focuses on business and enterprise growth that an enterprise will need to understand if it wants to continue to grow in the future. Pupils will learn about: **Internal & External growth** • Economies and diseconomies of scale • The challenge of growth
Information Technology	**How can we analyse data using a spreadsheet?** **Learning Aim A:** Data v Information, data formats, preparing data for processing, data collection methods, data quality, data privacy. **Learning Aim B:** Importing data, formatting of data, using formulas, using functions, absolute cell referencing, sorting information, decision making functions