

Year 10 : Term 5 Curriculum Plan

Subject	15 th June	22 nd June	29 th June	6th July	13 th July
Maths	<p>Dr Horne & Mr Jackson <u>Quadratics</u> Students will factorise quadratic expressions in the form $ax^2 + bx + c$. They will set up and solve quadratic equations by factorising and completing the square. Students will solve equations that need rearranging and solve quadratic equations using the quadratic formula.</p> <p>Mrs Ferns & Mr Lee <u>Equations</u> Students will use function machines. They will solve equations with integer coefficients, in which the unknown appears on either side or on both sides of the equation.</p>	<p>Dr Horne & Mr Jackson <u>Simultaneous Equations</u> Students will find the exact solutions of two simultaneous equations in two unknowns. They will use elimination or substitution to solve simultaneous equations. They will solve both linear and non- linear simultaneous equations</p> <p>Mrs Ferns & Mr Lee <u>Sequences</u> Students will find a specific term using position-to-term or term-to-term rules. They will generate linear sequences of numbers and sequences derived from diagrams. They will find the nth term for a pattern sequence and of an arithmetic sequence. Students will continue a quadratic sequence and use the nth term to generate terms</p>	<p>Dr Horne & Mr Jackson <u>3D Pythagoras and 3D trigonometry</u> Students will understand, recall and use trigonometric relationships and Pythagoras' Theorem in right angled triangles and use these to solve problems in 3D configurations</p> <p>Mrs Ferns & Mr Lee <u>Prime Numbers</u> Students will recognise and describe prime numbers. They will find the prime factor decomposition of positive integers and write as a product using index notation. Students will find the HCF/LCM using prime factors including finding HCF and LCM given the prime factorisation of two numbers.</p>	<p>Dr Horne & Mr Jackson <u>Statistics</u> Students will apply systematic listing strategies, including use of the product rule for counting. They will understand how to draw a tree diagram and use this to find probability and expected outcomes. They will calculate the probability of independent and dependent combined events.</p> <p>Mrs Ferns & Mr Lee <u>Standard form</u> Students will convert large and small numbers to and from standard form. They will multiply, divide, add and subtract in standard form. They will know how to interpret a calculator display using standard form and know how to enter numbers in standard form.</p>	<p>Dr Horne & Mr Jackson <u>Statistics 2</u> Students will estimate the size of a population using the capture-recapture method. They will draw and interpret cumulative frequency graphs and box plots to find median, quartiles, range and interquartile range and draw conclusions</p> <p>Mrs Ferns & Mr Lee <u>Ratio</u> Students will share a quantity in a given ratio, including three part ratios. They will apply ratio to real life problems, such as those involving conversion, comparison scaling.</p>
English	<p>In school/ online lesson: Overview of NEA. Exploration of what makes an effective speech including models. Recap and review of what makes an effective introduction. Independent practice: Writing/ improving introduction as assignment. Creating a plan of the structure of their speech as an extension for those who have already written introductions. Learning Loop: Power and Conflict: Powerful People cluster: Ozymandias. Understanding and analysis of the poem.</p>	<p>In school/ online lesson: Persuasive techniques and how to use them. How to conduct research for your speech effectively and use information in a way that has impact Independent Practice: Research project set as assignment with guidance from the in school/ online lesson. Learning Loop: Power and Conflict: Powerful People cluster: My Last Duchess</p>	<p>In school/ online lesson: How to write your speech. Creating effective conclusions Independent Practice: Writing first draft of speech set as assignment Learning Loop: Power and Conflict: Powerful People Cluster: London</p>	<p>In school/ online lesson: Editing and redrafting your speech. How to best prepare/ respond to Q&A element. Review/ overview of what we have learnt so far Independent Practice: Editing/ redrafting and completion of speech set as assignment Learning Loop: Power and Conflict: Powerful People Cluster: Deeper level analysis: Exploring analysing one of the poems above in more depth.</p>	<p>In school/ online lesson: Lecture on Powerful People Cluster (WTM). Filming of NEA. Independent Practice: Comparison of poems set as assignment. Learning Loops: Power and Conflict: Powerful People Cluster: Comparing the poems (Ozy, London, MLD)</p>

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Science	<p>Biology: Water Cycle In this lesson we are learning about how water cycles through the ecosystem and how we can produce clean drinkable water.</p> <p>Chemistry: Carbonate Reactions & Limiting Reagents In this lesson we are learning what happens when an acid reacts with a metal carbonate, how to prove it the gas which was made and how to tell which reactant is in the lowest amount in that chemical reaction.</p> <p>Physics: In this lesson we are learning how forces can change the shape of objects and what the relationship is between force and extension when an object is deformed.</p>	<p>Biology: carbon cycle In this lesson we are going to look at how carbon is cycled through an ecosystem. We will look at the main ways CO₂ is released into the atmosphere and how it is taken out. We will study the impacts humans are having on the planet through the use of fossil fuels, deforestation and building.</p> <p>Chemistry: Solubility Reactions In this lesson we are learning how to predict if an insoluble salt will be made when two soluble salts are mixed together. We will look at extending these predictions into word and symbol equations which include state symbols.</p> <p>Physics: Core Practical CP13a – Investigating Springs. In this lesson you will attempt the core practical using an online simulation.</p>	<p>Biology: Nitrogen Cycle In this lesson we are learning why plants need nitrates and the role of bacteria within the nitrogen cycle.</p> <p>Chemistry: Equations In this lesson we are learning to calculate the concentration of different soluble solutions. Then we are going to learn how to express different chemical reactions as word equations, symbol equations, ionic equations or half-reactions.</p> <p>Physics: Extension Calculations In this lesson we will learn and apply the equation that links the force applied to an object and the extension.</p>	<p>Biology: Nitrates and Farming In this lesson will look into the importance of nitrates for plants and also how growing and harvesting crops can change the nitrate concentration in the soil. We will also study the pros and cons of fertiliser use.</p> <p>Chemistry: Maximum Yield In this lesson we are linking together the ideas of solubility and how much of an insoluble salt can be made during the chemical reaction.</p> <p>This lesson will look at recapping symbol equations and stoichiometric (balancing number) relationships.</p> <p>Physics: Energy transfers and Equations Revision In this lesson we will look at the energy transfers that take place when stretching objects. We will also review the equations that you need to learn for the entire course and ways in which you can learn them.</p>	<p>Biology: CB9 Consolidation In this lesson we will bring together the different parts of the CB9 topic to ensure broader understanding of how the content links.</p> <p>Chemistry: Concentration & Balancing using Masses In this lesson we are recapping how to balance chemical equation and learning how to do to this when provided with masses of reactants. The process we are going to learn follows very closely to the method taught in term 4 regarding calculating empirical formula of a compound.</p> <p>Physics: Particle Model and Thermal Physics Revision In this lesson we will be revising the content of CP12 which covers the particle model and kinetic theory.</p>
German	<p>Revisit key vocabulary and structures for Theme 1 – Family and Friends Theme 1 – Family and Friends building written and spoken answers</p> <p>Specific Focus – Opinions and Reasons</p> <p>Combine vocabulary and grammar to produce short written answers – Progress Check</p>	<p>Revisit key vocabulary and structures for Theme 1 – Daily Life</p> <p>Theme 1- Daily Life building written and spoken answers</p> <p>Specific Focus – Past Tense</p> <p>Combine vocabulary and grammar to produce short written answers – Progress Check</p>	<p>Revisit key vocabulary and structures for Theme 2 – Travel and Tourism</p> <p>Theme 2 – Travel and Tourism building written and spoken answers</p> <p>Specific Focus – Future Tense</p> <p>Combine vocabulary and grammar to produce short written answers – Progress Check</p>	<p>Revisit key vocabulary and structures for Theme 2 – Home Town</p> <p>Theme 2 – Home Town building written and spoken answers</p> <p>Specific Focus – Conditional Tense</p> <p>Combine vocabulary and grammar to produce short written answers – Progress Check</p>	<p>Revisit key vocabulary and structures for Theme 5 – International and Global Dimension</p> <p>Theme 5 – International and Global Dimension</p> <p>Specific Focus – Adding Complexity</p> <p>Combine vocabulary and grammar to produce short written answers – Progress Check</p>

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Geography	<u>Wave types and Weathering:</u> In this lesson the learners will learn about how waves are formed, 2 different waves. Then they will start with the weathering process.	<u>Weathering processes continued:</u> In this lesson the learner will learn about mass movements, different erosion types and longshore drift.	<u>Coastal Erosion Landforms:</u> In this lesson learners will be looking at landforms and how different landforms are created with erosion.	<u>Coastal Depositional Landforms:</u> In this lesson learners will be looking at landforms that are created from deposition.	<u>Coastal Management:</u> In this lesson the learners will be learning about coastal management, hard engineering and soft engineering.
History	<u>How did Elizabeth organise her government when she came to the throne?</u> This lesson students will learn about the government structure Elizabeth imposed when she came to power. This includes: The Court, JPs and Parliament.	<u>What role did the Court play in the day to day running of the country?</u> This lesson will extend from the previous knowledge of Elizabeth's government structure. This will focus on the role of her key advisors and the jobs they did as part of running the country.	<u>What were the main problems Elizabeth faced as Queen of England in 1558?</u> This will look at an overview of all the problems Elizabeth faced covering the following: Religion, gender, economy and marriage. This will then follow with an in-depth look at individual issues.	<u>Why was it important for Elizabeth to marry?</u> This lesson students will consider the two major concerns of Elizabeth's role as a female leader as well as the pressure and influence of her having an heir to the throne. This should link back to the previous learning about her childhood and other monarchs.	<u>Why was Elizabeth's relationship with Parliament an issue?</u> This lesson will continue from the previous issues to understand how there was a lot of tension between Elizabeth and her Parliament. This will look at the role of her Parliament in more detail and the issues that happened throughout her reign.
Art	Pen Drawing This is the first lesson to begin our project on 'Improving techniques using a variety of mediums'. We will be practicing different techniques which you may want to use in your own projects. Pencil Drawing We are going to create a piece of art work using pencil only.	Pencil Source In today's lesson we are going to continue with using a pencil to create a piece of work art.	Watercolour Painting In today's lesson we are using a different medium -watercolour paints.	Pen Drawing In today's lesson we will be focussing on using a pen as our choice of medium.	Artist Research - Vincent Van Gogh In today's lesson we are going to look at the work of Vincent Van Gogh, which may inspire our future work.
Computer Science	IDE and Translators High Level vs Low level languages	IDE and Translators Translators	System Software Operating System Software	System Software Utilities Software	System Software Application Software
Creative iMedia	Pre-Production Techniques Reviewing mindmaps	Pre-Production Techniques Camera Shots	Pre-Production Techniques Reviewing Storyboards	Pre-Production Techniques Reviewing Scripts	Pre-Production Techniques Reading a client brief

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Design Technology	Core content - New and emerging technology (Enterprise) Focusing on: <ul style="list-style-type: none"> Privately-owned business Crowd funding Government funding Not for profit organisation 	Core content - New and emerging technology (Sustainability) Focusing on: <ul style="list-style-type: none"> Transportation Costs Pollution Demand on natural resources Waste generated 	Core content - New and emerging technology (People) Focusing on: <ul style="list-style-type: none"> Workforce Consumer Children 	Core content - The categorisation of the types, properties and structures of Focusing on: <ul style="list-style-type: none"> Ferrous metals Natural Timbers Manufactured Timbers 	Core content - Investigate and analyse the work of past and present professionals and companies to inform design Focusing on: <ul style="list-style-type: none"> Analysing a product to the following specification criteria. Aesthetics
Drama	Evaluating live theatre- performance techniques (exam skills) Evaluating live theatre - Design elements (exam skills) Study of performance of CIDN extract	Understand the character of Christopher Understand the relationship between Christopher, Judy, Ed and Siobhan Decide on performance techniques to play each character in a given circumstance (using script extracts)	Understand the importance of the ensemble in performance Understand the importance of the Use of physical theatre in performance How to create a physical theatre piece	Understand the elements of stage design Apply stage design to CIDN Write about stage design (exam skill)	Understand the elements of lighting design Apply lighting design to CIDN Write about lighting design (exam skill)
Engineering	Topic: Mechanical Engineering In this lesson you will... <ul style="list-style-type: none"> Identify different projects and products of mechanical engineering. Explain how the applications different projects and products of mechanical engineering has solved problems. Evaluate how the application of mechanical engineering shaped the modern world through projects and products. 	Topic: Electrical, Aerospace and Communications In this lesson you will... <ul style="list-style-type: none"> Identify different projects and products of Electrical and Electronic, Aerospace and Communications engineering. Explain how the applications different projects and products of Electrical and Electronic, Aerospace and Communications engineering has solved problems. Evaluate how the application of Electrical and Electronic, Aerospace and Communications engineering shaped the modern world through projects and products. 	Topic: Chemical, Civil and Automotive Engineering In this lesson you will... <ul style="list-style-type: none"> Identify different projects and products of Chemical, Civil and Automotive engineering. Explain how the applications different projects and products of Chemical, Civil and Automotive engineering has solved problems. Evaluate how the application of Chemical, Civil and Automotive engineering shaped the modern world through projects and products. 	Topic: Biomedical and Software engineering In this lesson you will... By the end of the session, you must be able to: <ul style="list-style-type: none"> Identify different projects and products of Biomedical and Software engineering. Explain how the applications different projects and products of Biomedical and Software engineering has solved problems. Evaluate how the application of Biomedical and Software engineering shaped the modern world through projects and products. 	Topic: Health and Safety In this lesson you will... <ul style="list-style-type: none"> Describe what is meant by the term Health and Safety List government health and safety legislations Explain the importance of Health and Safety in an engineering workplace Select the most appropriate PPE for a given scenario Evaluate the risk to an engineering company of not applying health and safety legislation.

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Food & Nutrition	Food spoilage and contamination In today's lesson we are going to look at food spoilages and contamination. E.g. Food poisoning and food safety advice when storing foods.	Principles of food safety In today's lesson we are going to learn about the principles of food safety. E.g. Conditions needed for bacterial growth and food safety advice when purchasing food.	Processing and production In today's lesson we are going to explore processing and production. There will be a suggested practical activity to reinforce learning.	Environmental impact and sustainability/Food Provenance In today's lesson you will learn about the environmental impact and sustainability of food. It is important that we understand the processes that food goes through before it reaches our fork.	Factors affecting food choice In today's lesson you will learn about factors that affect your food choices. As a consumer, there are various factors may influence your decision to purchase food products. E.g. Personal factors, social factors and economic factors.
Media	Revision of Media Language Ownership and Regulation Politics and newspapers	Revision of ML News Values	Revision of ML Creating actions to remember NVs. 1950s PP First lesson on set product – 1960s The Observer	Revision of ML Creating actions to remember NVs. 1960s PP First lesson on set product – 1960s The Observer	Revision of ML Creating actions to remember NVs. 1970s PP First lesson on set product – 1960s The Observer
Sociology	<u>Introduction to Social Stratification</u> In this lesson students will be recapping what social stratification means and recapping the start of this topic.	<u>Functionalist & New Right View On Social Stratification</u> In this lesson students will be recapping what Functionalist and New Right view on social stratification.	<u>Marxist & Weber's View On Social Stratification</u> In this lesson students will be recapping what Marxist and Weber's view on social stratification.	<u>Feminist View On Social Stratification</u> In this lesson students will be recapping Feminist view on social stratification.	<u>How Does Age Affect Life Chances</u> In this lesson student will be looking at how age can affect our life chances and how certain age groups may face prejudice and discrimination.
RSCS	Virtual Work experience LO: To ascertain an understanding of the different elements of a work place. Complete the virtual work experience project.	Kudos LO: To understand what skills you have and the industries they are most applicable to. Watch the PowerPoint and complete the Kudos survey.	Mock Interview Letter of Application LO: To be able to apply for a job and prepare for a mock interview Watch the PowerPoint, completing the tasks on the assignment document.	Employability skills LO: To understand the skills that employers look for. Watch the PowerPoint, completing the tasks on the assignment document.	Local Market Index LO: To understand what LMI is and how it changes Watch the PowerPoint, completing the tasks on the assignment document.

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PE	Nutrition during exercise	Nutrition after exercise	Reasons for varying dietary requirements	Diet for aerobic/endurance activities	Diet for short, intense/anaerobic activities
	<p>LO: To understand how to fuel your body during exercise.</p> <p>Watch the PowerPoint, completing the tasks on the assignment document.</p>	<p>LO: To understand how to fuel your body to aid recovery.</p> <p>Watch the PowerPoint, completing the tasks on the assignment document.</p>	<p>LO: To understand how different dietary requirements fuel their body for activity.</p> <p>Watch the PowerPoint, completing the tasks on the assignment document.</p>	<p>LO: To understand how to fuel your body for endurance activities.</p> <p>Watch the PowerPoint, completing the tasks on the assignment document.</p>	<p>LO: To understand how to fuel your body for anaerobic activities.</p> <p>Watch the PowerPoint, completing the tasks on the assignment document.</p>