

Year 10

Curriculum Map 2025



SALE HIGH SCHOOL

Curriculum Map Year 10: Art

Intent:

The Year 10 Art and Design GCSE curriculum for students studying the topic of Natural Forms is designed to inspire and empower young artists to explore the intricate beauty and diverse wonders of the natural world. Through this course, we intend to foster a deep appreciation for nature's forms, patterns, and textures while nurturing creativity and honing essential artistic skills.

Our goal is to encourage students to delve into the often-overlooked details of the environment, from the graceful curves of leaves to the complex structures of shells and beyond. By engaging in this exploration, students will develop a profound understanding of the relationship between art and nature, as well as the role of observation and interpretation in the creative process. Through a wide array of artistic techniques, mediums, and styles, students will have the opportunity to experiment, express themselves, and ultimately produce compelling artworks that reflect the intricacy and wonder of the natural world. In addition to two-dimensional artwork, this curriculum also incorporates larger scale sculpture, allowing students to venture beyond traditional mediums and delve into three-dimensional expressions of natural forms.

Our curriculum not only aims to equip students with technical proficiency but also to encourage critical thinking, creative problem-solving, and a lifelong appreciation for the beauty of natural forms, whether captured on paper or brought to life in sculptural creations.

Why I study Art?

I study Art because:

- It helps me find meaning in the world.
- It helps me express my identity.
- It helps me explore culture and ideologies.

Cultural capital/enrichment

Studying the Natural Forms project in Year 10 Art not only enriches students' artistic skills but also cultivates a significant cultural capital. This project immerses students in a diverse range of artistic voices and perspectives from various cultural backgrounds. By exploring the works of artists hailing from different corners of the world, students gain a deeper understanding of how culture and heritage influence artistic expression. The project is a journey through the crossroads of nature and creativity, allowing students to appreciate the global tapestry of art while drawing inspiration from a rich mosaic of techniques. Furthermore, the trip to Yorkshire Sculpture Park provides a unique opportunity to expand their contextual knowledge by engaging with art installations amidst the stunning Yorkshire landscape. This exposure not only fosters a profound connection between art and environment but also enables students to grasp the symbiotic relationship between art and culture, building a strong foundation for their own creative growth. In essence, the Natural Forms project not only nurtures artistic talent but also broadens students' horizons, making them culturally aware and globally minded artists.

Half term	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
AUTUMN	Skills development towards assessment objectives (A01/A02/A03)	Skills development phase- Students will be taught how to accurately record from visual stimulus in a variety of ways including: continuous line, analytical drawing, printing, collage etc. They will use pencil, graphite, chalk, charcoal, pen, oil pastel, soft pastel, and watercolour. Each skill will be anchored by using the theme of natural forms and will focus on the 7 elements of Art and Design. The students will create studies from direct observation and photography and are encouraged to collate their own selection of primary images. The main artist focus for the Autumn term is Natalie McIntyre, a pen artist with a focus on precision, detail and accuracy.	1. Observational Drawing Skills: Developing the ability to closely observe and accurately depict the intricate details and textures of natural forms, such as leaves, shells, or flowers. 2. Medium Exploration: Learning to work with a range of materials, such as oil pastels and chalk, to create vibrant and textural drawings that capture the essence of the natural forms. 3. Drawing from Life: Practicing drawing directly from life, which involves capturing the physical attributes of objects in real-time, improving their accuracy and realism. 4. Primary Image Collection: Understanding how to collect primary source material, such as photographs and sketches, to inform their artwork and support their creative process. 5. Visual Analysis: Developing the skills to critically analyse and interpret the intricate details and structures of natural forms, drawing inspiration from the work of artist Natalie McIntyre. 6. Colour Theory: Exploring colour palettes that best represent the natural forms they are studying, experimenting with colour mixing and harmonies. 7. Texture Representation: Practicing techniques to create textures that mimic the surfaces and details of natural forms, making their drawings more lifelike. 8. Artistic Process Development: Understanding how to plan and execute an artwork, including choosing an appropriate medium, preparing a composition, and refining their technique. 9. Incorporating Artist Inspiration: Drawing insights from the work of artist Natalie McIntyre, integrating elements of her style and approach into their own creative process. 10. Creative Problem-Solving:	1. Baseline assessment drawn in pencil of a still life natural forms object 2. Oil pastel beetle study with a focus on display of reflection through colour blending Key writing pieces such as artist analysis will be marked for accuracy, complexity of thought and SPAG.

			Encouraging students to think critically and creatively to overcome challenges that may arise during the artistic process. By focusing on natural forms and incorporating these skills into their project, Year 10 Art GCSE students will not only gain proficiency in artistic techniques but also deepen their appreciation for the beauty and intricacy of the natural world. This project will provide a solid foundation for their artistic development and further exploration in the field of art and design.	
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SPRING	Artist influence and development of ideas	A final natural forms piece will be developed using the student's own images, and will take inspiration from the artist Catrin Mostyn Jones. Students will create a 3D sculpture in her style which will be refined and developed from draft designs linking to their own ideas and their understanding of the artist's techniques. A strong emphasis will be placed on recurring patterns and students will begin to create a range of prints to explore this. Students will explore oil pastel transfers, mono printing and a range of materials when constructing their 3D piece. The combined focus on sculptural work, printmaking, and the development of independent projects will equip Year 10 Art GCSE students with a broad set of skills and a deep understanding of artistic concepts, enabling them to approach their future creative endeavors with confidence and creativity.	Year 10 Art GCSE students embarking on the development of their final sculptural piece, inspired by their prior learning and artist Catrin Mostyn Jones, will acquire a range of key skills. 1. Conceptual Development: Learning to brainstorm and refine their ideas to create a clear and compelling concept for their sculptural piece. 2. Three-Dimensional Artistry: Gaining proficiency in working with sculptural materials, understanding form, structure, and spatial relationships. 3. Material Exploration: Experimenting with various sculptural materials, such as clay, modrock, papier mache and mixed media, to achieve their artistic vision. 4. Observation Skills: Enhancing their ability to observe and interpret natural forms, following the influence of artist Catrin Mostyn Jones. 5. Conceptual Art Integration: Incorporating the conceptual depth and artistic sensibilities developed in previous projects into their sculptural and printmaking work. 6. Visual Analysis: Developing the ability to analyse and interpret the work of both Catrin Mostyn Jones and Angie Lewin to extract inspiration and apply it to their own creations. 7. Composition and Design: Applying design principles to sculptural pieces, ensuring a balanced and harmonious arrangement of elements. 8. Creative Problem-Solving:	1. Natalie McIntyre Response 2. Catrin Mostyn Jones response Key writing pieces such as artist analysis will be marked for accuracy, complexity of thought and SPAG.
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			Encouraging independent and critical thinking to address challenges that arise while creating both sculptural and printmaking pieces. 9. Presentation and Display: Learning how to effectively present and display their sculptural and printmaking pieces, considering exhibition and presentation standards.	
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SUMMER	Finalising ideas and independent projects	The summer term will be all about refining the work from year 10 to create a top quality art portfolio. Students will collate their work from the year into a professional composition which clearly displays their skillset and shows how the students have met the 4 assessment objectives. This will be an opportunity for students to develop their ideas further and improve on any work they are not happy with. Students will be able to explore additional materials which will aid them in gaining marks from assessment objective 2. Additionally, their introduction to new printing mediums, such as intaglio printing and etching, will further enrich their artistic toolkit, drawing from the inspiration of artist Angie Lewin. Students will be given a past paper from AQA and begin their first year 11 project before the end of term.	1. Composition and Design: Learning to arrange the elements of their artwork in a visually engaging and balanced composition, considering concepts like balance, contrast, and focal points. 2. Presentation and Display: Learning how to properly present and display their finished artwork, which may include mounting, framing, or other presentation techniques. 3. Artistic Process Management: Understanding how to plan and execute complex multi-step projects, balancing the sculptural and printmaking components. 4. Independence and Initiative: Fostering autonomy in decision-making and creative exploration, a key skill as they work on their second project based on a past AQA Art, Craft, and Design GCSE paper. 5. Technique Proficiency: Mastering the techniques involved in intaglio printing and etching, including etching plates, inking, and printing. 6. Printmaking Skills: Learning how to create intricate and detailed prints through intaglio techniques, inspired by artist Angie Lewin's work.	1. Sculpture design 2. Observational drawing (past paper) Key writing pieces such as artist analysis will be marked for accuracy, complexity of thought and SPAG.
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Curriculum Map Year 10: Drama

Intent:

Our intent is to provide Sale High students with broad scope of knowledge that challenges the way students think about the arts and teaches them to accept and embrace difference. We want our students to be confident and understand how the arts can benefit all aspects of life such as promoting confidence and good communication skills, to teach them that creating safe and comfortable spaces where people of all backgrounds can make, celebrate and learning together is empowering. Students study a range of topics containing either a written, devised or scripted aspect that prepares them for GCSE and beyond. Topics are chosen to develop creativity and co-operation and challenge students to experience a range of perspectives, issues and events. There is a sharp focus on developing students descriptive, analytical, and evaluative skills, crucial skills for life beyond Sale High School. Students develop knowledge of theatrical styles, script writing, vocal skills and physical skills to build confidence and enhance communication skills and literacy skills. Students implement, improve and transfer these skills through a variety of context, to encourage flexible learners. Students experience both traditional styles of drama and more contemporary, challenging them to develop opinions and appreciate work that is not necessarily what they would choose to watch. This promotes acceptance and a balanced outlook crucial to life in general.

Why I study Drama?

I study Drama because:

- I can be creative and collaborative
- I learn how to present myself to an audience
- I will view the world from different perspectives

Cultural capital/enrichment

Performance/presentation skills – awareness of the audience, self-confidence, use of vocal and physical skills

-Exploration of own thoughts and feelings through a character, considering what is right and wrong

-Creative collaboration to develop working relationships outside of friendship groups

-Giving/receiving constructive criticism about peer's performances

-Observing different types of theatre from different time periods and countries

-Writing for particular audiences, considering the emotions/experiences of the character they are portraying

-Working with challenging topics in order to expand their understanding of 'real' issues, including mental health issues and peer pressure

- Participating in our Extra-curricular drama company 'Platinum Stars' (an opportunity for students be part of a fun and safe environment for young people to experience creating and rehearsing theatre performance for a specific event)

-Participating in the whole school production allows students to experience performing in a theatre, to a paying audience

Half term	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
AUTUMN 1	Skills Building	Introduction to the course- Develop skills and understanding of the theatre practitioners Brecht, Stanislavski, Frantic Assembly and Artaud How to effectively devise from a stimulus (in preparation for the Component 2 devising unit) How to deliver an effective performance based on a specific practitioner – Artaud’s Theatre of Cruelty How to work effectively in a team to build trust and relationships to deliver a high quality performance. How to use exemplar work as a tool to improve own pieces Know the performance standards expected of GCSE delivery	How to analyse and use the following: Epic Theatre (Alienation Technique) and non-naturalism Emotion recall (Method Acting) Physical theatre and Theatre of Cruelty (immersive theatre). Students will learn how to devise and rehearse a performance linking to the stimulus which must have artistic intentions (an aim which the performance wishes to achieve) How to stage their own performance - this is performed to selected students from our theatre company, Platinum Stars How to effectively evaluate and reflect on progress using key vocabulary and structures	Variety of hinge questions, use of whiteboard (Kagen strategies) Artaud Theatre of Cruelty practical performance to an audience (Mock exam)
AUTUMN 2	Component 2 – Devising from a Stimulus	How to negotiate and work as a team member to select a stimulus How to work/rehearse effectively within time constraints under controlled assessment conditions How to develop ideas within a chosen stimulus and in collaboration with team members How to effectively determine strengths and areas for development in an extended rehearsal period.	Create meaning from a stimulus Communicate individual artistic, themes and characters ideas to a group of peers Develop individual artistic intentions. Develop and enhance performance skills learnt and developed from Key Stage 3 and put these strategies into practice. Demonstrate performance skills that show a high level and wide range of theatrical skills.	AQA GCSE Drama Component 2 Devised performance and log book (40% of final grade). Marked by teacher and sent to AQA examiner for moderation.

		Analyse and evaluate individual process of creating devised drama Understand how to create a devising logbook	Create inventive performance ideas - all work is performed to a small audience and recorded to be sent to the Examination board for external assessment/moderation, so students experience the reality of live theatre performances Learn to self-reflect by discussion strengths and areas of improvement with their peers Analyse and evaluate in the form of a 2500 word devising log showing: Log 1 – Response to a Stimulus -explaining their initial ideas, research and intentions for the devised piece Log 2 - Development and collaboration In this section students are expected to explain the process they undertook to refine their initial ideas and intentions into a final devised piece Log 3 - Analysis and evaluation This section offers students the opportunity to demonstrate their analytical and evaluative skills with respect to their own devised work. Students are expected to analyse and evaluate the ways in which they individually contributed to the devising process as a whole and to the final devised piece, exploring their strengths and weaknesses.	
SPRING	Continue Component 2 Devising	Continued work on Component 2 (as above)	Continued (as above)	

SUMMER	Component 1 – Understanding drama	Introduction to Component 1 – Understanding drama Through the characters and plot of Willy Russell’s Blood Brothers, students will gain key knowledge of... Theatre Roles and Responsibilities: including performers, directors, designers, and technicians, and their contributions to a production. Play Text Analysis: considering themes, characters, and context. Theatre Terminology: key terms related to drama and theatre, including dramatic techniques, staging, and design elements. Performing and Responding: skills in performing and responding to drama. This includes evaluating performances and articulating ideas clearly. Live Theatre Evaluation*: evaluate them critically, focusing on aspects like direction, acting, design, and overall impact. Theatrical Conventions and Styles: different theatrical styles (e.g., naturalism, absurdism) and conventions used in performance. Contextual Understanding: the historical, social, and cultural contexts of the play and its themes. Creative Interpretation: how different interpretations can shape a production, including choices made by directors and actors.	Students will learn technical language associated with both performance and non-performance elements of the theatre including stage positioning, stage configurations, sound and lighting, backstage and the roles and responsibilities of those who work in the theatre. Students will learn how to answer four questions in response to questions on Willy Russell’s Blood Brothers. <i>We merge practical lessons (exploring the script of <u>Blood Brothers</u>) with a wide range of revision strategies to allow all learners and all learning styles to access the best revision tools they need to prepare fully for the exam paper.</i>	In house exam style timed questions, whiteboards, targeted questioning.
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Curriculum Map Year 10/11: Business Studies

Intent:

To provide students with a comprehensive understanding of the key concepts, skills, and knowledge required for success in Edexcel GCSE Business Studies. The curriculum aims to develop enterprising minds, critical thinking, and an appreciation of the dynamic business environment.

Why I study Business?

Pupils are encouraged to explore the world of business through real-life case studies, enterprise activities, and critical thinking tasks. Our curriculum supports students in developing commercial awareness, financial literacy, and decision-making skills. We provide opportunities for enrichment such as business competitions, guest speakers, and visits to local enterprises. By the end of KS4, students will be equipped with the knowledge and confidence to pursue further study or careers in business-related fields.

- It helps me understand how businesses start, grow, and succeed.
- It develops my financial awareness and decision-making skills.
- It prepares me for a wide range of careers in the modern economy.

Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
1. Enterprise and Entrepreneurship	• The dynamic nature of business • Risk and reward • The role of business enterprise • Entrepreneurship	• Identifying business opportunities • Evaluating risks and rewards • Understanding entrepreneurial characteristics	Formative assessment used throughout all units, cold calling, mini whiteboards, low stakes quizzes with summative assessment being used at the end of each unit with a assessment, and mock exams prior to the real exams in year 11.
2. Spotting a Business Opportunity	• Customer needs • Market research • Market segmentation • Competitive environment	• Conducting market research • Analyzing customer needs • Evaluating competition	
3. Putting a Business Idea into Practice	• Business aims and objectives • Business revenues, costs, and profits • Cash and cash-flow • Sources of business finance	• Calculating profit, revenue, and costs • Interpreting cash-flow forecasts • Evaluating sources of finance	

4. Making the Business Effective	• Business location • Marketing mix (4Ps) • Business plans • The role of business stakeholders	• Applying the marketing mix • Evaluating business plans • Stakeholder analysis	
5. Understanding External Influences on Business	• Legislation and business • The economy and business • External influences (e.g., technology, ethics) • Stakeholder impact	• Analyzing external factors • Evaluating business responses • Interpreting economic data	
6. Growing the Business	• Methods of business growth • Business aims and objectives (revisited) • Globalisation • Ethics and environmental considerations	• Evaluating growth strategies • Analyzing global markets • Ethical decision-making	
7. Making Marketing Decisions	• Product, price, promotion, and place (marketing mix) • Using the marketing mix to make business decisions • Market research and data analysis	• Designing marketing strategies • Interpreting market data • Applying the marketing mix	
8. Making Operational Decisions	• Production processes • Quality of goods and services • Customer service • Working with suppliers	• Process mapping • Quality control analysis • Supplier evaluation	
9. Making Financial Decisions	• Business calculations (profit, loss, break-even) • Financial performance (interpretation of accounts) • Sources of finance (revisited)	• Calculating and interpreting financial data • Decision-making using financial information • Evaluating financial performance	

Curriculum Map Year 10: Computer Science

Intent:

The intent of our Computer Science at GCSE is to equip students with the fundamental knowledge and skills in understanding, creating, and applying computer programs. This curriculum emphasizes problem-solving, algorithmic thinking, and computational logic whilst enhancing and perfecting their programming skills. The subject aims to cultivate a deep understanding of computing concepts, preparing students for an increasingly digital future. It provides a foundation for higher-level studies and fosters analytical thinking essential in various careers. The course empowers students to become not just users but creators of technology, promoting innovation and adaptability in an evolving technological landscape.

Why I study Computer Science?

Pupils are encouraged to challenge themselves by demonstrating an array of different computing competencies. Our KS3 curriculum reflects the required skills and techniques students need to be confident and independent in a range of Computing skillsets. In school we present and allow opportunities for enrichment such as promoting Computing for girls, code clubs and trips to workplace visits. By the end of KS4 the students will have the skillset and tools to tackle the ever-changing digital landscape.

I learn Computer Science because:

- It allows me to be a critical and lateral thinker.
- It develops my computational thinking and problem-solving skills.
- It increases my digital skills needed for any career path.

Cultural capital/enrichment

Half term	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
Aut 1&2	Architecture of the CPU	The purpose of the CPU, Common CPU components and Vonn Neuman Architecture.	Learn and understand actions occur at each stage of the fetch-execute cycle Understanding the role/purpose of each component and what it manages, stores, or controls during the fetch-execute cycle. Learn to explain the purpose of each register, what it stores	z

	CPU performance	How common characteristics of CPUs affect their performance:	Understand the roles of the following: • Clock speed • Cache size • Number of cores And how they can affect performance, individually or as a combination	
	Embedded Systems	The purpose and characteristics of Embedded Systems	Be able to give examples of devices which have Embedded Systems.	
	Primary Storage	Explain why computers have primary storage and how this usually consists of RAM and ROM and the differences of each How virtual memory works	Learn to explain and describe why Primary storage is important/needed whilst identifying key differences between RAM and ROM, examining the different characteristics of both.	
	Secondary Storage	The need for secondary storage, and the common types of Secondary storage The advantages and disadvantages of different storage devices and storage media relating to these characteristics	Demonstrate an understanding of why computers have secondary storage and the ability to give examples of types of Secondary Storage. Recognise the differences between storage devices and mediums, whilst explaining the advantages and disadvantages of each (Optical, Magnetic, Solid State)	

	Units of storage	The different units of Data	Familiarity with data units and moving between each: 1. Bit 2. Nibble (4 bits) 3. Byte (8 bits) 4. Kilobyte (1,000 bytes or 1 KB) 5. Megabyte (1,000 KB) 6. Gigabyte (1,000 MB) 7. Terabyte (1,000 GB) 8. Petabyte (1,000 TB)	
		How data needs to be converted into a binary format to be processed by a computer	Understanding why data needs to be stored in Binary format	
		Data capacity and calculation of data capacity requirements	Calculate file sizes of sound, images and text files sound file size = sample rate x duration (s) x bit depth image file size = colour depth x image height (px) x image width (px) text file size = bits per character x number of characters	
	Data Storage	How to convert between denary numbers to binary numbers (Vice Versa) Binary Addition	Understanding the Denary number range 0-255 Learn to add two 8-bit binary numbers together	

Spring 1&2	Networks	Hexadecimal conversions to binary and denary (Vice Versa)	Learn to convert Binary/Denary to hexadecimal or vice versa	
		Binary Shift	Understand the effect of a binary shift (both left or right) on a binary number whilst applying this knowledge to perform a right or left shift	
		Images	Understand how an image is represented by a series of pixels represented in Binary whilst looking at Metadata	
		Sound	Understand how analogue sound is converted into a digital format and how the sample rate affects the quality and size of the file.	
		Compression	Develop an understanding of how compressing a file can affect the quality and size of a file depending on the style of compression used (Lossy/Lossless)	
		Types of networks Factors that can affect the performance of a network	Identify the differences between a LAN & WAN And being to explain the different factors that can affect the performance of a network (E.g. Bandwidth, number of devices) Understanding the tasks performed by the following pieces of Hardware:	

	Systems Software	Hardware needed for a LAN	Wireless Access Point (WAP) Routers Switches Network Interface Controller/Card (NIC) Transmission Media	
		Topologies	Understand and demonstrate the differences between a Star topology and a Mesh topology. What are the advantages and disadvantages of both	
		Wired and Wireless networks	Look at and investigate what are the advantages and drawbacks to both wired and wireless networks.	
		Encryption	Understand how encryption is used and what the benefits are for its use	
		Protocols	Investigate the following common protocols whilst being able to explain their individual roles: TCP/IP (Transmission Control Protocol/Internet Protocol) HTTP (Hyper Text Transfer Protocol) HTTPS (Hyper Text Transfer Protocol Secure) FTP (File Transfer Protocol) POP (Post Office Protocol) IMAP (Internet Message Access Protocol) SMTP (Simple Mail Transfer Protocol)	

		Layers	Understand and explain how the concept of layers are used with protocols, and the benefits of using layers; referring to the 4-layer TCP/IP model	
		Threats to computer systems and networks	Understanding the threats which a network could face	
		Preventative measures and identifying vulnerabilities	Investigate the different methods available which can help prevent threats:	
		Operating systems	Identifying and explaining the need for operating systems	
		Utility Software	Understanding the different types of utility software and what their function is.	
	Ethical, legal, cultural and environmental impacts of digital technology	Ethical, legal, cultural and environmental impacts	Technology introduces ethical, legal, cultural, environmental and privacy issues. Knowledge of a variety of examples of digital technology and how this impacts on society. An ability to discuss the impact of technology based around the issues listed.	
		Legislation relevant to Computer Science: The Data Protection Act 2018 Computer Misuse Act 1990 Copyright Designs and Patents Act 1988	Learn the purpose of each piece of legislation and the specific actions it allows or prohibits. Learn and explain the need to license software and the purpose of a software licence Features of open source	

Summer 1&2	Algorithms	Software licences (i.e. open source and proprietary) Computational Thinking Principles of computational thinking: Abstraction Decomposition Algorithmic Thinking Designing, creating and refining algorithms Standard searching algorithms: Binary search Linear search Standard sorting algorithms: Bubble sort Merge sort Insertion sort	Features of proprietary Understanding of these principles and how they are used to define and refine problems Identify the inputs, processes, and outputs for a problem Structure diagrams Create algorithms using: Pseudocode Flowcharts Reference language/high-level programming language Trace tables Understand the main steps of each algorithm and successfully implement them on different sets of data Practical use of the techniques in a high-level language.	
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	Programming Fundamentals	The use of variables, constants, operators, inputs, outputs and assignments. The use of the three basic programming constructs used to control the flow of a program: Sequence Selection Iteration The common arithmetic operators The common Boolean operators AND, OR and NOT Data Types: Integer Real String Boolean Casting	Practical use of the data types in a high-level language, understand that data types may be temporarily changed through casting, and where this may be useful. Recognition of each gate symbol	
	Boolean Logic	Simple logic diagrams using the operators AND, OR and NOT Logic Circuits/Diagrams Truth Tables Combining Boolean operators using AND, OR and NOT	Understanding of how to create, complete or edit logic diagrams Knowledge of the truth tables for each logic gate Ability to work with more than one gate in a logic diagram	

	Languages	Characteristics and purpose of different levels of programming language: The purpose of translators The characteristics of a compiler and an interpreter	Understand and identify the differences between high- and low-level programming languages Explain how a translator works and the need for them Explain and demonstrate the differences, benefits and drawbacks of using a compiler or an Interpreter	
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Curriculum Map Year 10: Design & Technology

Intent:

- Design & Technology encourages students to make informed technological choices, considering global, cultural, ethical, environmental, political, and economic factors.
- Students learn to innovate by combining traditional and modern technologies, focusing on the iterative design cycle to develop creative solutions to everyday challenges.
- The subject integrates mathematics, science, engineering, computing, geography, business, and art.
- It goes beyond practical skills, developing Creative Thinking & Innovation, Problem-Solving, Practical & Technical Skills, Collaboration & Teamwork, Project Management, Analytical & Research Skills, Resilience & Adaptability, Entrepreneurial Thinking, and Attention to Detail.

Why I study Design & Technology?

We provide opportunities, which allow students to develop a knowledge of a range of technology areas in KS3. Students should grow in confidence through dedicated teaching environments, manufacturing equipment and specialist teaching. As students' progress to KS4 they choose an area within Design & Technology to study. In the chosen area, the subject allows for deeper study of the world they live in, potential career opportunities and with the skills developed at KS3 the confidence to take risks, become resourceful, innovative, enterprising and capable citizens. The subject encourages students to design and make products that solve real and relevant problems, within a variety of contexts, while considering their own and other's needs, wants and values. Cultural capital is explored across the key stages by appreciation of the work of others locally, nationally and internationally, each subject identifies and relates to real contextual challenges focussing upon people, communities or businesses.

I learn Design & Technology because:

- It allows me to be creative and innovative.
- It develops my problem solving and evaluation skills.
- It increases my understanding of how the world around me has been created.

Cultural capital/enrichment

Our carefully structured DT curriculum provides opportunities that are additional to the National Curriculum. Design technology helps to build cultural capital through exposure to life-skills such as innovation and entrepreneurship. Our curriculum enables and nurtures a love of design and technology, helping students to develop the skills required for their future working life. Students will learn about a range of areas where designing and creating for a purpose take places. We link these subjects to real life experiences and famous designers and communicating ideas and developing prototypes using CAD.

Half term	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
Autumn 1&2	Gcse core and specialist knowledge	Core subject knowledge Timbers Understand where timbers come from their material proprieties and their uses. Understand the environmental impact of using timbers to make products.	Be able to explain the sources of timber products and explain the properties and uses of various soft woods, hard woods and manufactured boards. Be able to conduct an LCA to highlight the impact of timber products on the environment and be able to suggest ways that negative impacts can be reduced E.G sourcing material from sustainable forest.	Assessment opportunities are provided through hands down questioning, discussions, brain storming, spider diagrams, quizzes, verbal feedback, self and peer assessment. Assessment will focus on four areas: • Core knowledge (exam questions) • Written assessments linked to NEA activities. • Design skills

		Understand what a finish is and how they can be applied to timbers and boards Trinket box project Understand how to make timber-based products of a high quality Mini lamination project. Understand how timbers can be shaped into unique forms. Specialist knowledge timbers students must understand : 1. The sources, origins, physical and working properties of the material categories or the components and systems, and their ecological and social footprint. 2. The way in which the selection of materials or components is influenced by a range of factors, such as functional, aesthetic, environmental, availability, cost, social, cultural and ethical. 3. The impact of forces and stresses on materials and objects and the ways in which materials can be reinforced and stiffened. 4. Stock forms, types and sizes in order to calculate and determine the quantity of materials or components required. 5. Alternative processes that can be used to manufacture products to different scales of production. 6. Specialist techniques and processes that can be used to shape, fabricate, construct and assemble a high quality prototype, including techniques such as wastage, addition, deforming and reforming, as appropriate to the materials and/or components being used. 7. Appropriate surface treatments and finishes that can be applied for functional and aesthetic purposes Core knowledge Polymers Understand where polymers come from their material properties and their uses.	Be able to select and apply appropriate finishes to timbers. Know how to select the correct material to make a high-quality product and be able to select and use workshop tools and other specialist equipment. Be able to bend timber using techniques such as lamination and steam bending. Be able to apply specialist knowledge to the development of new innovative products that meet the needs and wants of an identified target markets. Be able to apply specialist knowledge when answering exam questions. Be able to explain the sources of polymer products and explain the properties and uses of various thermo and thermosetting polymers.	• Making skill.
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		Understand the environmental impact of using polymers to make products. Understand Advantages and disadvantages of CAD CAM Understand the importance that analysing existing products has on the development of new products. Tatty divine jewellery project. Understand how to use CAD CAM to design and make products out of polymers. Core knowledge Papers and board Understand where paper come from their material proprieties and their uses. Understand the environmental impact of using paper to make products. Pop up card project. Understand how to use papers and boards to make a simple commercially viable product.	Be able to conduct an LCA to highlight the impact of polymer products on the environment and be able to suggest ways that negative impacts can be reduced E.G using the 6rs of sustainability. You should also be able to articulate the advantages and disadvantages of CAD CAM in industry and know how to use it to make products of a consistent quality in small batches. Be able to write a detailed product analysis that critically identifies positives and negatives of existing products and also helps inform the development of new products. Be able to use software, such as 2D design, to create jewellery inspired by the retailer Tatty Divine, and have the capability to produce this jewellery in small batches using laser cutters. Be able to explain the sources of paper products and explain the properties and uses of various papers and boards. Be able to conduct an LCA to highlight the impact of paper products on the environment and be able to suggest ways that negative impacts can be reduced E.G sourcing paper from FSC approved forest. Be able to safely and accurately use tools, such as craft knives, to create a pop-up card that considers the properties of the materials used and how they can be utilized to apply working mechanisms to the card	
Spring 1&2		Core knowledge ferrous, non-ferrous and alloy metals.		

		Understand where metals come from their material proprieties and their uses. Understand the environmental impact of using metals to make products. Metal skills project. Understand how to use the working properties of metals to make a simple product. (cutting, drilling, riveting, filing, forming, casting, brazing and finishing) Core knowledge textiles Understand where textiles come from their material proprieties and their uses. Understand the environmental impact of using textiles to make products. Self-portrait Felt toy project. Understand how to use the working properties of materials such as felt to make a simple product Smart materials, composites and technical textiles Understand how the development of modern and smart materials have impacted the development of new innovative products. design without making project. Understand the importance of iterative design to the development of new products.	Be able to explain the sources of paper products and explain the properties and uses of various non ferrous, ferrous and alloy metals. Be able to conduct an LCA to highlight the impact of metal products on the environment and be able to suggest ways that negative impacts can be reduced E.G recycling materials. Be able to use skills such as drilling, riveting, filing, brazing and casting to make a simple metal product. Be able to explain the sources of textile products and explain the properties and uses of various natural and synthetic fibres. Be able to conduct an LCA to highlight the impact of textile products on the environment and be able to suggest ways that negative impacts can be reduced E.G reducing fast fashion trends. Be able to use skills such as blanket stitching and embroidery to design and make a simple product. Be able to identify various smart and modern materials and explain their properties and uses . Be able to embed knowledge of smart materials alongside developing core design skills including, isometric, line weighting, rendering, prototyping and cad development using sketch up	
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Summer1&2		Electronic systems and programmable components Understand How electronic systems provide functionality to products and processes, including sensors and control devices to respond to a variety of inputs, and devices to produce a range of outputs understand how programmable components embed functionality into products in order to enhance and customise their operation. Mechanical components and devices Understand The functions of mechanical devices, to produce different sorts of movement, changing the magnitude and direction of forces. pinball/mechanical toy project understand how mechanism can be used to make interactive functional products with moving parts.	Be able to explain the uses of different electrical components and be able to build a functioning circuit that responds to and input, producing an output. Understand how different mechanical devices can change movement direction and the required force for tasks. Learn to calculate mechanical advantage and velocity ratio for accurate design when creating mechanical products. Be able to apply knowledge of mechanisms to design and make a working toy with moving parts.	
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Curriculum Map Year 10: Engineering

Intent:

- Provide students with a solid foundation in key engineering disciplines, including applied science and mathematics, to solve real-world engineering problems.
- Develop practical skills in using engineering tools, machinery, and techniques, alongside proficiency in interpreting and creating both hand-drawn and CAD engineering drawings.
- Foster creativity, critical thinking, and problem-solving abilities through hands-on projects, with a focus on sustainable engineering practices and material selection.
- Prepare students for further education or careers in engineering by enhancing technical competence, understanding of health and safety, and employability skills.

Why I study Design & Technology/engineering?

it provides a strong foundation in critical thinking and problem-solving skills, essential for tackling real-world challenges.

it fosters creativity and innovation, allowing me to design and build projects that make a positive impact on the world and society.

It develops project management, team working and communication skills.

Cultural capital/enrichment

Our carefully structured DT curriculum provides opportunities that are additional to the National Curriculum. Design technology helps to build cultural capital through exposure to life-skills such as innovation and entrepreneurship. Our curriculum enables and nurtures a love of design and technology, helping students to develop the skills required for their future working life. Students will learn about a range of areas where designing and creating for a purpose take places. We link these subjects to real life experiences and famous designers and communicating ideas and developing prototypes using CAD.

Half term	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
Half term 1	• Content area 1. Engineering Disciplines: • Topics include • Mechanical Engineering • Electrical Engineering • Electronic Engineering • Aerospace Engineering • Telecommunications Engineering • Chemical Engineering • Civil Engineering	Understand the different engineering sectors (e.g., mechanical, electrical, civil, aerospace) Understand the roles of engineers, technicians, and technologists Understand the Skills required in each engineering discipline	Be able to Identify key characteristics and applications of different engineering disciplines and Be able to explore career paths and progression opportunities in different engineering fields while Analysing key tasks and responsibilities in the engineering job roles	Assessment opportunities are provided through hands down questioning, discussions, , quizzes, verbal feedback, self and peer assessment, whole class mark sheets Assessment will focus on four areas: • Core knowledge (exam questions) • Key Written assessed pieces • Mini exams after each content area

	- Automotive Engineering - Biomedical Engineering - Software Engineering - Health and safety at work - PPE - Manual Handling Operations Legislation - COSHH - RIDDOR Content area 2.Applied Science and Mathematics in Engineering - Topics include: - SI Units of Measurement - Current and Luminous Intensity - Thermodynamic Temperature - Mass and Length - Amount of Substance - Time - Application of Base SI Units - Equations for Properties - Energy - Force and Motion - Mass - Electrical - Geometric – Area - Geometric – Volume - Application of Equations	Understand some of the basic engineering formulas (e.g., area, volume, force, torque) Understand the different units and conversions (e.g., metric and imperial) Understand Principles of forces and motion Understand concepts of work, energy, and power Understand some of the fundamental physics concepts relevant to engineering (e.g., electricity, magnetism, thermodynamics)	Be able to perform calculations to solve engineering problems using relevant units in the calculations . Be able to analyse the effects of forces on structures and mechanisms and apply these concepts to real world engineering scenarios. Be able to apply physics principles to engineering problems.	
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Half term 2	Content area 3. Reading Engineering Drawings Topics include: • What are Engineering Drawings? • Line Types • Tolerance • Title Block • Scale • System of measurement • 2D Projection: First and Third Angle Projection • 3D: Isometric • 3D: Oblique drawings • BS 8888 Content area 4: Properties, Characteristics, and Selection of Engineering Materials Topics include: • Chemical properties • Electrical and magnetic properties • Optical and thermal properties • Aesthetics • Environmental impact • Sustainability • Renewables • Carbon footprint • Recycling • Metals • Polymers • Wood • Ceramics • Composites	Understand the different types of engineering drawings (e.g., orthographic, isometric, assembly drawings). Understand the different symbols and conventions used in technical drawings. Understands the Importance of dimensions and tolerances in engineering design. Understand the different classification of materials (e.g., metals, polymers, ceramics, and composites). Understand key properties of materials (e.g., tensile strength, hardness, ductility, thermal conductivity). Understand the factors that lead to material selection including mechanical properties and aesthetics. Understand the environmental considerations in material selection (e.g., recyclability, sustainability).	Be able to interpret various types of engineering drawings and recognise standard symbols and their meanings. Be able to manufacture a product by reading and applying dimensions and tolerances from engineering drawings. Be able to identify different types of engineering materials and their applications and apply selection criteria to choose appropriate materials for specific engineering tasks. Be able to Assess the environmental impact of different materials and make sustainable choices when manufacturing products.	
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Half term 3	Content area 5:Engineering Tools, Equipment, and Machines Topics include : • Marking out • Modification • Joining • Finishing • Safe and correct use • Control measures Context area 6: Hand-Drawn Engineering Drawings Topics include: • freehand drawings • Colour and direction of light • Rendering and shading • Annotations and • Isometric basics • Isometric and orthographic basics • hand-drafted drawings in isometric • Scaling isometric objects • Converting from orthographic to isometric • hand-drawn orthographic drawing • hand-drawn first angle orthographic drawing • hand-drawn third angle orthographic drawing	Understand the different hand tools, power tools, and machine tools used in engineering. Understand how to use tools safely and with accuracy to perform a range of engineering task. Understand fundamental techniques for hand-drawing engineering drawings Understand some of the standards for presenting hand-drawn engineering drawings (e.g., line weights, styles) Understand what isometric and orthographic projection are and how they are used to communicate designs and technical information	Be able to identify and select appropriate engineering tools for a range of practical engineering task. Be able to safely use different tools with skill and accuracy to make a quality prototype that meets a range control measures. Students will be able to explain what some of the basic techniques of free hand drawing are and be able to explain some of the standards used in engineering drawings . Students will be able to produce a range of different drawings including, free hand sketches, isometric drawings, first and third angle orthographic projection. They will be able to produce these drawings to meet the BS8888 standards.	
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Half term 4	Content area 7: Computer-Aided Design (CAD) Engineering Drawings Topics include: • CAD engineering drawings – What is CAD • Units of measurement in CAD engineering drawings • Lines and title block • CAD isometric drawing • CAD orthographic drawing • CAD – Isometric to orthographic • CAD – Orthographic to isometric • Finite element analysis and modelling • Computer aided manufacturing CNC Content area 8: Production Planning Techniques Topics include: • Hazards, risks, and control measures • risk assessments • Tools and equipment • Control measures and quality control measures • Flow charts • Gantt chart • Spreadsheet • Time plan	Understand what CAD software is and its applications in engineering design. Understand the Techniques used for creating 2D engineering drawings in CAD. Understand the fundamentals of 3D modelling and visualisation in CAD. Understand the importance of adding annotations, dimensions, and notes in CAD drawings. Understand the different file types and their uses in Engineering. Understand what production planning is and its importance in engineering and manufacturing Understand the different production systems (e.g., batch, continuous, just-in-time) Understand the different methods for scheduling production activities (e.g., Gantt charts, flow charts etc) Understand Importance of quality control and health and safety in production planning	Be able to navigating CAD software interfaces and tools to enable the designing and modifying of 2D drawings and 3d models using various CAD software. Students will be able to export drawings in various formats for printing and sharing and manufacturing using CAM/CNC. Be able to explain what a production plan is and why it is important. Students will be able to plan making activities using various methods of production planning such as Gantt charts and flow charts. Students will be able to make sure that control measures and risk assessments are in place to ensure making activities are successful and safe.	
Half term 5	Content area 9: Applied processing skills and techniques Topics include:		Students will be able to use hand tools and fixed machines safely and accurately to	

	• Preparing materials • Marking out • Drilling • Cutting and filing • Bending • Metal casting • Sand casting • Soldering • Joining materials • Finishing materials • Applying a surface finish • CNC/CAM machines • Safe use of power tools • Safe use of fixed machines • Control measures	Understand some of the various processing techniques used in engineering (e.g., machining, forming, assembly) Understand how to safely use various hand tools and fixed machines Understand how different materials are joined together. Understand what a finish is and what some of the finishing techniques are (eg polishing, coating etc)	cut, form and finish materials. Students will be able to select appropriate joining methods to join materials together and apply finishing processes to make a high-quality product.	
Half term 6	Practice NEA Students will use knowledge and skills gained in the previously covered content areas to complete a practice NEA in preparation for year 11.	Understand how to identify and define real-world engineering problems Understand some of the techniques used for conducting research to inform engineering solutions Understand how to develop a detailed design specification that meets the needs of the identified problem. Understand how to Create sketches and rough designs to visualise potential solution. Understand how to Create a detailed production plan including materials, tools, and processes Understand what manufacturing processes are appropriate to use to create a product	Be able to analyse problems and develop a clear problem statement that will lead the direction of the NEA. Be able to gather and evaluate relevant information from various sources. Be able to write a detailed specification that takes into consideration the problem requirements. Be able to generate a range of design ideas that meets the requirements of the specification. Be able to develop a production plan using method such as Gantt charts and flow charts to plan making activities, students will be able to ensure control measures and risk assessments are in place. Be able to use a range of processes and tools to make a high-quality product.	

		Understand how to test and evaluate a finished product	Be able to test the finished product against a range of measurable criteria and identify areas for improvement.	
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Curriculum Map Year 10: English

Intent: Across both Key Stages, we aim to ensure that our students are able to learn how to **identify** and **explore the impact of language** within a variety of different contexts. We explore various genres, forms, structures and purposes of literary works, in order to emphasise the importance of reading and writing as a way of **successfully engaging with the world**, both within the school context and the wider society. At the core, we strive to inspire our young learners to become **competent and confident communicators**, consciously teaching reading and writing skills within every year group, which enables us to demonstrate the progress students make when accessing a multitude of texts which have been produced across the ages for a variety of different reasons.

Through the Key Stages we have designed the curriculum to help our students both improve and refine their reading and writing skills, with a progressively more demanding set of skills taught and revisited throughout the schemes as students travel from Year 7 to Year 11, implementing things such as variations of sentence structures and increasingly difficult and interesting vocabulary. We explore the **etymology** of language and how this correlates to the context from within which it was written, aiding our students' ability to **interpret and infer** with greater confidence.

We want to inspire our students to develop their own **love of language**, to become **critical thinkers**, engaging with moral ideas, and to widen their perspectives when establishing their own impressions and opinions when exploring literary materials. Furthermore, we continue to develop our curriculum content to encourage and enable our students to be empathetic with different points of view, to be understanding when analysing and evaluating character and theme and to be able to both speak and write with clarity and purpose.

Why I study English?

I study English because:

- *It enables me to communicate freely and effectively*
- *I understand more about global culture, thought and literature*
- *Having a love of language and literature transports me to other worlds*

Cultural capital/enrichment

By studying A Christmas Carol and An Inspector Calls, students are building on their cultural capital by learning about a significant British novella and play, knowledge of the theatre (because we study form) and British history by studying the historical and societal context. By studying GCSE English Language Paper 1 students are introduced to a vast variety of key pieces of literature written by a diverse range of authors from different cultural backgrounds. Studying English Language Paper 2 allows students to recognise the importance of forming their own opinion and acknowledging the perspectives of others, through a variety of non-fiction text types written across different eras from a diverse range of writers. When completing their spoken language assessment students are taught how to use language in a formal style, appropriate to delivering information to an audience and also engage with media and research on contemporary issues.

Half term	Topic	Key knowledge		Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
Autumn 1	Language Paper 1 Full paper	Students will learn: How to approach each exam question and how to manage their time effectively in the exam.		Students will build on their prior reading and writing skills by applying them to unseen extracts.	Students will have the opportunity to do an assessed answer for each question throughout this half term – with teacher feedback on key skills. Spelling Bees of key word vocabulary.

		A variety of different language and structural techniques and how they can impact a piece of writing How to closely analyse and evaluate an unseen fictional text. Exam technique and how to answer each individual question, including how to structure an analytical answer How to write narratives and descriptions.	They will also develop the ability to choose evidence thoughtfully and analyse the effects of the writer's choices in detail. Students will develop close reading skills on unseen fictional texts. Finally, students will develop an understanding of the assessment objectives for each question within the reading section and develop techniques to answer these successfully.	There will be a formal assessment towards the end of the first half term and it will be a full past paper.
Autumn 2	<i>A Christmas Carol</i> , by Charles Dickens (19 th century text: Literature Paper 1)	Students will explore the social and historical context of the Victorian period and will analyse how Charles Dickens used language, themes and structure to appeal to Victorian readers, as well as how he addressed social inequalities of the Victorian period. In their final exam, students will be required to analyse a theme or character within an extract and elsewhere in the play as a whole, so will study plot, characters, themes and Dickens' use of language, whilst developing skills of critical interpretation. Students will engage with an in-depth study and close annotation of the whole novella in the classroom.	Students will be given opportunities to develop the key skills of the Assessment Objectives, which include developing a personal response (AO1), using textual references/quotations to support interpretations (AO1), analysing language, form and structure (AO2) and considering the context behind the novella (AO3). Students will develop and refine skills in: - Revision of plot and character. - Understanding and successfully commenting on the message and social criticism in the text. - Understanding how to structure a literary essay and develop personal response. - Successfully selecting whole and judicious textual references. - Referencing relevant Victorian context of 'A Christmas Carol'. - The analysis and interpretation of symbols/symbolism/allegorical messages.	Students will complete a section B practise assessment with teacher feedback. This will then be followed by their winter exam where they will complete a past paper question.

Spring 1	<i>An Inspector Calls</i> , by J.B. Priestley (modern text: Literature Paper 2)	Students will learn: The content and contextual factors surrounding the play <i>An Inspector Calls</i> How to approach a literature essay without an extract. Key features of a play and how these can be manipulated by a writer for effect. Contextual information around the author Priestley, his intentions in writing <i>An Inspector Calls</i>, and the historical context in which it was written. How to analyse language, structural and dramatic techniques within a play and the impact these could have on an audience.	Students will gain an in-depth knowledge of the play <i>An Inspector Calls</i> and learn how to comment critically upon it. Students will continue to develop their essay writing style and ability to respond to an unseen exam question. Students will develop the ability to analyse dramatic techniques specific to the literary form of a play. They will also develop an understanding of how play writers' choices impact an audience.	Pupils will complete a pre-assessment and assessment on <i>An Inspector Calls</i> during this half term. The pre-assessment will focus on a single question whereas for the actual assessment at the end of this half term pupils will have the option between 2 essay questions to mimic the final GCSE exam. Spelling bee of key words.
Spring 2	<i>Macbeth</i> , by William Shakespeare (Literature Paper 1)	Students will develop an understanding of the classic tragedy, as well as exploring the context of the production of 'Macbeth'. They will further develop their ability to respond to a literary text, writing analytically through their exploration of how Shakespeare uses language, structure and dramatic techniques to present characters and themes. Students will be required to analyse a given extract and explore themes, characters and ideas presented in both the extract and elsewhere in the	Building on the previous Literature units already studied by this point, students will develop an understanding of how to: Identify and interpret the focus of their GCSE question, in order to craft successful responses; Carefully select relevant and valuable references from the text for the purpose of analysis; Successfully structure an essay response, practising the use of topic sentences and/or a thesis statement;	Students will complete a pre-assessment and assessment on <i>Macbeth</i> during this half term. For this exam component, the students are given an extract to help them construct their response. Towards the end of the half term students will sit a formal assessment. Spelling bee of key words.

		play, so will be working on developing skills of written analysis in response to their reading of the play. They will develop a confident understanding of Shakespeare's characters, themes, ideas, social and historical context of the Jacobean era, as well as how to approach and interpret Shakespeare's language in order to successfully interpret and analyse this. Students will explore how ideas within the text are contextually linked and shaped by society at the time and learn how to effectively cross-reference ideas to formulate a perceptive and critical argument.	Effectively analyse a writer's use of language, structure and form, using accurate subject terminology.	
Summer 1	Speaking and Listening Endorsement linked to Language Paper 2 Question 5 writing skills. Final week will focus on revision for English Language Paper 1 end of	Students will learn: How to create an effective piece of argumentative non-fiction writing. How to use structural and persuasive features for effect within a creative writing piece. How to use persuasive techniques successfully to produce realistic non-fiction texts such as newspaper articles. How to create a persuasive speech on a moral or ethical issue. How to perform an engaging speech to create an impact on the audience.	Students will build their creative writing skills within the medium on non-fiction and persuasive writing. They will learn how this writing needs to change subtly depending on the intended audience and will have the opportunity to demonstrate this through their completion of the Speaking and Listening Endorsement.	Students will complete the Speaking and Listening Endorsement for their GCSE in English Language, this will create the final grade for this element. This grade will be submitted to the exam board for review. *This is a compulsory element of the GCSE and is why we incorporate speaking and listening units into our schemes of work at Key Stage 3.

	year exam in Summer 2.			
Summer 2	End of Year exams and then moving onto Power and Conflict Poetry (Literature Paper 2). Ozymandias – Poppies in the anthology. <i>Remaining poems will be studied in Year 11.</i>	Students will learn: - How to approach the understanding and analysis of a poem. - How to identify and analyse poetic techniques and their effects on the reader. - Contextual information surrounding the poet, key themes in the poetry and the time it was written. - How to compare poems and the themes and techniques within them. - How to craft a comparative essay successfully.	Students will learn how to successfully compare poems including comparison of their themes, techniques and contexts. Students will begin to construct their own essay styles when writing literature essays. They will start to analyse more deeply that the QTA structure we have used in Year 9 and begin to focus on a wider range of assessment objectives. Students will build the ability to comment on contextual factors in detail and with purpose.	Students will complete their end of year exams in English Language Paper 1 and English Literature Paper 1. After the exam's students will complete analytical paragraphs on the poems studied. Learning check sheets will be used to formatively assess progress. Spelling bee of key words.

Curriculum Map Year 10: NCFE Level 1/2 Technical Award in Food and Cookery (603/7014/2).

Food and Cookery Intent Statement -

This is an alternative qualification for our KS4 pupils. The Level 1/2 Technical Award in Food and Cookery is designed for pupils who want an introduction to food and cookery that includes a vocational and project-based element. This qualification is designed to match the rigour and challenge of GCSE study. The qualification is graded at level 1 ass/merit/distinction and level 2 pass/merit/distinction/distinction* (equivalent to GCSE grades 8.5 to 1). At year 10 pupils are taught the skills and knowledge to prepare them for the assessments in year 11. The assessment is in the form of Non-exam assessments (NEAs) worth 60% and an externally set written exam worth 40%. This subject **is not** taught in a linear way so some units are repeated or taught alongside other units to allow a deeper understanding of content areas as well as to allow pupils to make of links between the different content areas

Areas covered include:

- *Health and safety relating to food, nutrition and the cooking environment
- *Food legislation and food provenance
- * Food groups, key nutrients and a balanced diet
- * Factors affecting food choice
- *Food preparation, cooking skills and techniques
- * Recipe amendment, development and evaluation
- *Menu and action planning for completed dishes

Cultural capital/enrichment – In Year 11 pupils will act as Food Tech ambassadors. Pupils will take part in Careers day for this subject.

Half term	Topic	Key knowledge: . NCFE Level 1/2 Technical Award in Food and Cookery The below details are based on the qualification's specification	Key skills I will learn in this topic:	Assessment opportunities (Summative and formative) Key pieces
Autumn 1 and 2	Content area 1: Health and safety relating to food, nutrition and the cooking environment	The Pupils will understand safe and hygienic working practices when food is prepared and cooked: -safe and hygienic working practices for the individual -safe and hygienic working practices for the cooking environment: They will understand a range of hazards (which include contamination) in the cooking environment when food is being prepared and cooked. The Pupils will also understand the potential risks in the cooking environment and how these may be minimised: -hazards – the potential to cause harm(Physical, Chemical and Biological)	*Identify safe and hygienic working practices when preparing and cooking food (for the individual and the cooking environment. *Follow safe and hygienic working practices when preparing and cooking food. *Assess case studies hygienic working practices when food is prepared and cooked. *Identify various types of hazards (biological, chemical, and physical) that can occur during food preparation and cooking. *Assess the risk levels associated with identified hazards and understand how they can affect food safety in the cooking environment. *Assess using a case study hygienic working practices when food is prepared and cooked.	Assessment opportunities are provided through: *Quick quizzes *Practice exam questions Literacy task – Answering open response exam question Spelling bees Peer assessment After assessed exam paper completed student carry out DIRT Pupil reflection sheets

	Content area 5: Food preparation, cooking skills and techniques	The pupils will understand the HACCP system and its purpose for the food industry -HACCP system -HACCP purpose They will know will the purpose of risk assessments and be able to understand ways to minimise potential hazards when food is prepared and cooked: - purpose of risk assessments - minimise risks Pupils will understand the purpose, safe preparation, usage, cleaning and storage of equipment and utensils when food is prepared and cooked: Pupils will understand the purpose of the FSA and current legislation governing food safety: -awareness of the FSA and its role -the frame that the Food Safety Act 1990 provides - the main responsibilities under the Food Safety Act 1990 <i>This is the practical unit which is covered alongside the other units throughout the year to allow pupils to develop a range of technical skills and use a range of cooking methods to prepare and cook a range of dishes; They will also carry out some elements of Unit 6 as well.</i> -the key stages of a recipe and factors that impact on the recipe when making to develop and hone their skills by practising to achieve consistent results for: • knife skills (choice and use of suitable knives) •peeling(minimal skin removal, impact on the dish, nutritive value, taste and appearance) •weighing and measuring •preparation of tins(lining, greasing and flouring)	Demonstrate knowledge of the principles of HACCP, including hazard analysis, critical control points, and monitoring procedures. Apply the HACCP system to identify and control potential hazards in food production and handling processes. Create and maintain HACCP chart used for a practical lesson they will carry out, including hazard identification and corrective action/measures. Conduct a comprehensive risk assessment to identify biological, chemical, and physical hazards in food their food tech room. Identify different types of kitchen equipment and utensils and explain their specific uses in food preparation and cooking. Demonstrate safe handling practices when using kitchen equipment to minimize the risk of injury. Apply appropriate techniques for using equipment effectively, ensuring correct operation based on the type of food being prepared. Cleaning Procedures: Execute proper cleaning techniques and methods for various kitchen equipment and utensils to maintain hygiene and safety. Explain the principles of storing kitchen equipment and utensils safely to prevent damage and ensure accessibility. Identify potential hazards associated with kitchen equipment and demonstrate measures to mitigate these risks. *Make a range of dishes following recipes to build on the skills learned at KS3. *Further refine and develop more complex making skills, techniques and cooking methods. Use different presentation skills, garnishing, decorating and choosing and dressing a serving plate or dish, and how all these impact on the success	Peer assessment Pupil reflection sheets Teacher assessment feedback of practical work
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	•thickening (gelatinisation) – starch granules heated in a liquid absorb the liquid and thicken the mix •marinating (making a marinade) •reducing Use a range of cooking methods •simmering •boiling •stir frying •grilling •shallow frying •deep frying •microwaving •sautéing baking •stewing •braising •pot roasting •en papillote (paper bag cooking) •casseroling	of a completed dish: • choice of plate • choice of utensils • design • colour • texture • flavour • garnish • decoration Explain the different working characteristics of ingredients and the processes required to achieve uniform and consistent results each time food is prepared and cooked, and how to manipulate ingredients and processes when things go wrong to achieve a successful outcome	Practical evaluations assessed
6.2 Evaluating 3 Food groups, key nutrients and a balanced diet 3.1 Food groups 3.2 The components of a balanced diet. 3.2.1 Proportions of the food groups 3.2.2.UK government healthy eating tips 3.3. Nutrients	Pupils will understand how ingredients have different characteristics and functions in a recipe when food is prepared and cooked. Pupils will understand how amended dishes are evaluated and the factors which must be considered: • choice of alternative ingredients and the impact of their individual characteristics on: • taste • appearance/presentation • smell • texture • nutritional content of completed dishes • final presentation of cooked dishes • how the completed dishes could be improved Pupils will understand the main food groups according to the Eatwell Guide and understand examples of foods for each group Pupils will understand what is meant by a balanced diet and how food groups contribute to a balanced diet using current UK dietary recommendations:	Evaluation of some dishes made Describe the Eatwell Guide Food groups: Identify the main food groups (fruits/veg, carbs, proteins, dairy, fats) and examples of foods for each. Balanced diet: Define what makes a balanced diet and how food group proportions (from the Eatwell Guide) fit into UK dietary recommendations. Eatwell Tips: List the 8 tips for healthy eating, like drinking water and eating more fibre. Macronutrients Types and functions: Identify carbohydrates, proteins, and fats, their food sources (e.g., bread for carbs, meat for protein), and how they help the body. Deficiencies/overnutrition: Explain the effects of too much or too little of each macronutrient (e.g., weight gain from excess fat).	

	3.3.1 Sources and functions of macronutrients 3.3.2 Sources and functions of micronutrients 3.3.3 Sources and functions of minerals 3.3.4 Sources and functions of water 3.4 Nutrient imbalances 3.5 Fibre 3.6 Nutritional requirements for different groups of people 3.7 Food-related health conditions 3.7.1 Health Conditions	-what constitutes a balanced diet - should be in line with RIs for -the different proportions of the food groups represented in the Eatwell Guide. -Why and how to achieve each of the 8 eat well tip Pupils understand the sources and functions of the nutrients that make up a balanced diet and how they influence a balanced diet. -Macro-nutrients (types, sources, functions, deficiencies and over nutrition) Pupils will know the different micronutrients (types, sources, functions, deficiencies and over nutrition) -understand how the functions of the vitamins contained in the food source may be impacted by the cooking method used: •vitamin A (fat soluble) •vitamin B complex (water soluble) •vitamin C (water soluble) •vitamin D (fat soluble) Pupils understand the sources and functions of minerals: •iron •calcium Pupils know the sources and function of water. Awareness of the effect of too much or too little in the diet. Pupils will be aware of the sources and functions of fibre and the impact of fibre as a part of a balance diet. Awareness of the effect of too much or too little in the diet. Pupils understand the nutritional requirements for different groups of people, how this may change as they grow older, and how their level of activity impacts on their nutritional needs: • babies (age 0 to 6 months): all nutrients required are contained in breast or formula milk	Micronutrients (Vitamins) Types and sources: Identify about vitamins A, B, C, D, their functions (e.g., vitamin C for immunity), and food sources. Cooking impact: Assess how cooking methods affect vitamins, especially water-soluble ones like vitamin C. Minerals Iron & calcium: Identify the sources (e.g., red meat for iron, dairy for calcium), their functions (e.g., iron for oxygen transport), and effects of deficiency. Water & Fibre Water: Explain the importance of staying hydrated and the risks of too much or too little water. Fibre: Describe fibre's role in digestion and other function, its sources (whole grains, fruits), and the effects of inadequate or excessive intake. Nutritional Needs by Age Different life stages: Recognize how nutritional requirements change from babies (milk), to children and adolescents (more nutrients for growth), to adults and older people (nutrient-dense foods for health maintenance). Discuss how these changes differ and why. Food and Health Conditions Coronary heart disease: Identify which foods to avoid (e.g., high-fat foods) and include (e.g., fruits, vegetables) for heart health. Suggest foods to include. Type 2 diabetes: Identify foods to avoid (e.g., sugary foods) and include (e.g., whole grains, lean proteins) for managing blood sugar. Suggest foods to include. Coeliac disease: Identify which foods to avoid (e.g., gluten-containing products) and suitable gluten-free alternatives (e.g., rice, quinoa).	
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	3.7.2-3 Intolerances and Allergies 6.2 Evaluating 3.8 Nutritional information on food labels	• toddlers (age 2 to 4 years) – rapid stage of development • children (age 5 to 12 years) • adolescents (age 13 to 19 years) • adults (age 20 to 65 years) • older people (age 65+ years) Pupils will understand what food is unsuitable or should be avoided and which foods should be included in the diet for specific health conditions, intolerances, and allergies. For the most common allergies, the pupils will also understand which foods cause a reaction and what alternative ingredients/foods are recommended. Pupils will understand what food is unsuitable or should be avoided and which foods should be included in the diet for specific health conditions: -coronary heart disease -type 2 diabetes - coeliac disease Pupils will understand what food is unsuitable or should be avoided and which foods should be included in the diet for specific intolerances and allergies: Pupils will understand how amended dishes are evaluated and the factors which must be considered: • choice of alternative ingredients and the impact of their individual characteristics on: • taste • appearance/presentation • smell • texture • nutritional content of completed dishes • final presentation of cooked dishes • how the completed dishes could be improved	Suggest foods to include. Food Intolerances and Allergies Allergies: Identify common allergens (e.g., nuts, dairy) and know which alternative ingredients to use (e.g., almond milk for dairy). Intolerances: Identify which foods to avoid for specific intolerances (e.g., lactose intolerance) and recommended substitutes (e.g., lactose-free milk). Describe the effects of consuming these foods for people with specific intolerances and allergies. Evaluate dishes made commenting on their nutritional alternative ingredients, content, sensory properties and presentation Identify information on food labels and their meaning.	
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		Pupils will understand food labels and the information they provide		
Sprin 1-2	2. Food legislation and food provenance 2.1 The Food Standards Agency (FSA) and food safety legislation 2.2 Food provenance 2.2.1-2.2.2 Grown and reared foods 2.2.3 Caught 2.3 Food transportation 2.4 Food processing 2.4.1 Why food is processed 2.4.2 Advantages of processed food 2.4.3 Disadvantages of processed food	Pupils understand food legislation and the provenance of food. Pupils will understand food can be grown, reared and caught. They will know how food is produced and transported. They will understand that food is grown and reared in a variety of different ways. Pupils will understand that food is transported and the importance of health and safety requirements when transporting food Pupils will be aware of the term 'food processing', the purpose of food processing, and the advantages and disadvantages of consuming processed food. They will also understand why food is processed, the advantages and disadvantages of processing food.	Food provenance refers to the origins of food and how it is produced, sourced, and transported. Describe how different foods are sourced, from plant-based products to animal products, including the methods of farming, fishing, and food processing. Explain the entire process of food transportation within the food supply chain, from the source (farms, fisheries, factories) to supermarkets, restaurants, and homes. Describe the different stages of food transportation, including storage, packaging, and distribution. Discuss how to ensure that food remains safe during transportation by maintaining appropriate conditions (e.g., temperature control for perishable items like meat, dairy, and seafood). List the methods of food processing Describe why foods are processed Discuss the advantages and disadvantages of processing food.	

	2.5 Food manufacturing 2.5.1 Why food is manufactured 2.5.2 Advantages of manufactured food 2.5.3 Disadvantages of manufactured food	Pupils will understand the term 'food manufacturing', the purpose of food manufacturing, and the advantages and disadvantages of consuming manufactured food as why they are manufactured.	List the methods of food manufacturing Describe why foods are manufactured Discuss the advantages and disadvantages of manufactured foods.	
Summer 1 and 2	4. Factors affecting food choice Social factors Environmental factors Economical Seasonality 6. Recipe amending, development and evaluation 6.1 Recipe amendment 6.1.1 Amending and developing recipes	Pupils will understand that there are many factors that influence what we choose to eat when food is prepared and cooked. They include social factors, the environmental impact and seasonal constraints. This unit is also taught through out the year as part of practical lessons but now focuses on amending recipes based on mini mock briefs. Pupils understand that recipe amendment may take into account a range of factors such as: social, economical, environmental, seasonality, occasion etc They also understand how to amend and develop recipes when food is prepared and cooked, using a range of ingredients for: • different groups of people • different activity levels • food-related health conditions	Identify the factors affecting food choice under the headings: Social, Economical, Environmental and Seasonal. Make amendments to recipes based on these factors Discuss how these factors impact on people's food choice Amend recipes based on different age groups and health conditions	This unit will be taught also in September of year 11 as part of Mock NEA Mini NEA task assessed

	7.3Action planning 6.2. Evaluating completed dishes • factors affecting food choice: •social • environmental • seasonality - Pupils learn how to write a time plan to include: •safe and hygienic working practices for self and the cooking environment •selection of a range of skills and techniques in the chosen menu •selection of ingredients o selection of equipment o timeline •dovetailing o fridge/oven space o oven temperature and timing - Know how amended dishes are evaluated and the factors which must be considered: • choice of alternative ingredients and the impact of their individual characteristics on: • taste • appearance/presentation • smell •texture • nutritional content of completed dishes • final presentation of cooked dishes • how the completed dishes could be improved Mock mini NEA 1	Writing a time plan for making amended recipe Make 2 dishes based on recipe amendments Evaluate dishes made based on set task for this unit	
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Curriculum Map Year 10: Geography

Intent: Geography at Sale High School is intended to provide a wealth of knowledge about the world both globally and just outside their window. Students will have the opportunity to explore a wide range of human and physical geography from urban environments and globalisation to ecosystems and coasts. Students will be encouraged to not only learn facts from local and global case studies, but to apply their own understanding and judgement, and at times debate critical issues in geography. From this we hope that each student can gain their own unique but well-informed understanding of the world around them.

In Year 10 students begin their studies of GCSE Geography (AQA exam board). They will cover topics from all units on Paper 1 (physical geography) and Paper 2 (human geography), as well as complete fieldwork, which will be examined on paper 3. Students develop their knowledge of key geographical processes and analyse these in depth and in different contexts and scales from KS3. Case studies take them far and wide: Nepal, New Zealand, Nigeria, The Amazon, building knowledge of landscapes and cultures as well as geographical events that are recognised around the world.

Why do I study Geography?

- It helps me to understand the wider world.
- I can better appreciate diversity.
- I will become a global citizen who can make a positive change.

Cultural capital/enrichment

Fieldwork opportunities – Investigations into river management on the River Ladybrook and a study of the regeneration of Salford Quays.

Read – *A Short History of Nearly Everything* by Bill Bryson, *Can We Protect People From Natural Disasters?* by Earth Debate, *No One Is Too Small To Make A Difference* by Greta Thunberg, *There Is No Planet B* by Mike Breners-Lee, *This is Planet Earth* by New Scientist

Watch – *Planet Earth – Jungles* on BBC iPlayer, *Down to Earth with Zac Efron* on Netflix, *Slumdog Millionaire* on Google Play or Disney+

Do – walk through a woodland and consider the producer and consumer species that exist there, also consider how the climate has affected these species and how humans may have intervened and affected them in some way. Visit Manchester city centre and consider the similarities and differences between Manchester and Mumbai's opportunities and challenges. Walk along the River Mersey and consider how the local community is being protected from flooding.

10	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
1	Paper 2 Section B Part i: The Changing Economic World - Theory	• Different ways of classifying parts of the world according to their level of economic development and quality of life. • Different economic and social measures of development: gross national income (GNI) per head, birth and death rates, infant mortality, life expectancy, people per doctor, literacy rates, access to safe water, Human Development Index (HDI). Limitations of economic and social measures. • Link between stages of the Demographic Transition Model and the level of development. • Causes of uneven development: physical, economic and historical. • Consequences of uneven development: disparities in wealth and health, international migration.	• Data analysis • Demographic Transition Model and Population Pyramids • Desire line maps / proportional flow • Using facts to describe. • Thorough explanations • Evaluation of strategies	• Exam Q to be marked by the teacher and feedback given: Using the Figure and your own knowledge, evaluate the effectiveness of tourism in reducing the development gap. [6 marks] SP2 • This unit will be tested in checkpoint quizzes, mid-year and end of year exams in Y10. • Teacher to use formative assessment to check understanding in each lesson. • Frequent use of whole class feedback as appropriate.

		- An overview of the strategies used to reduce the development gap: investment, industrial development and tourism, aid, using intermediate technology, Fairtrade, debt relief, microfinance loans. - How the growth of tourism in Jamaica helps to reduce the development gap.		
1	Paper 1 Section A Part ii Weather Hazards and Climate Change	- General atmospheric circulation model: pressure belts and surface winds. - Global distribution of tropical storms (hurricanes, cyclones, typhoons). An understanding of the relationship between tropical storms and general atmospheric circulation. - Causes of tropical storms and the sequence of their formation and development. The structure and features of a tropical storm. - How climate change might affect the distribution, frequency and intensity of tropical storms. - Primary and secondary effects of tropical storms. Immediate and long-term responses to tropical storms. Use a named example of a tropical storm to show its effects and responses. - How monitoring, prediction, protection and planning can reduce the effects of tropical storms. - An overview of types of weather hazard experienced in the UK. - An example of a recent extreme weather event - in the UK to illustrate: causes, social, economic and environmental impacts, how management strategies can reduce risk. - Evidence that weather is becoming more extreme in the UK. Evidence for climate change from the beginning of the Quaternary period to the present day. - Possible causes of climate change: natural factors – orbital changes, volcanic activity and solar output. Human factors – use of fossil fuels, agriculture and deforestation. - Overview of the effects of climate change on people and the environment. - Managing climate change: mitigation – alternative energy production, carbon capture, planting trees, international agreements. Adaptation – change in agricultural systems, managing water supply, reducing risk from rising sea levels.	- Latitude and longitude - Diagrams - Satellite images - Magnitude and frequency - Qualitative and quantitative data - Line graphs	- Exam Q to be marked by the teacher and feedback given: Using the Figure and your own understanding... To what extent is climate change the result of human actions? [9 marks] 2021 - This unit will be tested in checkpoint quizzes, mid-year and end of year exams in Y10. - Teacher to use formative assessment to check understanding in each lesson. - Frequent use of whole class feedback as appropriate.
2	Paper 2 Section A Part ii: Urban Issues and Challenges – A UK City: Manchester	- Overview of the distribution of population and the major cities in the UK. - Illustrate the location and importance of Manchester in the UK and the wider world; and impacts of national and international migration on the growth and character of the city.	- Use of qualitative and quantitative data. - Use of OS maps – inferring human activity from	- This unit will be tested in checkpoint quizzes, mid-year and end of year exams in Y10. - Teacher to use formative assessment to check understanding in each lesson. - Frequent use of whole class feedback as appropriate.

		- How urban change has created social and economic opportunities in Manchester: cultural mix, recreation and entertainment, employment, integrated transport systems. - How urban change has created environmental opportunities in Manchester: urban greening - How urban change has created social and economic challenges in Manchester: urban deprivation, inequalities in housing, education, health and employment - How urban change has led to environmental challenges: dereliction, building on brownfield and greenfield sites, waste disposal - The impact of urban sprawl on the rural–urban fringe, and the growth of commuter settlements, such as Sale. - An example of an urban regeneration project (Salford Quays) to show: reasons why the area needed regeneration. The main features of the project. - Features of sustainable urban living in Freiburg, Germany: water and energy conservation, waste recycling, creating green space. - How urban transport strategies are used to reduce traffic congestion in Freiburg.	evidence, identifying locations from photographs, labelling, four and six-figure grid references.	
3	Paper 1 Section B Part i: The Living World - Ecosystems and Tropical Rainforests	- How Epping Forest illustrates the concept of interrelationships within a natural system, an understanding of producers, consumers, decomposers, food chain, food web and nutrient cycling. - The balance between components. The impact on the ecosystem of changing one component. - An overview of the distribution and characteristics of large scale natural global ecosystems. - The physical characteristics of a tropical rainforest. The interdependence of climate, water, soils, plants, animals and people. How plants and animals adapt to the physical conditions. Issues related to biodiversity. - Changing rates of deforestation. - How the example of the Amazon Rainforest illustrates: causes of deforestation – subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, population growth. Impacts of deforestation – economic development, soil erosion, contribution to climate change. - Value of tropical rainforests to people and the environment. - Strategies used to manage the rainforest sustainably – selective logging and replanting, conservation and education, ecotourism and international agreements about the use of tropical hardwoods, debt reduction.	- Food webs and nutrient cycling diagrams - Topological maps - Annotating diagrams - Analysing photographs - Choropleth maps - Bar charts - Describing causes	- Exam Q to be marked by the teacher and feedback given: Using Figure 6 and your own understanding, suggest how plants are adapted to the climate in tropical rainforests. [6 marks] 2022 - This unit will be tested in checkpoint quizzes and end of year exam in Y10. - Teacher to use formative assessment to check understanding in each lesson. - Frequent use of whole class feedback as appropriate.

4	Paper 2 Section B Part i: The Changing Economic World – Nigeria	- The example of Nigeria to illustrate: the location and importance of the country, regionally and globally. - The wider political, social, cultural and environmental context within which Nigeria is placed. - The changing industrial structure in Nigeria. The balance between different sectors of the economy. How manufacturing industry can stimulate economic development. - The role of transnational corporations (TNCs) in relation to industrial development. Advantages and disadvantages of Shell Oil to the host country. - The changing political and trading relationships with the wider world. - International aid: types of aid, impacts of aid on Nigeria. - The environmental impacts of economic development. - The effects of economic development on quality of life for the population.	- Atlas maps - Latitude and longitude - Proportional bar charts - Flow diagrams - Data analysis - Reading secondary sources	- Exam Q to be marked by the teacher and feedback given: Using a case study of a LIC or NEE country, explain the link between Transnational Corporations and industrial development in the country. [6 marks] 2018 - This unit will be tested in checkpoint quizzes and end of year exam in Y10. - Teacher to use formative assessment to check understanding in each lesson. - Frequent use of whole class feedback as appropriate.
5	Paper 1 Section C Part ii: UK Physical Landscapes - Rivers	- The long profile and changing cross profile of a river and its valley. - Fluvial processes: erosion – hydraulic action, abrasion, attrition, solution, vertical and lateral erosion. Transportation – traction, saltation, suspension and solution. Deposition – why rivers deposit sediment. - Characteristics and formation of landforms resulting from erosion – interlocking spurs, waterfalls and gorges. Characteristics and formation of landforms resulting from erosion and deposition – meanders and ox-bow lakes. Characteristics and formation of landforms resulting from deposition – levées, flood plains and estuaries. The River Tees – identifying its major landforms of erosion and deposition. - How physical and human factors affect the flood risk – precipitation, geology, relief and land use. - The use of hydrographs to show the relationship between precipitation and discharge. - The costs and benefits of the following management strategies: hard engineering – dams and reservoirs, straightening, embankments, flood relief channels. Soft engineering – flood warnings and preparation, flood plain zoning, planting trees and river restoration. - Flood management scheme in Banbury to show: why the scheme was required, the management strategy, the social, economic and environmental issues.	- OS map analysis and describing river features on OS maps - Drawing and annotating diagrams - Cost-benefit analysis - Using key terms - Photograph analysis - Use of bivariate data, interpolate and extrapolate. - Use of measures of central tendency.	- Exam Q to be marked by the teacher and feedback given: Using the Figure and your own understanding... Explain how river features are created by erosion and deposition. [6 marks] 2024 - This unit will be tested in checkpoint quizzes and end of year exam in Y10. - Teacher to use formative assessment to check understanding in each lesson. - Frequent use of whole class feedback as appropriate.
6	Paper 3 Section B: Fieldwork	The factors that need to be considered when selecting suitable questions/hypotheses for geographical enquiry. The geographical theory/concept underpinning the enquiry. Appropriate sources of primary and secondary evidence, including locations for fieldwork. The	Data collection – primary and secondary data	Exam Qs taken from Paper 3 past exam papers to be marked by the teacher and feedback given.

		potential risks of both human and physical fieldwork and how these risks might be reduced. • Setting and testing hypotheses • Writing risk assessments • Analysing data • Writing conclusions • Evaluating	• Data presentation – graphs, radar diagrams, box plot graphs – drawing, analysing and evaluating these • Application of skills to unfamiliar contexts	• This unit will be tested in checkpoint quizzes and end of year exam in Y10. • Teacher to use formative assessment to check understanding in each lesson. • Frequent use of whole class feedback as appropriate.
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Curriculum Map Year 10: Health & Social

Intent:

BTEC Health and Social Care is a qualification that gives learners the opportunity to build applied knowledge and skills that show an aptitude for further learning, both in the sector and more widely. The courses content included coursework with a final external assessment at the end of year 11. The course is proven to be successful in building applied knowledge and skills and motivating learners to engage fully with challenging study. There are many progression options as the skills acquired are applicable to a range of post-16 study options.

Why I study Health & Social?

Students opt for BTEC Health and Social Care as it is an engaging and fun topic for them to learn. They will look into each life stage and how PIES (physical, intellectual, emotional, social) interlinks. The course provides them with real-world experiences, enhancing their skills, understanding whilst also nurturing their personal growth. It equips them for a range of in-demand careers in healthcare and social services, making it a pathway to meaningful work and professional development that caters to individuals' comprehensive well-being.

I learn Health & Social because:

- I learn more about well-being, physical, and mental health
- It gives me an insight into health professions
- It will improve my ability to care for others

Half term	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
Autumn 1	Content preparation for their first coursework	Students will cover PIES for each life stage 1. Infancy – PIES Explore the physical development changes in birth to infancy (0-2 years) children 2. Early Childhood - PIES Understand the physical, intellectual, emotional and social development; Early Childhood (3-8 years)	Understanding and applying the concept of PIES (Physical, Intellectual, Emotional, and Social development) into each life stage. They will recognise physical development means considering factors like physical comfort and health, which are essential for optimal learning. Addressing intellectual development involves tailoring instructional methods to stimulate cognitive growth and adapt to diverse learning styles.	Assessment opportunities are provided through hands down questioning, discussions, brain storming, spider diagrams, quizzes, verbal feedback, self and peer assessment.

		3. Adolescence – PIES Understand the physical, intellectual, emotional and social development; Adolescence (9-18 years) 4. Early Adulthood – PIES Understand the physical, intellectual, emotional and social development; Early Adulthood (19-45years) 5. Middle Adulthood – PIES Understand the physical, intellectual, emotional and social development; Middle Adulthood (46-64 years) 6. Later Adulthood – PIES Understand the physical, intellectual, emotional and social development; Later Adulthood (65+ years)	Students learning a PIES-based approach to ensures that students grasp the importance of consider a person's PIES. By understanding PIES, students become more adaptable, empathetic, and effective in their interactions, contributing to their ability to learn, work, and provide care holistically.	
Autumn 2	Content preparation for their first coursework	Students look into factors that could affect each life stage earners will explore the different factors that can affect an individual's growth and development. Different factors will impact on different aspects of growth and development. Physical factors:	Students will assess why different factors affect different life stages. They will compare each factor and relate it to real-world scenarios. They will learn key knowledge for their coursework on how to interlink each life stage with a factor.	Assessment opportunities are provided through hands down questioning, discussions, brain storming, spider diagrams, quizzes, verbal feedback, self and peer assessment. Students will do a Practise Mock PSA in silence, to prepare them for Spring 1.

		- o inherited conditions – sickle cell disease, cystic fibrosis, muscular dystrophy, Marfan syndrome and Huntington’s disease - o experience of illness and disease - o mental ill health – anxiety, stress - o physical ill health – cardiovascular disease, obesity, type 2 diabetes - o disabilities - o sensory impairments. ● Lifestyle factors: - o nutrition - o physical activity - o smoking - o alcohol - o substance misuse. ● Emotional factors: - o fear - o anxiety/worry - o upset/sadness - o grief/bereavement - o happiness/contentment - o security - o attachment. ● Social factors: - o supportive and unsupportive relationships with others – friends, family, peers and colleagues - o social inclusion and exclusion - o bullying - o discrimination. ● Cultural factors: - o religion - o gender roles and expectations - o gender identity		
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		- o sexual orientation - o community participation - o race. ● Environmental factors: - o housing needs, conditions, location - o home environment - o exposure to pollution – air, noise and light. ● Economic factors: - o employment situation - o financial resources – income, inheritance, savings. Students will then start practising PSA coursework in aid of their first component in January.		
Spring 1 & 2	Component 1 PSA coursework	Non-exam internal assessment set by Pearson, marked by the centre and moderated by Pearson. The Pearson-set Assignment will be completed under supervised assessment, in class.	Students will use their previous knowledge from Autumn 1 & 2 to complete their component 1 coursework which will go towards their final grade. The coursework will cover a life stage and PIES. As well as the factors that could affect the life stage. Students are given a long period of time, due to be given the opportunity to re-submit their coursework and work on feedback given by the teacher to improve their work.	Components 1 is assessed through non-exam internal assessment. The non-exam internal assessment for these components has been designed to demonstrate application of the conceptual knowledge underpinning the sector through realistic tasks and activities. This style of assessment promotes deep learning through ensuring the connection between knowledge and practice.
Summer1&2	Content preparation for Component 2	What are the primary services Second and tertiary services Who are allied health professionals	Understand who different services must work together in order to treat a patient Demonstrate how professional are able to support a patient with a	Assessment opportunities are provided through hands down questioning, discussions, brain storming, spider diagrams, quizzes, verbal feedback, self and peer assessment.

		How do professionals work together How can support help with health conditions Services available for Children and young people Services available for individuals with special needs Services for old adults Informal carers Barriers – Physical, sensory, social/cultural, language, geographical, intellectual, resources, financial. Skills and attributes needed by professionals Obstacles faced by individuals (link back to PIES and life stages) Benefits of support to each life stage	specific condition. They will connect to work out how services work for different generations. Looking into barriers faced from life stages and PIES and what ways they can adapt to it. They will look into the benefits of support that can take place to aid this.	
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Curriculum Map Year 10: History

Intent:

Within the Humanities department, History is an essential subject in order to understand the world we currently live in and the consequences of past events that have shaped present day life. In History, there are opportunities for students to develop their literacy and oracy when discussing historical matters such as the causes of events or the significance of important individuals. Learners will be able to analyse and evaluate evidence in order to form their own judgements. This provides pupils with knowledge of the past as well as the skills to construct their own well-evidenced arguments on a range of issues.

Our aim is to deliver a broad and ambitious History curriculum, rich in knowledge and disciplinary skills, which immerses students in a range of cultures and develops an enquiring and critical outlook on the world. Our curriculum reflects the complexity and diversity of the past, by exploring a range of different individuals and experiences. Students are able to place their own experiences and identity within the history of the local community, Britain and the wider world. History is important because it enables our students to understand the past and use that knowledge to make informed judgements about the present. Our curriculum is mapped out chronologically from migration pre-1066 to the present day.

Year 10 – We begin the year with our wider world depth study in which we investigate international conflict by focusing on the inter war years. This topic deepens students’ knowledge of the international situation post First World War, and the complex and diverse interests of the Great Powers in the aftermath of this conflict. We look at concepts such as national self-determination, ideas of internationalism and the challenges of revising the peace settlement. Our study focuses on the causes of the Second World War and seeks to show how and why conflict occurred and why it proved difficult to resolve the issues that caused it. The study also considers the roles of key individuals and groups in shaping change, as well as how they were affected by and influenced international relations.

In the second half of year 10 we examine Germany from 1890-1945. This study offers students an insightful exploration of Germany's tumultuous journey during this pivotal period. Divided into distinct units, the scheme covers the Wilhelmine Era, the Weimar Republic, the rise of Hitler and the Nazi regime and finally the experience of Germans under the Nazis. Through analysis of primary sources and discussions on ethical and moral implications, this curriculum enables students to develop a deep understanding of the complex interplay between democracy and dictatorship in Germany. This knowledge equips them with the historical perspective necessary to comprehend one of the most transformative periods in modern history.

Why I study History?

I study History because:

- **It helps me to develop a clear sense of identity**
- **I will appreciate the accomplishments of previous generations**
- **Learning from the past helps create a better future**

Cultural capital/enrichment

History provides opportunities for debate and expression of opinion over a variety of issues. Students may explore the role of causes or the significance of consequences and will learn how to apply historical evidence into their own explanations. In order to do this we encourage a wide range of knowledge and experience in order to support them. Sale High School provides Year 10s with a trip to the Imperial War Museum in Salford Quays. This supports their depth study of conflict and tension: inter war years. Depending on the Elizabethan site study (studied in year 11) there maybe an opportunity to visit the site to develop students understanding of the site and its historical significance. Students are also able to access History catch up club in order to recap on studied topics in greater detail and in order to support them in their final year of history. Pupils are encouraged to access age-appropriate media in order to develop their contextual knowledge and to build a deeper understanding of the periods of history being studied. Online channels such as Simple History and Ten Minute History can also bolster classroom knowledge. Websites like BBC Bitesize will often provide content linked to our studied topics and can be utilised as a revision aid. Study Rocket provides information linked to our migration topic. SENECA learning provides AQA History specific content which supports learning on our course.

Half term	Topic	Key skills I will learn in this topic	Key knowledge	Assessment opportunities (Summative and formative) Key pieces
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Autumn 1	Part One: Peacemaking	Students will be able to: • Explain the role of key individuals such as Woodrow Wilson, George Clemenceau and David Lloyd George in creating the Treaty of Versailles peace settlement. • Analyse historical sources, relating to the Treaty of Versailles, by examining their content and provenance thoroughly and explaining their utility to a historian • Evaluate the strengths and weaknesses of the peace treaty and the wider implications the peace settlement had on international politics and how nations reacted.	Students will know • The aims and motivations of the peacekeepers after the armistice. • The terms of the Treaty of Versailles and other treaties created at the Paris Peace Conference. • Reactions to the Treaty of Versailles from the Germany and the Great Powers. • The long term and short term impact of specific terms on Germany (for example reparations and territorial losses) • Strengths and weaknesses of the Treaty of Versailles in creating peace after the First World War.	Quizzes (in class and homework) Extended writing and practice questions (classwork and homework) Mid-Unit Assessment on terms of the Treaty of Versailles Mid-Unit Assessment on reactions to the Treaty of Versailles (source utility)
Autumn 2	Part 2: The League of Nations and international peace	Students will be able to: • Explain why the League of Nations was created, its aims and why it proved difficult to resolve conflict during this period. • Analyse historical sources, relating to the League of Nations, by examining their content and provenance thoroughly and explaining their utility to a historian • Evaluate key success and failures of the League that contributed towards its collapse	Students will know • How and why the League of Nations was created, who was involved and its humanitarian work. • The key successes and failures of the League in the 1920s and the difficulties it faced in resolving issues. • Diplomacy outside of the League of Nations • Reasons for the collapse of the League during the 1930s including the Great Depression, Manchurian incident and Abyssinian crisis.	Quizzes (in class and homework) Extended writing and practice questions (classwork and homework) Mid-Unit Assessment on strengths and weaknesses of the League of Nations Mid-Unit Assessment on the Manchurian incident November PPE

Spring 1	Part 3: The origins and outbreak of the Second World War	Students will be able to: • Explain in a chronological narrative the key events of leading up to the outbreak of the Second World War • Analyse historical sources, relating to the origins and outbreak of the Second World War by examining their content and provenance thoroughly and explaining their utility to a historian. • Analyse political cartoons, as historical sources, on attitudes towards the causes contributing to the Second World War. • Evaluate the main causes of the Second World War	Students will know • The development of tension leading up to the outbreak of the Second World War • The escalation of tension looking at key events, Hitler' aggression and the policy of appeasement. • The role of individuals such as, Chamberlain, Hitler and Stalin, in the escalation of tension and the outbreak of the Second World War. • Reasons for the outbreak of the Second World War	Quizzes (in class and homework) Extended writing and practice questions (classwork and homework) Mid-Unit Assessment on the Sudetenland crisis End of topic exam (assessing all parts)
Spring 2	Part 1: Germany and the growth of democracy	• Identify the political and social difficulties Kaiser Wilhelm faced ruling Germany. • Analyse the impact of the First World War on Germany through historical sources and interpretations. • Explain the Weimar democracy: political change, unrest and recovery during the Stresemann era.	Students will know: • What Germany was like before and after WW1 and German attitudes towards the Treaty of Versailles. • The challenges faced by the Weimar government in its formative years, including murders, uprisings and hyperinflation. • German recovery and subsequent golden years under Gustav Stresemann until his death in 1929.	Quizzes (in class and homework) Extended writing and practice questions (classwork and homework) Mid-unit assessment on the impact of the TOV End of Unit assessment

Summer 1	Part 2: Germany and the Depression	- Describe the impact of the Depression: growth in support for the Nazis and other extremist parties (1928–1932), including the role of the SA; Hitler’s appeal. - Evaluate the failure of Weimar democracy: election results; the role of Papen and Hindenburg and Hitler’s appointment as Chancellor. - Explain the establishment of Hitler’s dictatorship: the Reichstag Fire; the Enabling Act; elimination of political opposition; trade unions; Rohm and the Night of the Long Knives; Hitler becomes Führer.	Students will know: - How the Great Depression affected Germany and helped the Nazi party secure enough votes to influence the Reichstag. - The steps Hitler took to become chancellor, eliminate opposition and subsequently achieve status as the Führer of Germany.	Quizzes (in class and homework) Extended writing and practice questions (classwork and homework) Mid-unit assessment June PPE
Summer 2	Part 3: The experience of Germans under Nazi Rule	- Evaluate Economic changes: benefits and drawbacks; employment; public works programmes; rearmament; self-sufficiency; the impact of war on the economy and the German people, including bombing, rationing, labour shortages, refugees. - Describe Social policy and practice: reasons for policies, practices and their impact on women, young people and youth groups; education; control of churches and religion; Aryan ideas, racial policy and persecution; the Final Solution. - Explain how the Nazis controlled the population: Goebbels, the use of propaganda and censorship; Nazi culture; repression and the police state and the roles of Himmler, the SS and Gestapo; opposition and resistance, including White Rose group, Swing Youth, Edelweiss Pirates and July 1944 bomb plot.	Students will know: - The economic changes brought in by the Nazi party to achieve ‘self-sufficiency’. - The impact WW2 had on Germany and how life changed for Germans on the home front. - How the Nazis changed the life of young people and women through indoctrination, propaganda and policy. - The role played by the church in appeasing and condemning the Nazi regime and the struggles faced by those who did not conform to Nazi beliefs and doctrine. - The implementation of Nazi ideals and racial policy. - The Journey to ‘the final solution’ and what this meant for millions of Jewish people, who found themselves facing Nazi persecution. - The methods the Nazis used to control the populations under their control, through both adoration and fear. - How arts and culture changed drastically under the Nazi regime, through censorship and control. - Resistance and opposition to Hitler.	Quizzes (in class and homework) Extended writing and practice questions (classwork and homework) Mid-unit assessment End of unit assessment

Curriculum Map Year: Cambridge National IT Level 1/2

Intent:

- Practical Skills Development: Equip students with essential IT skills, focusing on real-world applications like spreadsheets, databases, and technological solutions.
- Understanding IT Concepts: Provide foundational knowledge of IT systems, cybersecurity, and the ethical implications of technology in society.
- Project Management and Problem-Solving: Teach effective project management techniques and problem-solving skills through hands-on projects and real-world scenarios.
- Preparation for Future Opportunities: Prepare students for further study and enhance employability by covering a broad range of relevant IT topics and practical applications.

Why I study IT Level 1/2?

It prepares me for the ever-changing world of work

I will think creatively, innovatively, analytically, logically and critically

It will develop my independence and confidence

Cultural capital/enrichment

Our comprehensive IT curriculum is designed to enhance students' cultural capital by going beyond the National Curriculum requirements. The course fosters essential life skills such as digital literacy, problem-solving, and critical thinking, preparing students for the demands of the modern workforce.

Students engage in a variety of practical projects that connect classroom learning to real-world applications, exploring areas such as cybersecurity, data management, and emerging technologies. By studying notable IT professionals and industry trends, students learn to communicate their ideas effectively and develop innovative solutions using cutting-edge tools, including CAD software and programming languages.

Through these experiences, we cultivate a passion for technology and empower students to become informed digital citizens, equipped with the knowledge and skills necessary for future academic and career pursuits.

Half term	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
Half term 1	Unit R012: Understanding Tools, Techniques, Methods, and Processes for Technological Solutions. Topics Covered: Introduction to IT Systems: Components, hardware, and software functions.	Understanding how to identify and describe the different hardware and software used in IT systems. Understanding how to process, store, and manage data effectively and securely. Understanding how different types of networks (e.g., LAN, WAN) allow	Using IT systems efficiently, including both hardware and software. Managing data securely, including storage, backup, and retrieval methods.	Assessment opportunities are provided through hands down questioning, discussions, , quizzes, verbal feedback, self and peer assessment, whole class mark sheets Assessment will focus on four areas: • Core knowledge (exam questions) • Key Written assessed pieces • Summative Assessments • Key Written Assessed Pieces

	Data and Information Management: Storage, data processing, and data backup techniques. Networks and Communication: LAN, WAN, and the flow of data. Data Validation and Integrity: Methods of ensuring accurate and error-free data.	communication and data transfer between systems. Understanding how data validation techniques (e.g., range checks, presence checks) ensure data accuracy and integrity.	Applying network principles to enable communication between systems. Using data validation tools to ensure information accuracy and integrity.	- Formative Assessments - Self and Peer Assessments
Half term 2	Unit R013: Developing Technological Solutions Topics Covered: Understanding Client Requirements: Gathering and analysing user needs. Planning IT Projects: Creating project plans, Gantt charts, and critical path analysis. Legal and Ethical Issues: Ensuring compliance with data protection laws and considering ethical impacts. Testing and Evaluation: Methods for testing the functionality, reliability, and user satisfaction of IT solutions.	Understanding how to gather and interpret client needs and requirements effectively. Understanding how to create detailed project plans, including Gantt charts and critical path analyses. Understanding how to consider the legal and ethical implications of IT solutions (e.g., data protection, environmental impacts). Understanding how to design, test, and evaluate IT solutions to meet client needs and ensure reliability.	Planning and managing IT projects using Gantt charts and critical path analysis. Developing and delivering IT-based solutions tailored to client requirements. Evaluating IT solutions for functionality, reliability, and client satisfaction. Considering legal, ethical, and environmental implications when developing IT solutions.	
Half term 3	Unit R060: Data Manipulation Using Spreadsheets Topics Covered: Basic Spreadsheet Skills: Formatting cells and using	Understanding how to create and format spreadsheets, including applying basic and advanced formulas (e.g., SUM, IF, VLOOKUP). Understanding how to analyse and manipulate data using filters, pivot tables,	Designing and manipulating complex spreadsheets for data analysis and problem-solving. Applying advanced formulas (e.g., IF, VLOOKUP) to perform calculations and automate processes.	

	simple functions (e.g., SUM, AVERAGE). Advanced Spreadsheet Functions: Using IF statements, VLOOKUP, and more complex formulas. Data Analysis Tools: Creating pivot tables, applying filters, and using charts. Data Validation and Protection: Ensuring accuracy, locking cells, and protecting sensitive data.	and charts to summarise and present information. Understanding how to apply data validation rules to ensure the accuracy and integrity of spreadsheet data. - Understanding how to protect sensitive data using security features like locking cells and password protection.	Summarising large datasets using pivot tables and data analysis tools. Presenting data visually through graphs, charts, and dashboards. Securing spreadsheet data with validation techniques and protection tools.	
Half term 4	Unit R070: Using Databases to Handle Data Topics Covered: Relational Databases: Introduction to database design, tables, and relationships. Database Queries: Designing and executing queries to search and filter data. Database Reports and Forms: Producing user-friendly data input forms and automated reports. Security and Integrity in Databases: Understanding database security measures, including encryption and permissions.	Understanding how to design and build relational databases with tables, fields, and relationships. Understanding how to create and execute queries to extract, filter, and manipulate data in databases. Understanding how to design and use forms and reports to input and present data efficiently. Understanding how to apply database security features (e.g., encryption, permissions) to protect sensitive data and ensure confidentiality.	Designing and maintaining relational databases to support various business functions. Creating and executing queries to retrieve and manipulate data. Producing forms and reports to allow for efficient data entry and presentation. Implementing security measures (e.g., permissions, encryption) to protect sensitive data within databases.	
Half term 5	Unit R050: IT in the Digital World (Exam Unit) Topics Covered: IT Systems in the Digital Age: How IT systems have evolved and their current applications.	Understanding how IT systems operate and their role in modern business and society. Understanding cybersecurity threats and implementing basic security measures to protect data.	Analysing and understanding key features of IT systems. Applying cybersecurity measures to protect IT systems and data.	

	Cybersecurity and Data Protection: Understanding threats and how to protect IT systems. Cloud Computing and Emerging Technologies: The benefits and limitations of cloud technology and an overview of key trends. Legal and Regulatory Frameworks: Relevant laws and regulations affecting IT systems (e.g., GDPR, intellectual property laws). Impact of IT on Society: How IT influences business, communication, education, and everyday life.	Understanding how cloud computing operates, including its advantages and disadvantages. Understanding the legal and ethical responsibilities surrounding IT use, including data protection laws and intellectual property considerations. Understanding the impact of IT on society and how it shapes communication, work, and daily life.	Evaluating the use of cloud computing and its role in emerging technologies. Recognising legal responsibilities, including data protection laws and intellectual property concerns. Assessing the societal impact of IT systems, both positive and negative.	
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Curriculum Map Year 10: Maths

Intent:

The Sale High Mathematics department will provide lessons which are both challenging and stimulating. Our aim is for all students to enjoy mathematics and to achieve their potential. A variety of teaching styles cater for all students' learning needs and staff are always available to support all students both in and out of the classroom. There are ample opportunities for students to learn maths in a variety of enriching ways including after school clubs and entering national competitions. Students who wish to go beyond the National Curriculum will be able to Study Level 2 further mathematics.

The combination of developing fluency and mathematical understanding in tandem will enable students to use their learning accurately, efficiently and flexibly to reason mathematically and solve routine and non-routine problems, so meeting the aims of the national curriculum and GCSE AQA Mathematics specification. It will enable students to solve problems efficiently in later life and students who pursue further studies in mathematics will have sufficient breadth and depth to enable success.

Why I study Maths?

"I learn mathematics because:

- It helps me solve everyday problems,
- Improves my communication skills,
- Make me better at managing my money,
- Opens up more future career options."

Cultural capital/enrichment

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

In year 10 students are entered into the UK math challenge and Manchester University maths feast.

Half term	Topic	Key skills I will learn in this topic	Key knowledge	Assessment opportunities (Summative and formative) Key pieces
Autumn	Working in 2D	Students will be able to: - Measuring lines and angles (map reading) - Bearings - interpreting and drawing bearings - Area of a 2D shapes - Be able to transform a shape by translating, rotating, reflecting and enlarging.	Students will know - The formula for finding the area of different 2d shapes - The 4 transformations	Key skills GCSE starter booklet End of topic reviews Base line assessment Marked piece
	Probability	Students will be able to: - Calculate experimental probability - Calculate theoretical probability	Students will know How to identify Mutually exclusive and exhaustive events	Key skills GCSE starter booklet End of topic review Spelling Bee
Autumn 2	Measures and accuracy	Students will be able to: - Round to integers, decimal places and significant figures - Make estimations and approximations - Find the upper and lower bound of a truncated number	Students will know - The formula for compound measures like speed and density	Key skills GCSE starter booklet End of topic review
	Circles and constructions	Students will be able to: - Find the area and circumference of circles - Find the area and perimeter of sectors. - Bisect a line and angle	Students will know - All the required circle theorems - And understand Loci	Key skills GCSE starter booklet End of topic review Marked piece Winter summative exam.

Spring 1	Ratio and proportion	Students will be able to: • Convert between fractions, decimals and percent's. • Simplify and share a ratio • Find a percentage • Increase and decrease a percentage • Find compound and simple interest	Students will know • The different methods for finding and changing by a percentage	Key skills GCSE starter booklet End of topic review Marked piece End of topic review
Spring 2	Factors, powers and roots	Students will be able to: • Find the prime factors of a number • Find the HCF and LCM of a number • Simplify and evaluates indices using the first 4 laws • Multiply, divide, add, subtract and simplify surds. • Rationalise the denominator	Students will know • The laws of indices	Key skills GCSE starter booklet End of topic review Marked piece

Summer 1	Equations and inequalities.	Students will be able to: • Solve equations with unknowns on both sides • Solve equations with fractions • Solve equations with brackets • Create and solve equations • Solve quadratics by factorising, quadratic formula and graphically • Use the iterative process to solve • Draw graphs of inequalities • Solve simultaneous equations algebraically and graphically.	Students will know • The concepts of algebra • Order of operation • How to collect like terms	Key skills GCSE starter booklet End of topic review Marked piece
Summer 2	Graphs 1	Students will be able to: • Draw linear graphs • Find the equation of a linear graph • Find the equation of a line between two points • Plot quadratic and cubic graphs • Solve a simultaneous equation using a quadratic graph • Interpret and draw kinematic graphs. •		Key skills GCSE starter booklet End of topic review Summer summative exam

	Working 3D	Students will be able to: • Draw plan and elevations • Draw 3D shapes on Isometric paper • Find the volume of Prism, pyramids and spheres • Find the volume of a fustum	Students will know • The geometric properties of 3D shapes	Key skills GCSE starter booklet End of topic review
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Yr 10 MFL. Overview and tracker.

Curriculum Map Year KS4 MFL French

Intent VISION

Our department's vision is to develop our students skills and confidence to consider themselves **global citizens** who belong to a **multicultural world**.

We aim to cultivate our students' **curiosity of other countries' culture and language**.

We aim to **empower our students with the cognitive skills and metacognitive strategies** which make them successful and resilient learners and which give them a **competitive edge** in future careers.

INTENT

Our intent is to provide Sale High students with **a breadth and depth of knowledge** that promotes **cultural awareness and communication skills to access the wider world**.

Creating learners that are **resilient**, open-minded language detectives **empowered** to demonstrate skills in reading, listening, writing, translation and speaking another language.

Why I study a modern language?

- It makes me a better learner
- It opens doors to a better future
- It makes me a global citizen

Cultural capital/enrichment

Employer encounters: Alliance Française / Instituto Cervantes / DA languages (Trafford)

Sessions with Routes into Languages: the importance of languages.

Spotlight on cultural difference across Franco/Hispanic countries via the study of festivals and school/home life.

Discussions round :

- post 16 choices and the benefits/disadvantages of university,
- the dangers of social media,
- Global and environmental issues,
- Healthy lifestyle
- Customs and festivals.

Term	Topic	Theme and questions	Assessment
Autumn 1	UNIT 1 Lifestyle, media and technology ☐ Sport ☐ Social media / technology ☐ Cinema / TV ☐ La musique	GC Lifestyle / wellbeing x2 Q1 sport Q2 sport / activity GC Media and technology	<u>Learning checkpoint 1 – post learning assessment</u> Reading / Listening / Translation <u>Learning checkpoint 2 – GC booklet YELLOW</u>
Autumn 2	UNIT 2 My personal world: family and relationships ☐ family, friends & relationships ☐ birthday / Christmas ☐ self in the past ☐ generational differences ☐ future hopes / dreams / marriage ☐ keeping in touch	GC My Personal World	<u>Learning checkpoint 1 – GC booklet BLUE– extended writing</u> <u>Learning checkpoint 2 – reading exam style Qs</u>
Spring 1	MID YEAR ASSESSMENTS & FEEDBACK ***** UNIT 3 Lifestyle & wellbeing ☐ mental well being ☐ physical well being / doctor ☐ exam stress ☐ becoming an athlete ☐ food / diet / waste ☐ fashion	GC Lifestyle & wellbeing –cont.	<u>Assessment 3 - MID YEAR Reading Listening Writing</u>

Spring 2	UNIT 3 Lifestyle & wellbeing continued	GC Lifestyle & wellbeing – cont.	<u>Learning checkpoint 1</u> – End of unit assessment – reading / listening <u>Learning checkpoint 2</u> – photo task – writing / speaking
Summer 1	UNIT 4 Studying and Future ☐ school & problems ☐ jobs / skills / dreams ☐ holidays ☐ buildings ☐ transport	GC Studying & the future	<u>Learning checkpoint 1</u> – GC booklet ORANGE <u>Learning checkpoint 2</u> –
Summer 2	EOY revision / assessments & feedback ☐ writing ☐ speaking ☐ revision of exam skills		Assessment 4 - EOY exams Wk1 Speaking exam Reading Listening Writing

Curriculum Map Year 10: Music

Intent:

Our intent is to provide Sale High students with broad scope of knowledge that challenges the way students think about the arts and teaches them to accept and embrace difference. We want our students to be confident and understand how the arts can benefit all aspects of life such as promoting confidence and good communication skills. We want to teach them that creating safe and comfortable spaces where people of all backgrounds can make, celebrate and learn together is empowering. Students study a variety of musical styles, each leading to a music making experience, performance and evaluation. Students have the opportunity to sing and make music using a variety of instruments. Students build a valuable understanding of the elements of music such as melody, pitch, tone, texture, structure, dynamics, tempo and rhythm, including music notation.

Students gain knowledge of how music is created and recorded in different contexts. They are taught to understand the value of both traditional and contemporary styles and music for different occasions leading to a greater acceptance of these differences. Students are encouraged to improvise and understand that happy mistakes can lead to great work and changes of direction are not necessarily a bad thing. They experience working solo and in groups, understanding that both have merit and it is important to listen to the ideas of others to build work together – this promotes excellent communications skills. Students are encouraged to perform and evaluate work, focusing on specific skills, reflecting to improve future work.

Why I study Music?

I study Music because:

- I can express myself creatively
- I experience music from other cultures
- It improves my memory, confidence and teamwork skills

Cultural capital/enrichment

Performance/presentation skills – awareness of the audience, self-confidence, use of practical skills (e.g. open evening, Christmas concert and annual production)

Exploration of own thoughts and feelings through experiencing, discussing and performing a range of musical styles

Creative collaboration to develop working relationships outside of friendship groups

Giving/receiving constructive criticism about peer's performances

Composing and performing for audiences, considering the emotions they wish to portray

Considering the emotional support music can offer in day to day life

Extra-curricular musical groups and expressive arts company 'Platinum Stars' is an opportunity for students be part of a fun and safe environment for young people to experience creating and rehearsing theatre performance (including musical theatre) for a specific event e.g. Christmas Concert and annual production. The whole school production is a valuable experience for students to take part in a performance in a theatre, in front of a paying audience.

Half term	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
AUTUMN 1	Introduction to the course, set work: William - Star Wars/ Instrumental lesson set up	Introduction to the course: Students will know the three components of Edexcel GCSE Music and the timeline for completion over the two year course as well as expectations for homework, instrumental practice and attendance at additional Friday composition sessions. Set work 1: Star Wars 'A New Hope'. Students will understand how to read a short score and will learn the piece inside and out. They will be able to talk confidently about the elements involved in the piece and use key vocabulary where possible. Performance: Students will know when to attend individual practical sessions and with whom. Understanding of Tones and Semitones, sharps and flats and tonalities of sharp and flat keys (major). Understand basic intervals.	Organisational skills – attending instrumental lessons and ensembles following a timetable and keeping a tidy file with clear sections for each set work. Using basic key vocabulary associated with all set works (MPRSTTTDHI – Melody, Pitch, Rhythm, Structure, Tonality, Timbre, Texture, Tempo, Dynamics, Harmony and Instrumentation) and using it in context when speaking about the set work. Using specific vocabulary associated with the Star Wars piece. Naming a tonality from a given key signature (7 flats and sharps) Describing a basic time signature e.g. $\frac{3}{4}$, 4/4 or 6/8 Identifying key features of a piece of music BY EAR. Following a short score and using bar numbers to locate and label key information. Colour coding a score with key techniques and instrumentation. Recalling key aspects of a set work and explaining the impact on the audience. Identifying specific intervals in a melody line.	Section A exam style assessment of Star Wars 'A New Hope' (at least one). Flash cards produced for Star Wars. AFL pack use (whiteboard, RAG etc.) for formative assessment. Sharps and Flats tonalities sheets. Quiz-quiz trade observations.

AUTUMN 2	Set work: Schwartz - Defying Gravity/ Begin Theme and Variations Composition	Set work: Wicked 'Defying Gravity'. Students will understand how to read a short score and will learn the piece inside and out. They will be able to talk confidently about the elements involved in the piece and use key vocabulary to explain the techniques and the effects these have on the audience. Students will understand the context of 'Defying Gravity' in the world of musicals. Understand how to create a strong melody line using steps and leaps (conjunct and disjunct movement). Understand the structure and techniques involved in a Theme and Variation Composition. Gain a deeper understanding of MELODY, PITCH and RHYTHM and apply to set works studied to this point. Understand MELODIC DICTATION and know how this will fit into the final exam paper. Know how to decipher clues in a given melody line to ensure greater accuracy of melodic dictation.	Organisational skills – attending instrumental lessons and ensembles following a timetable and keeping a tidy file with clear sections for each set work. Using specific vocabulary associated with the Wicked piece. Identifying key features of a piece of music BY EAR. Following a short score and using bar numbers to locate and label key information. Colour coding a score with key techniques and instrumentation. Recalling key aspects of a set work and explaining the impact on the audience. Identifying specific aspects of MELODY, PITCH and RHYTHM by ear and by sight and using more complex vocabulary when discussing set works. Analyse a given melody line, talk about intervals, sequences, ascending and descending pitches and how this will inform any missing notes.	Dictation exercises Core analysis of Defying Gravity Whiteboard questioning Section A style question paper on Defying Gravity Mini question papers on key vocabulary Observations of group discussion work Year 10 exam based on Star Wars and Defying Gravity pieces. Progress toward Composition 1
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SPRING 1	Set work: Bach - Brandenburg Concerto/ Continue Composition 1/ Work toward performances	Set work: Brandenburg Concerto (Bach) Students will learn the piece inside and out. They will be able to talk confidently about the elements involved in the piece and use key vocabulary where possible. Students will understand the context of the Brandenburg Concerto within the Baroque period, analysing the conventions and styles of the period and how they apply to the set work. Students will have a deeper understanding of STRUCTURE and be able to apply more technical vocabulary when describing the layout of a piece of music. After discussion with class teacher and instrumental teacher, students will understand the level of performance work/ piece they will use and begin rehearsals for a solo or ensemble performance. Understand how to develop a theme to create five further sections to expand the Theme and Variations composition 1. Analyse and understand how to approach the 'Compare and Contrast' 12 mark question.	Organisational skills – attending instrumental lessons and ensembles following a timetable and keeping a tidy file with clear sections for each set work. Using specific vocabulary associated with the Brandenburg Concerto Identifying key features of the concerto BY EAR. Following a score and being able to identify key elements WITHOUT teacher lead, building on previous skills. Colour coding a score with key techniques and instrumentation. Recalling key aspects of the concerto and explaining the impact on the audience. Identifying specific aspects of MELODY, PITCH and RHYTHM and STRUCTURE by ear and by sight and using more complex vocabulary when discussing set works. Analyse an exemplar answer and structure and re-draft own work based on set works covered in the course so far.	Correction/ re-sit of mock exam Dictation exercises Baroque homework. Score analysis of Brandenburg Concerto Whiteboard questioning Section A style question paper on the Bach piece Mini question papers on key vocabulary Observations of group discussion work Progress toward Composition 1 Progress toward performance 1
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SPRING 2	Set work: Beethoven- Pathetique/ Continue composition 1/ Continue performance rehearsals	Set work: Beethoven's piano sonata 'Pathetique'. Students will learn the piece inside and out. They will be able to talk confidently about the elements involved in the piece and use key vocabulary where possible. Students will understand the context of 'Pathetique' within the Classical period, analysing the conventions and styles of the period and how they apply to the set work - which pushes into the Romantic style. Students will have a deeper understanding of TONALITY and be able to apply a wider range of technical vocabulary when describing the key signatures of a piece of music. Students will understand the techniques necessary to improve their performance piece and will rehearse independently. Composition: students will understand how to apply chords/accompaniment to their chosen variations.	Organisational skills – attending instrumental lessons and ensembles following a timetable and keeping file up to date. Using specific vocabulary associated with the 'Pathetique' sonata Identifying key features of the sonata BY EAR. Confidently discussing Sonata form (structure) Stating the key differences and advantages of the piano over harpsichord Following a score and being able to identify key elements WITHOUT teacher lead, building on previous skills. Colour coding a score with key techniques and instrumentation. Recalling key aspects of the sonata and explaining the impact on the audience, in the context of the piece pushing forward into the romantic period. Identifying specific aspects of MELODY, PITCH and RHYTHM, STRUCTURE and TONALITY by ear and by sight and using more complex vocabulary when discussing set works.	Section A style question paper. Score analysis of 'Pathetique' Observation of discussion work. Whiteboard questioning. Piano homework Progress toward composition 1 Progress toward performance 1 – record/ re-record from now until end of Summer term
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SUMMER 1	Set work: Purcell – Music for a While/ Continue composition 1/ Continue performance 1	Set work: Purcell's 'Music for a While'. Students will learn the piece inside and out. They will be able to talk confidently about the elements involved in the piece and use key vocabulary where possible. Students will understand the context of Music for a While within the Baroque period, making comparisons between this set work and the Bach piece from term 2. They will be able to analyse the conventions and styles of the period and how they apply to the set work. Students will have a deeper understanding of TEXTURE and be able to apply a wider range of technical vocabulary when describing how texture is used in music. Students will understand the requirements to increase their grade in performance piece 1 Composition: students will refine composition 1 to include tempo, dynamic and articulation and work to add a range of accompaniment styles to each variation.	TEXTURE FOCUS: Apply the terms, melody dominated homophony, polyphonic, contrapuntal to music and include imitation, doubling and unison. Analyse and highlight a score to show expertise in handling key words. Talk about, and recognise by ear and sight, the word setting in a piece – syllabic, melismatic and word painting. Talk about the piece in context referring to the play Oedipus and linking the mood of the music to the characters and their situation. Recall and apply knowledge from the previous Baroque piece studied in Spring 1. Recognise ground bass by ear and sight and be able to talk about the specific ground bass in Music for a While. State the role of the basso continuo.	Section A style question paper on the set work. Homework 'Word Painting' Observations of performance piece Progress of composition 1 Mock 12 mark question Observation of class discussion work AFL whiteboard questioning
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SUMMER 2	Set work: Queen – Killer Queen/ Complete composition 1/ Complete performance 1	Set work: Queen’s ‘Killer Queen’. Students will learn the piece inside and out. They will be able to talk confidently about the elements involved in the piece and use key vocabulary where possible. Students will understand the context of Killer Queen within the pop/rock/glam rock era, being able to describe the Queen style in relation to instrumentation, playing techniques and the technology they employed to create a studio sound. Students will have a deeper understanding of TIMBRE and be able to apply a wider range of technical vocabulary when describing how unusual sounds are to great effect in Killer Queen and wider music. Expand knowledge of vocal skills to include detail of backing vocals. Students will record their first performance Composition: students will complete composition 1	Analyse and highlight a score to show expertise in handling key words. Transfer knowledge of word painting from Summer 1 to Killer Queen and find examples of syllabic and melismatic setting. Talk about the piece in context referring specific skills and techniques e.g. portamento and call and response. Recall and discuss the electronic equipment and effects used in Killer Queen e.g. multi tracking, overdubbing and use of flanger and panning Identify key guitar techniques by ear and on a score e.g. sliding, vibrato and pitch bending. Say how backing vocals are used to great effect in Killer Queen including the use of vocables and rhythmic four-part harmony.	Section A exam style listening test. Completed composition 1. Completed first performance. AFL whiteboard questioning. Various quiz tasks – observations. **NB periodic revision of the earlier pieces will take place throughout the year and mini tests will take place to ensure previous knowledge is not ‘lost’.
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Curriculum Map Year 10/11: Core Physical Education

Intent: Students are encouraged to take greater ownership of their lessons in year 10 by allocating roles for students, including coach, manager, officials, equipment. It is an opportunity for staff and students to monitor and evaluate different aspects of physical education, including, team work, leadership, tactics and knowledge of health and fitness. Students are encouraged to discuss between them, how to create groups that would bring about fair and challenging opponents. Running PE in this way also pays attention to the social element of health, as connection with others is key. We still ensure that we encourage students to form good habits that will lead to lifelong enjoyment. However, the onus is certainly on the student to take charge of these lessons.

KS4 Activity blocks take place in 6 week blocks as opposed to the 4 week blocks in KS3. This is a reaction to student voice, which highlighted a preferred activity choice in which to focus and develop the areas mentioned above. Students take part in these activities with the key focus to provide students the opportunity to experience and enjoy activities with the hope that these will become a central part of their progression into adulthood. Activities will be more complex and demanding than in KS3 and promote an active, healthy lifestyle.

Why I study Physical Education?

- I get to experience different sports
- It supports my physical, social and mental wellbeing
- It develops my confidence, leadership and teamwork skills

Cultural capital/enrichment

- lunchtime and after school extra-curricular programme
- School teams and fixtures as part of the many Trafford Schools Leagues
- Inter-house competitions
- KS4 visit opportunity to the UA92 University
- Links to local clubs

Block 1 Boys	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
	Football	How to perform a skill in a fully competitive situation and when to select the skill at the right time to have maximum impact.	Ball mastery Receiving and releasing Ball striking Creating and manipulating space Moving with the ball Attacking	Heart – their ability to lead and make good, kind choices. We look for the students that want to help others and for those that are trying to build resilience in challenging situations, are fully equipped for each lesson

		Linking physical activity and sport to health fitness and mental wellbeing Benefits of a warm up and cool down Officiating	Defending Wing play Playing through midfield Press / Pass and move Switching play Implementation of skills into games	and show effort and commitment each lesson. Verbal feedback will be given lesson by lesson and students who show high standards every lesson are rewarded
	Basketball	Tactical awareness in differing scenarios Problem solving Organising a game/tournament/team Regulating themselves as a team to ensure it is fair and equal How to assess their own strengths and weaknesses to ensure that practical improvement can still be made.	Passing Dribbling Movement Shooting Half-court defence Effective movement around the key Implementation of skills into games	
Block 1 Girls	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
	Netball	How to perform a skill in a fully competitive situation and when to select the skill at the right time to have maximum impact. Linking physical activity and sport to health fitness and mental wellbeing	Footwork Passing Dribbling Movement Shooting Implementation of skills into games	Heart – their ability to lead and make good, kind choices. We look for the students that want to help others and for those that are trying to build resilience in challenging situations, are fully equipped for each lesson and show effort and commitment each lesson.
	HRF	Benefits of a warm up and cool down Officiating	CV endurance Speed Muscular Strength Muscular Endurance Flexibility	Verbal feedback will be given lesson by lesson and students who show high standards every lesson are rewarded

	OAA	Tactical awareness in differing scenarios Problem solving Organising a game/tournament/team	Agility Power Training methods Fitness testing Heart Rate calculations	
	Football	Regulating themselves as a team to ensure it is fair and equal How to assess their own strengths and weaknesses to ensure that practical improvement can still be made.		
Block 2 Boys	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
	Rugby	How to perform a skill in a fully competitive situation and when to select the skill at the right time to have maximum impact. Linking physical activity and sport to health fitness and mental wellbeing Benefits of a warm up and cool down	Grip and carry Ball handling Receiving and releasing Tackling Rucks Mauls Line-outs Switch/scissor pass Implementation of skills into games	Heart – their ability to lead and make good, kind choices. We look for the students that want to help others and for those that are trying to build resilience in challenging situations, are fully equipped for each lesson and show effort and commitment each lesson. Verbal feedback will be given lesson by lesson and students who show high standards every lesson are rewarded
	Badminton	Officiating Tactical awareness in differing scenarios	CV endurance Speed Muscular Strength Muscular Endurance Flexibility	
	HRF	Problem solving Organising a game/tournament/team	Agility Power Training methods Fitness testing HR calculations	
	OAA	Regulating themselves as a team to ensure it is fair and equal How to assess their own strengths and weaknesses to ensure that practical improvement can still be made.		

Block 2 Girls	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
	Football	How to perform a skill in a fully competitive situation and when to select the skill at the right time to have maximum impact. Linking physical activity and sport to health fitness and mental wellbeing	Selection of shots Movement around the court Service rules Doubles and singles tactics Front and back v Side by side	Heart – their ability to lead and make good, kind choices. We look for the students that want to help others and for those that are trying to build resilience in challenging situations, are fully equipped for each lesson and show effort and commitment each lesson. Verbal feedback will be given lesson by lesson and students who show high standards every lesson are rewarded
	Lacrosse	Benefits of a warm up and cool down Umpiring	Teamwork Map reading Compass work Problem solving Planning Designing routes Setting challenges	
	HRF	Tactical awareness in differing scenarios Problem solving Organising a game/tournament/team		
	Badminton	Regulating themselves as a team to ensure it is fair and equal How to assess their own strengths and weaknesses to ensure that practical improvement can still be made.		
Block 3 Boys	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
	Athletics	How to perform a skill in a fully competitive situation and when to select the skill at the right time to have maximum impact. Linking physical activity and sport to health fitness and mental wellbeing	Sprinting Pacing Jumping Throwing Relay technique Competition technique Timing	Heart – their ability to lead and make good, kind choices. We look for the students that want to help others and for those that are trying to build resilience in challenging situations, are fully equipped for each lesson and show effort and commitment each lesson.
	Cricket	Benefits of a warm up and cool down	Throwing Catching Batting	

		Umpire/Timer/Scorer Comparison of times/distance in relation to different events and records	Bowling Ground Fielding Rules and Regulations Implementation of skills into games	Verbal feedback will be given lesson by lesson and students who show high standards every lesson are rewarded
	Softball	Tactical awareness in differing scenarios Problem solving Organising a game/tournament/team Regulating themselves as a team to ensure it is fair and equal How to assess their own strengths and weaknesses to ensure that practical improvement can still be made.	Throwing Catching with mitt Batting Bowling Ground Fielding Base running and tagging Rules and Regulations Implementation of skills into games	
Block 3 Girls	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
	Athletics	How to perform a skill in a fully competitive situation and when to select the skill at the right time to have maximum impact. Linking physical activity and sport to health fitness and mental wellbeing	Sprinting Pacing Jumping Throwing Competition technique Relay technique	Heart – their ability to lead and make good, kind choices. We look for the students that want to help others and for those that are trying to build resilience in challenging situations, are fully equipped for each lesson and show effort and commitment each lesson. Verbal feedback will be given lesson by lesson and students who show high standards every lesson are rewarded
	Rounders	Benefits of a warm up and cool down Umpire/Timer/Scorer Comparison of times/distance in relation to different events and records Tactical awareness in differing scenarios Problem solving	Throwing Catching Batting Bowling Ground Fielding Rules and Regulations Implementation of skills into games	

		Organising a game/tournament/team Regulating themselves as a team to ensure it is fair and equal How to assess their own strengths and weaknesses to ensure that practical improvement can still be made.		
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This Scheme of Work is designed to work alongside the following resources which are recommended to benefit and support the delivery of the AQA GCSE Specification theory content in school. As well as the student's primary sport, the department offer a rock climbing course and deliver handball within practical sessions, to ensure all students are able to perform three sports at the required level.

PowerPoints: Created by department members

Text Book: Howitt, R. & Murray M. (2016). AQA GCSE (9-1) PE. Hodder & Stoughton. ISBN: 9781471859526

Unit & Topic	Learning & Assessment Objectives	Content	Resources	Delivery suggestions
3.1.3 Physical Training	AO1, AO2, AO3 Paper 1	3.1.3.1. The relationship between health and fitness and the role exercise plays in both. - Relationship between Health & Fitness. - Definitions. 3.1.3.2. Components of fitness, benefits for sport and how fitness is measured and improved. - Definitions of all 10 components of fitness. -Linking sports and activities to components of fitness.	-PowerPoint -YouTube -Text Book pages 42 – 49.	-Delivery of 'Components of Fitness' PowerPoint resource. -Range of strategies for 'reflection tasks', including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.
	AO1, AO2, AO3 Paper 1	3.1.3.2. Fitness Testing	-PowerPoint -YouTube	-Delivery of ' Fitness Testing ' PowerPoint resource.

		– Introducing the tests used to measure each of the 10 components of fitness. -Reasons for and limitations of fitness testing. 3.1.4. Data analysis. - Introducing different types of data and interpretation linked to fitness tests.	-Text Book pages 51 – 61.	-Range of strategies for ‘reflection tasks’, including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment. -Practical engagement with a variety of fitness tests to support data analysis and deepen k&u of fitness tests.
	AO1, AO2, AO3 Paper 1	3.1.3.3. The principles of training and their application to personal exercise/training programmes. - Introduction of SPORT and FITT principles. -Application of the principles of training. - Types of training. Introducing the 7 different methods of training with examples. - Advantages and disadvantages of the different types of training with examples.	-PowerPoint -YouTube -Text Book pages 61 – 72.	-Delivery of ‘Principles of Training’ PowerPoint resource. -Range of strategies for ‘reflection tasks’, including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.
	AO1, AO2, AO3 Paper 1	3.1.3.4. Optimising training and injury prevention -Introduction of aerobic and anaerobic respiration. -Calculating and understanding the training thresholds for aerobic and anaerobic training. -Altitude training concepts.	-PowerPoint -YouTube -Text Book pages 67 and 73.	-Delivery of ‘Aerobic and Anaerobic Training Thresholds’ PowerPoint resource. -Range of strategies for ‘reflection tasks’, including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.
	AO1, AO2, AO3 Paper 1	3.1.3.4. Optimising training and injury prevention. - Injury prevention methods	-PowerPoint -YouTube	-Delivery of ‘Injury Prevention and Training Seasons’ PowerPoint resource. -Range of strategies for ‘reflection tasks’, including individual, paired and group work.

		- Seasonal aspects – training seasons introduced and explained. 3.1.3.5 Effective use of warm ups and cool down. - Warm ups and cool down methods introduced and explained.	- Text Book pages 73 – 78.	- Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment. - Practical tasks linked to delivery of warm ups and cool downs.
3.2.2 Socio-Cultural Influences	AO1, AO2, AO3 Paper 2	3.2.2.1 Engagement patterns of different social groups and the factors affecting participation. - Engagement patterns of different social groups affecting participation.	- PowerPoint - YouTube - Text Book pages 102 – 112.	- Delivery of ‘Engagement and Participation’ PowerPoint resource. - Range of strategies for ‘reflection tasks’, including individual, paired and group work. - Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment. - Questionnaire task to gather quantitative data for analysis.
	AO1, AO2, AO3 Paper 2	3.2.2.3 Ethical and socio-cultural issues in physical activity and sport. - Conduct of performers. - Prohibited substances. - Prohibited methods and PEDS. - Advantages and disadvantages of taking PEDS. - Spectator behaviour. - Hooliganism – Reasons why this occurs and strategies to combat hooliganism.	- PowerPoint - YouTube - Text Book pages 126 – 134.	- Delivery of ‘Ethical Issues’ PowerPoint resource. - Range of strategies for ‘reflection tasks’, including individual, paired and group work. - Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment. - School trip to a live sports event to experience the atmosphere.
	AO1, AO2, AO3 Paper 2	3.2.2.2 Commercialisation of physical activity and sport.	- PowerPoint - YouTube	- Delivery of ‘Commercialisation’ PowerPoint resource.

		-Commercialisation - Sponsorship and the media - Positive and negative impacts of sponsorship and the media - Positive and negative impacts of technology	-Text Book pages 113 – 125.	-Range of strategies for ‘reflection tasks’, including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.
3.1.1 Applied Anatomy and Physiology	AO1, AO2, AO3 Paper 1	3.1.1.1 The structure and functions of the musculoskeletal system. -Bones -Structure of the skeleton -Functions of the skeleton -Muscles of the body -Joints (Synovial and freely-movable) and the different types of joints -How movement occurs	-PowerPoint -YouTube -Text Book pages 2 – 9.	-Delivery of ‘Structure and functions of the musculoskeletal system’ PowerPoint resource. -Range of strategies for ‘reflection tasks’, including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.
	AO1, AO2, AO3 Paper 1	3.1.1.2 The structure and functions of the cardiorespiratory system. -The pathway of air -Gaseous exchange -Blood vessels	-PowerPoint -YouTube -Text Book pages 10 – 18.	-Delivery of ‘Structure and functions of the cardiorespiratory system’ PowerPoint resource. -Range of strategies for ‘reflection tasks’, including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.

		-Structure of the heart -Cardia cycle, cardiac output and stroke volume -Mechanics of breathing -Interpretation of a spirometer trace		
	AO1, AO2, AO3 Paper 1	3.1.1.3 Anaerobic and aerobic exercise. -Aerobic and anaerobic terms and use in exercise -Oxygen consumption and EPOC -The recovery process. 3.1.1.4 Short and long term effects of exercise. -Immediate effects of exercise -Short-term effects of exercise -Long-term effects of exercise	-PowerPoint -YouTube -Text Book pages 19 – 26.	-Delivery of 'Aerobic, anaerobic and the effects of exercise' PowerPoint resource. -Range of strategies for 'reflection tasks', including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.
3.2.1 Sport Psychology	AO1, AO2, AO3 Paper 2	3.2.1.1 Classification of skills (basic/complex, open/closed). -Skills and ability -Classification of skills -Type of goals (performance or outcome)	-PowerPoint -YouTube -Text Book pages 79 – 85.	-Delivery of 'Classification of Skills and SMART Targets' PowerPoint resource. -Range of strategies for 'reflection tasks', including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.

		3.2.1.2 The use of goal setting and SMART targets to improve and/or optimise performance. -Evaluating performance and outcomes -SMART targets		
3.2.1 Sport Psychology	AO1, AO2, AO3 Paper 2	3.2.1.3 Basic information processing. -Basic information processing model -Input/Output/Decision making processes 3.2.1.4 Guidance and feedback on performance. -Types of guidance and feedback and their effectiveness.	-PowerPoint -YouTube -Text Book pages 88 - 93.	-Delivery of ' Information Processing and Feedback ' PowerPoint resource. -Range of strategies for 'reflection tasks', including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.
3.2.1 Sport Psychology	AO1, AO2, AO3 Paper 2	3.2.1.5 Mental Preparation for Performance. -Arousal and the Inverted-U Theory -Optimal arousal and stress management.	-PowerPoint -YouTube -Text Book pages 94 – 101.	-Delivery of ' Mental Preparation for Performance ' PowerPoint resource. -Range of strategies for 'reflection tasks', including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.
3.2.1 Health, Fitness and well-being	AO1, AO2, AO3 Paper 2	3.2.3.1 Physical, emotional, social health, fitness and well-being. -Linking physical activity and exercise to health, well-being and fitness. 3.2.3.2. Consequences of a sedentary lifestyle.	-PowerPoint -YouTube -Text Book pages 135 – 147.	-Delivery of ' Health and Well-Being and the Consequences of a Sedentary Lifestyle ' PowerPoint resource. -Range of strategies for 'reflection tasks', including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.

		-Sedentary lifestyles introduced -Obesity and its effect on performance -Somatotypes		
3.2.1 Health, Fitness and well-being	AO1, AO2, AO3 Paper 2	3.2.3.3 Energy, Diet and Nutrition. -Energy use -Nutrition and balanced diet -Nutrition and the role of carbohydrates, proteins, fats and vitamins/minerals -Maintaining water balance (hydration)	-PowerPoint -YouTube -Text Book pages 147 - 153. -Examples of healthy vs non-healthy foods.	-Delivery of 'Energy, Diet and Nutrition' PowerPoint resource. -Range of strategies for 'reflection tasks', including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment.
3.1.2 Movement analysis	AO1, AO2, AO3 Paper 1	3.1.2.1 Lever systems, examples of their use in activity and the mechanical advantage they provide in movement. -First, second and third class lever systems within sports examples -Mechanical advantages linked to the lever systems -Analysis of basic sporting movements 3.1.2.2 Planes and axes of movement. -Introduction of the different planes (frontal, transverse, sagittal) and axes (longitudinal, transverse, sagittal) of movement in sport.	-PowerPoint -YouTube -Text Book pages 27 - 41.	-Delivery of 'Movement Analysis in Sport' PowerPoint resource. -Range of strategies for 'reflection tasks', including individual, paired and group work. -Use of exam-style questions in exam conditions or as homework tasks – mark schemes to be used as peer/self-assessment. -Practical-based sessions to observe movement patterns across a range of different activities.

Curriculum Map Year 10: Religion and Ethics

Intent:

At Sale High School, our aim for Religion & Ethics is to provide students with an academically rigorous study of religious beliefs and practices, and broader ethical questions. Our curriculum empowers students to thrive in a diverse, multi-faith society by fostering a deep understanding of different religious and non-religious worldviews. Students will gain a strong disciplinary knowledge, enabling them to explore, critically, different religions and worldviews and fully analyse and evaluate different teachings and practices. This equips students to address moral and ethical dilemmas and become well-rounded individuals who are academically proficient, culturally sensitive, and morally responsible.

Sequencing:

At KS3, students will begin by exploring the fundamental philosophical inquiries such as “What is a worldview?”, leading into an in-depth examination of various religious traditions, such as the Abrahamic Religions in Year 7 and the Dharmic Religions in Year 8. Students will also receive an opportunity to apply the knowledge gained in Year 7 and 8 by considering questions, such as, “Is death the end?”, “What is good and challenging about being X in Britain today?” and “What makes life valuable?”. These ‘big questions’ encourage students to use the disciplinary knowledge that is acquired across other humanities subjects to analyse and examine contemporary topics. This will also allow students to critically explore the significance and impact that different interpretation of scripture can bring to different worldviews and religious practices.

At KS4, students can opt to complete the Religious Education GCSE course through the AQA exam board. This GCSE course builds upon students’ knowledge of Islam and Christianity, whilst also continuing to develop the disciplinary knowledge to critically analyse scripture and examine the influences of religious belief on human behaviour. It also encourages students to develop skills of empathy and cultural understanding, preparing them for thoughtful and inclusive engagement in an increasingly diverse world.

I study RE because:

- I learn more about spirituality, faith, diversity, and belief
- I feel empowered to make a positive contribution and make informed moral choices
- I learn more about how beliefs and values affect current issues and cultures.

Cultural capital/enrichment

RE provides opportunities for authentic interfaith dialogue, including enriching visits to the Jewish Museum, Sikh Gurdwara, Mosque and Manchester Cathedral. In Year 9 at Sale High School, our RE program fosters authentic interfaith dialogue, provides a secure space for self-exploration of beliefs, and includes a visit to Altrincham and Hale Islamic Association. Pupils are encouraged to read texts for meaning and use contextual knowledge to build a deeper understanding of the meaning being conveyed. This provides cross-curricular skills which can enhance understanding in History, Geography, Literature and Languages. Pupils use statistical skills to understand data about social attitudes and religious affiliation, this provides an opportunity for the practical application of skills from mathematics. The study of religions also provides opportunities to link with MFL and geography in enhancing pupils understanding of the culture and traditions of different places. Students also benefit from an interfaith club where they can explore other cultures and traditions and celebrate the diversity of the school.

Unit	Topic (Lens)	Key skills I will learn in this topic	Key knowledge	Assessment opportunities (Summative and formative) Key pieces Each unit will contain ‘Spelling Bees’ of keyword vocabulary (once across the half term, with revision HW opportunities)
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Unit 1	Christianity: Beliefs (Theology)	Students will be able to: - Describe the diverse Christian beliefs about God. - Explain how such beliefs influence a Christian today. - Explain the concept of the Trinity and the different roles each person of the Trinity. - Explain and evaluate the diverse Christian beliefs about creation. - Assess the belief in the incarnation and the role of Christ in salvation.	Students will know: Key beliefs about: - The Nature of God: God as omnipotent, loving and just, and the problem of evil and suffering. - The oneness of God and the Trinity: Father, Son and Holy Spirit. - Different Christian beliefs about creation including the role of Word and Spirit (John 1:1-3 and Genesis 1:1-3). - Different Christian beliefs about the afterlife and their importance, including: resurrection and life after death; judgement, heaven and hell. Jesus Christ and salvation: Beliefs and teachings about: - the incarnation and Jesus as the Son of God - the crucifixion, resurrection and ascension - sin, including original sin - the means of salvation, including law, grace and Spirit - the role of Christ in salvation including the idea of atonement.	Mid-Unit Assessment: Exam style paper: 1. Multiple choice, 2. State beliefs; 3. Explain concepts or influences 4. Explain concepts or influences (+ SOWA) 5. Evaluate the statement: <i>“For Christians, what the Bible says about creation is literally true”</i> End of Unit Assessment: Exam style paper: 1. Multiple choice, 2. State beliefs; 3. Explain concepts or influences 4. Explain concepts or influences (+ SOWA) 5. Evaluate the statement: <i>“Belief in Jesus is all that Christians need to be saved from sin.”</i>
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Unit 2	Islam: Beliefs (Theology)	Students will be able to: - Explain the importance of recognising the diverse beliefs within Islam. - Explain the six articles of faith in Sunni Islam and the five roots of Usul-ad-Din in Shi'a Islam. - Describe the diverse Muslim beliefs about Allah. - Explain how such beliefs influence a Muslims today. - Evaluate the role of angels and critically assess the influence of angels of Muslims today. - Explain and critically evaluate the concept of predestination and human freedom in relation to beliefs of Akhirah. - Critically assess the importance of Risalah and Holy Books in Islam.	Students will know: Key beliefs about: - The six articles of faith in Sunni Islam and five roots of Usul ad-Din in Shi'a Islam, including key similarities and differences. - Tawhid (the Oneness of God), Qur'an Surah 112. - The nature of God: omnipotence, beneficence, mercy, fairness and justice/Adalat in Shi'a Islam, including different ideas about God's relationship with the world: immanence and transcendence. - Angels, their nature and role, including Jibril and Mika'il. - Predestination and human freedom and its relationship to the Day of Judgement. - Akhirah (life after death), human responsibility and accountability, resurrection, heaven and hell. Authority: - Risalah (Prophethood) including the role and importance of Adam, Ibrahim and Muhammad. The holy books: - Qur'an: revelation and authority - the Torah, the Psalms, the Gospel, the Scrolls of Abraham and their authority. - The imamate in Shi'a Islam: its role and significance.	Mid-Unit Assessment: Exam style paper: 1. Multiple choice, 2. State beliefs; 3. Explain concepts or influences 4. Explain concepts or influences (+ SOWA) 5. Evaluate the statement: <i>"Tawhid (the Oneness of God) is the most important Muslim belief."</i> Winter Exam. Exam style paper (half): - Christianity (beliefs) - Islam (beliefs)
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Unit 3	Theme E: Religion, Crime and Punishment. (Theology & Sociology)	Students will be able to: - Critically evaluate different beliefs about good and evil intentions and actions. - Explain and assess the different reasons for crime and types of crime. - Critically assess different religious beliefs regarding those who break the law. - Explain the different aims of punishment and evaluate the strengths and weaknesses of them. - Critically evaluate the treatment of criminals, including different types of punishment. - Explain and assess the different ethical arguments relating to the death penalty, including those based on the principle of utility and sanctity of life.	Students will know: Religion, crime and the causes of crime - Good and evil intentions and actions, including whether it can ever be good to cause suffering. - Reasons for crime, including: poverty and upbringing, mental illness and addiction, greed and hate, opposition to an unjust law. - Views about people who break the law for these reasons. - Views about different types of crime, including hate crimes, theft and murder. Religion and punishment - The aims of punishment, including: retribution, deterrence, reformation. - The treatment of criminals, including: prison, corporal punishment, community service. - Forgiveness. - The death penalty. - Ethical arguments related to the death penalty, including those based on the principle of utility and sanctity of life.	Mid-Unit Assessment: Exam style paper: 1. Multiple choice, 2. State beliefs; 3. Explain concepts or influences 4. Explain concepts or influences (+ SOWA) 5. Evaluate the statement: <i>“Deterring people from committing crime is the best aim of punishment.”</i> End of Unit Assessment: Exam style paper: 1. Multiple choice, 2. State beliefs; 3. Explain concepts or influences 4. Explain concepts or influences (+ SOWA) 5. Evaluate the statement: <i>“Capital punishment should never be allowed”</i>
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Unit 4	Theme D: Religion, Peace and Conflict (Theology & Sociology)	Students will be able to: -	Students will know: Religion, violence, terrorism and war - The meaning and significance of: peace, justice, forgiveness, reconciliation. - Violence, including violent protest. - Terrorism. - Reasons for war, including greed, self-defence and retaliation. - The just war theory, including the criteria for a just war. - Holy war. - Pacifism. Religion and belief in 21st century conflict: - Religion and belief as a cause of war and violence in the contemporary world. - Nuclear weapons, including nuclear deterrence. - The use of weapons of mass destruction. - Religion and peace-making in the contemporary world including the work of individuals influenced by religious teaching. - Religious responses to the victims of war including the work of one present day religious organisation.	Mid-Unit Assessment: Exam style paper: 1. Multiple choice, 2. State beliefs; 3. Explain concepts or influences 4. Explain concepts or influences (+ SOWA) 5. Evaluate the statement: <i>“All religious believers should be pacifists and never fight.”</i> Winter Exam. Exam style paper: - Theme E - Theme D
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Curriculum Map Year 10: Combined Science

Science Intent Statement - The Science department at Sale High School follows a 5 year in depth, knowledge rich Science curriculum which covers all aspects of the National Curriculum, supported by using the Exploring Science Year 7 – 9 structure. At Key Stage 4 we offer both Combined and Triple Science GCSEs through the Edexcel exam board.

Practicals play a key role in developing pupil's skills, practicals will be used to develop scientific enquiry skills collecting, recording and processing data. The Science curriculum is further enriched through Science club, Sale Scholars, Physics Olympiads and Science ambassadors.

We have a high level of pupils opting to take triple Science and great progression onto Science based A levels and University courses, we believe this is due to having high expectations, strong work ethic and most importantly our desire to develop pupils love for Science and thirst for knowledge.

Why study Science?

"I learn science because:

- **It develops my analytical and problem-solving skills.**
- **It increases my fundamental knowledge, linked to real life situations**
- **It helps me to develop my curiosity about the world around us."**

Cultural capital/enrichment – In Year 10 pupils will have the opportunity to apply to become a science ambassador. We have a trip to visit Jodrell bank for those pupils who have a keen interest in Physics.

Half term	Topic	Key knowledge: <i>GCSE Combined Science – Edexcel Specification.</i>	Key skills I will learn in this topic:	Assessment opportunities (Summative and formative) Key pieces
Autumn 1	Chemistry - Review topics 1—4 The atom and periodic table. Chemistry – Topics 5, 6 and 7. Ionic and covalent bonding and types of substances. Chemistry Topic 8 - Types of substance and acids and alkalis	Pupils will review separating techniques, the structure of the atom and periodic table which was covered in year 9. Pupils will learn: -how ionic bonds are formed. -that an ion is an atom or group of atoms with a positive or negative charge -- -the use of the endings –ide and –ate in the names of compound - how to deduce the formulae of ionic compounds - how a covalent bond is formed when a pair of electrons is shared between two atoms and that covalent bonding results in the formation of molecules. 1 -the different physical properties of ionic, simple molecular, giant molecular and metallic bonds. -that graphite and diamond are different forms of carbon and that they are examples of giant covalent substances. -the structures and uses of graphite and diamond -the properties of fullerenes including C60 and graphene in terms of their structures and bonding. -that simple polymers consist of large molecules containing chains of carbon atoms. -the properties of metals, including malleability and the ability to conduct electricity.	Pupils will learn: -appropriate experimental technique to complete required investigations. - Use estimations and explain when they should be used. -Carry out simple neutralisation reactions of acids, using metal oxides, hydroxides and carbonates. -Carry out tests for hydrogen and carbon dioxide. -Prepare an insoluble salt by precipitation. - how to carry out an acid-alkali titration, using burette, pipette and a suitable indicator, to prepare a pure, dry salt Literacy skills: answering extended writing GCSE questions.	Baseline assessment End of topic test - Chemistry Topics 5, 6, 7 - Ionic and covalent bonding. End of topic test - Chemistry Topic 8 - Types of substance and acids and alkalis Literacy task – 6 mark question. Describe the difference between and concentrated and dilute acid and a strong and weak acid.

		-the limitations of particular representations and models to, include dot and cross, ball and stick models and two- and three-dimensional representations. Pupils will also learn: - that acids in solution are sources of hydrogen ions and alkalis in solution are sources of hydroxide ions. -the effect of acids and alkalis on indicators, including litmus, methyl orange and phenolphthalein. -the higher the concentration of hydrogen ions in an acidic solution, the lower the pH; and the higher the concentration of hydroxide ions in an alkaline solution, the higher the pH. -the terms dilute and concentrated, with respect to amount of substances in solution. -the terms weak and strong acids, with respect to the degree of dissociation into ions. -a base is any substance that reacts with an acid to form a salt and water only and that alkalis are soluble bases. - the general reactions of aqueous solutions of acids -the chemical test for: hydrogen and carbon dioxide. -an acid-alkali neutralisation is a reaction in which hydrogen ions (H⁺) from the acid react with hydroxide ions (OH⁻) from the alkali to form water. -the general rules which describe the solubility of common types of substances in water - how to use the solubility rules as to whether or not a precipitate will be formed. - the method used to prepare a pure, dry sample of an insoluble salt.	Maths Skills: Represent three dimensional shapes in two dimensions and vice versa when looking at chemical structures. Relate size and scale of atoms to objects in the physical world. Estimate size and scale of atoms.	Spelling bees – Chemistry T5
Autumn 2	Biology Review Topics 1, 2, 3, 4 Key concepts in biology, cells and control, genetics, natural selection, genetic modification. Biology Topics 5 Health, disease and the development of medicines	Pupils will review key content from Year 9 across a two-week period including: Key concepts in biology, cells and control, genetics, natural selection, genetic modification. Pupils will also learn: - health as a state of complete physical, mental and social well-being. -the difference between communicable and non-communicable diseases -why the presence of one disease can lead to a higher susceptibility to other diseases - how to describe a pathogen as a disease-causing organism, including viruses, bacteria, fungi and protists, -Descriptions of some common infections. -how pathogens are spread and how this spread can be reduced or prevented. -how sexually transmitted infections (STIs) are spread and how this spread can be reduced. -how the physical barriers and chemical defences of the human body provide protection from pathogens.	Pupils will learn: --appropriate experimental technique to complete required investigations. - Investigate the conditions affecting growth of microorganisms. -Investigate the effect of CO₂ concentration or temperature on the rate of photosynthesis. -Investigate how the structure of the leaf is adapted for photosynthesis. Investigate how the loss of water vapour from leaves drives transpiration. Literacy skills: answering extended writing GCSE questions.	End of topic test – Biology Topic 5– Health, disease and the development of medicines. Winter Exam – knowledge based Literacy task 6 mark question – describe the difference between selective breeding and genetic modification Spelling bees - BT5

	Biology Topic 6 – Plant Structure and their functions. Start	-the role of the specific immune system of the human body in defence against disease. - the body's response to immunisation. - that antibiotics can only be used to treat bacterial infections -the process of developing new medicines, -the effect of lifestyle factors on non-communicable diseases. - what cardiovascular disease is and how you can treat it. Pupils will also learn: -photosynthetic organisms as the main producers of food and therefore biomass. -photosynthesis in plants and algae is an endothermic reaction that uses light energy to react carbon dioxide and water to produce glucose and oxygen. -the effect of limiting factors on the rate of photosynthesis. -the structure of the root hair cell is adapted to absorb water and mineral ions. - how the structures of the xylem and phloem are adapted to their function in the plant. -how water and mineral ions are transported through the plant by transpiration. -the structure and function of the stomata. -how sucrose is transported around the plant by translocation.	Maths Skill: Plot, draw and interpret appropriate graphs, construct and interpret frequency tables and diagrams, bar charts and histograms, use a scatter diagram to identify a correlation between two variables. Understand and use inverse proportion – the inverse square law and light intensity in the context of factors affecting photosynthesis. Use percentiles and calculate percentage gain and loss of mass. Calculate arithmetic means, carry out rate. How to calculate BMI and Hip:Waist ratios.	
Spring 1	Biology Topic 6 – Plant Structure and their functions. Finish Physics Review topics 1 and 2– Motion, forces and motion Physics topic 3 - Conservation of energy Physics Topic 4 and 5 – Waves, light and the EMS	Continued from above with Biology Topic 6. <i>Pupils will also spend some time reviewing key concepts from Physics topics 1 and 2 studied in Year 9.</i> Pupils will also learn: -how to calculate GPE. $\Delta GPE = m \times g \times \Delta h$ - How to calculate kinetic energy. -how to draw and interpret diagrams to represent energy transfers. -what is meant by conservation of energy. -that where there are energy transfers in a closed system there is no net change to the total energy in that system. -mechanical processes become wasteful when they cause a rise in temperature, dissipating energy in heating the surroundings. -ways of reducing unwanted energy transfer. -the effects of the thickness and thermal conductivity of the walls of a building on its rate of cooling qualitatively. -the equation and how to calculate the efficiency of an appliance. -the main energy sources available for use on Earth and compare the ways in which both renewable and non-renewable sources are used. Pupils will also learn: -that waves transfer energy and information without transferring matter.	Pupils will learn: -appropriate experimental technique to complete required investigations. Analyse the changes involved in the way energy is stored when a system change. Investigate the suitability of equipment to measure the speed, frequency and wavelength of a wave in a solid and a fluid Investigate refraction in rectangular glass blocks in terms of the interaction of electromagnetic waves with matter Literacy skills: answering extended writing GCSE questions. Math Skills: Make calculations using ratios and proportional reasoning to convert units and to compute rates. Calculate relevant values of stored energy and energy transfers; convert between newton-metres and joules. Make	End of topic test Biology Topic 6 – Plant structures and functions End of topic test - Topics 4 and 5 Physics – Waves, Light and the electromagnetic spectrum. Literacy task – Describe the uses and dangers of the electromagnetic spectrum. Spelling bees Physics topic 4 and 5

		-the terms frequency, wavelength, amplitude, period, wave and velocity as applied to waves. -the difference between longitudinal and transverse. -that different substances may absorb, transmit, refract or reflect waves in ways that vary with wavelength. -that all electromagnetic waves are transverse, that they travel at the same speed in a vacuum and that all electromagnetic waves transfer energy from source to observer. -the main groupings of the continuous electromagnetic spectrum and how it is ordered. -that our eyes can only detect a limited range of frequencies of electromagnetic radiation. - that different substances may absorb, transmit, refract or reflect electromagnetic waves in ways that vary with wavelength. - the uses and potential danger associated with electromagnetic waves. - that radio waves can be produced by, or can themselves induce, oscillations in electrical circuits. -that changes in atoms and nuclei can generate radiations over a wide frequency range and can be caused by absorption of a range of radiation.	calculations of the energy changes associated with changes in a system. Recall and use both the equations below for all waves: wave speed (metre/second, m/s) = frequency (hertz, Hz) × wavelength (metre, m) $v = f \times \lambda$ wave speed (metre/second, m/s) = distance (metre, m) ÷ time (second, s) $t \times v$. -Apply the relationships between frequency and wavelength across the electromagnetic spectrum.	
Spring 2	Physics Topic 6, 7 and 8 – Radioactivity, energy, force and their effect. Chemistry Topics 9 and 10 – Calculations, electrolytic processes, obtaining metals, reversible reactions and equilibria.	Pupils will learn: -an atom has a positively charged nucleus, consisting of protons and neutrons, surrounded by negatively charged electrons, with the nuclear radius much smaller than that of the atom and with almost all of the mass in the nucleus. -the typical size (order of magnitude) of atoms and small molecules. -the structure of nuclei of isotopes using the terms atomic (proton) number and mass (nucleon) number and using symbols in the format using symbols in the format. -that isotopes of an element differ in mass by having different numbers of neutrons. -the relative masses and relative electric charges of protons, neutrons, electrons and positrons. -that in an atom the number of protons equals the number of electrons and is therefore neutral. - that in each atom its electrons orbit the nucleus at different set distances from the nucleus - that electrons change orbit when there is absorption or emission of electromagnetic radiation. -how atoms may form positive ions by losing outer electrons. -that alpha, β^- (beta minus), β^+ (positron), gamma rays and neutron radiation are emitted from unstable nuclei in a random process. -that alpha, β^- (beta minus), β^+ (positron) and gamma rays are ionising radiations. - what is meant by background radiation, the origins of background radiation from Earth and space and methods for measuring and detecting radioactivity -that an alpha particle is equivalent to a helium nucleus, a beta particle is an electron emitted from the nucleus and a gamma ray is electromagnetic radiation.	Pupils will learn: -appropriate experimental technique to complete required investigations. Investigate methods for extracting metals from their ores. Investigate simple oxidation and reduction reactions, such as burning elements in oxygen or competition reactions between metals and metal oxides. Investigate the formation of the products in the electrolysis of copper sulfate solution, using copper electrodes, and how this electrolysis can be used to purify copper. Literacy skills: answering extended writing GCSE questions. Maths skills: Make calculations using ratios and proportional reasoning to convert units and to compute rates, Balance equations representing alpha-, beta- or gamma-radiations in terms of the masses	End of topic test -Physics Topic 6, 7 and 8 Radioactivity, energy, force and their effects. Knowledge test – 45 marks Literacy task – 6 marks describe the three types of radiation, alpha, beta and gamma and compare their ionising and penetrating properties. Spelling bees – Physics topic 6

	-how and why the atomic model has changed over time. -the process of β^- decay (a neutron becomes a proton plus an electron and the process of β^+ decay (a proton becomes a neutron plus a positron) -the effects on the atomic (proton) number and mass (nucleon) number of radioactive decays -how the activity of a radioactive source decreases over a period of time. -the unit of activity of a radioactive isotope is the Becquerel, Bq and that the half-life of a radioactive isotope is the time taken for half the undecayed nuclei to decay or the activity of a source to decay by half. -the dangers of ionising radiation and the precautions taken to ensure the safety of people exposed to radiation. - the differences between contamination and irradiation effects. Pupils will also learn: -the changes involved in the way energy is stored when systems change. -the different ways that the energy of a system can be changed. -how to measure the work done by a force and understand that energy transferred (joule, J) is equal to work done (joule, J). -how in all system changes energy is dissipated so that it is stored in less useful ways. - that mechanical processes become wasteful when they cause a rise in temperature so dissipating energy in heating the surroundings. - that power is the rate at which energy is transferred and use examples to explain this. -that one watt is equal to one joule per second, J/s. Pupils will also learn: -that electrolytes are ionic compounds in the molten state or dissolved in water. -electrolysis as a process in which electrical energy, from a direct current supply, decomposes electrolytes. Pupils will be able to explain the movement of ions during electrolysis and the products formed. -oxidation and reduction in terms of loss or gain of electrons and that reduction occurs at the cathode and that oxidation occurs at the anode in electrolysis reactions. -the relative reactivity of some metals, by their reactions with water, acids and salt solutions and that these reactions show the relative tendency of metal atoms to form cations. - displacement reactions as redox reactions, in terms of gain or loss of electrons. - how metals are extracted depending on their reactivity and that the extraction of metals involves reduction of ores. -oxidation as the gain of oxygen and reduction as the loss of oxygen. -alternative biological methods of metal extraction.	and charges of the atoms involved, Calculate the net decline, expressed as a ratio, in a radioactive emission after a given number of half-lives. Use given data to balance nuclear equations in terms of mass and charge Draw and interpret diagrams to represent energy transfers. Use the equation: work done (joule, J) = force (newton, N) $\times$ distance moved in the direction of the force (metre, m) $E = F \times d$ use the equation to calculate the change in gravitational PE when an object is raised above the ground: change in gravitational potential energy (joule, J) = mass (kilogram, kg) $\times$ gravitational field strength (newton per kilogram, N/kg) $\times$ change in vertical height (metre, m) $\Delta GPE = m \times g \times \Delta h$. Recall and use the equation to calculate the amounts of energy associated with a moving object: kinetic energy (joule, J) = $\frac{1}{2} \times \text{mass (kilogram, kg)} \times (\text{speed})^2$ $\left(\frac{\text{metre}}{\text{second}}\right)^2, \left(\frac{\text{m}}{\text{s}}\right)^2$ $KE = \frac{1}{2} m v^2$ Recall and use the equation: power (watt, W) = work done (joule, J) $\div$ time taken (second, s) Write half equations for reactions occurring at the anode and cathode in electrolysis. Evaluate data from a life cycle assessment of a product.	
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		-the advantages of recycling metals, including economic implications and how recycling can preserve both the environment and the supply of valuable raw materials. -that a life-cycle assessment for a product involves consideration of the effect on the environment of obtaining the raw materials, manufacturing the product, using the product and disposing of the product when it is no longer useful. -that chemical reactions are reversible, the use of the symbol $\rightleftharpoons$ in equations and that the direction of some reversible reactions can be altered by changing the reaction conditions --what is meant by dynamic equilibrium. -how the formation of ammonia is a reversible reaction between nitrogen and hydrogen and the conditions that effect the position of equilibrium.		
Summer 1	Biology Topics 7 –Animal coordination, control and homeostasis	Pupils will learn: -where hormones are produced and how they are transported from endocrine glands to their target organs. -that adrenalin is produced by the adrenal glands to prepare the body for fight or flight. ----how thyroxine controls metabolic rate as an example of negative feedback. -the stages of the menstrual cycle, including the role of the hormones; oestrogen and progesterone, in the control of the menstrual cycle. -the interactions of oestrogen, progesterone, FSH and LH in the control of the menstrual cycle. - how hormonal contraception influences the menstrual cycle and prevents pregnancy. -the use of hormones in Assisted Reproductive Technology (ART) including IVF and clomifene therapy. -the importance of maintaining a constant internal environment in response to internal and external change. -how the hormone insulin controls blood glucose concentration and how this is maintained. -the cause of type 1 and type 2 diabetes and how it is controlled.	Pupils will learn: -appropriate experimental technique to complete required investigations. Investigate the presence of sugar in simulated urine/body fluids. Literacy skills: answering extended writing GCSE questions. Maths Skills: Use simple compound measures such as rate. Plot, draw and interpret appropriate graphs. Translate information between numerical and graphical forms. Construct and interpret frequency tables and diagrams, bar charts and histograms. Understand and use percentiles. The correlation between body mass and type 2 diabetes including waist:hip calculations and BMI, using the BMI equation.	End of topic test – Electrolysis and extraction of metals. End of topic test - Biology Topics 7 –Animal coordination, control and homeostasis. Literacy task – Compare type 1 and type 2 diabetes. Spelling bees – Biology T7
Summer 2	Revision for end of Year exam – Revision lessons, walking talking exams papers, key facts and exam skills.	Revision and review of previous of previous paper 1 content. Pupils will learn: -the structure of the atom. -how to draw and use electric circuit diagrams including circuit symbols. -the differences between series and parallel circuits. -that a voltmeter is connected in parallel with a component to measure the potential difference (voltage), in volt, across it. -that potential difference (voltage) is the energy transferred per unit charge passed and hence that the volt is a joule per coulomb.	Pupils will learn: -appropriate experimental technique to complete required investigations. Construct electrical circuits to: a investigate the relationship between potential difference, current and resistance for a resistor and a filament lamp b test series and parallel circuits using resistors and filament lamps Literacy skills: answering extended writing GCSE questions.	End of year exams – 3 x paper 1s (Biology, Chemistry and physics) Literacy task – based around a 6 mark question from the exam. Spelling bees – General key words.

	Physics Topic 9 – Electricity and circuits (Any content not completed will be covered in year 11)	-that an ammeter is connected in series with a component to measure the current, in amp, in the component. -that an electric current is the rate of flow of charge and the current in metals is a flow of electrons. -how changing the resistance in a circuit changes the current and how this can be achieved using a variable resistor. -if two resistors are in series, the net resistance is increased, whereas with two in parallel the net resistance is decreased. -how current varies with potential difference for the following devices and how this relates to resistance a filament lamps b diodes c fixed resistors. - how the resistance of a light-dependent resistor (LDR) varies with light intensity and how the resistance of a thermistor varies with change of temperature -that electrical energy is dissipated as thermal energy to the surroundings when an electrical current does work against electrical resistance. -ways of reducing unwanted energy transfer through low resistance wires. -the advantages and disadvantages of the heating effect of an electric current. -power is the energy transferred per second and is measured in watts. -how, in different domestic devices, energy is transferred from batteries and the a.c. mains to the energy of motors and heating devices. -direct current (d.c.) is movement of charge in one direction and that alternating current (a.c.) is the movement of charge changes direction. -that in the UK the domestic supply is a.c., at a frequency of 50 Hz and a voltage of about 230 V. -the parts and function of wires in a plug and of fuses or circuit breakers in ensuring safety with electricity. (Any content not completed will be covered in year 11)	Maths Skills: Recall and use the equation: energy transferred (joule, J) = charge moved (coulomb, C) × potential difference (volt, V) $E = Q \times V$. Recall and use the equation: charge (coulomb, C) = current (ampere, A) × time (second, s) $Q = I \times t$ Recall and use the equation: potential difference (volt, V) = current (ampere, A) × resistance (ohm, Ω) $V = I \times R$. Calculate the currents, potential differences and resistances in series circuits Recall and use the equation energy transferred (joule, J) = current (ampere, A) × potential difference (volt, V) × time (second, s) $E = I \times V \times t$. Recall and use the equations: power (watt, W) = energy transferred (joule, J) ÷ time taken (second, s). electrical power (watt, W) = current (ampere, A) × potential difference (volt, V) $P = I \times V$ electrical power (watt, W) = current squared (ampere², A²) × resistance (ohm, Ω) $P = I \times R^2$.	
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Curriculum Map Year 10: Triple Science (GCSE Chemistry, Biology and Physics)

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Cultural capital/enrichment - - In Year 10 pupils will have the opportunity to apply to become a science ambassador. We have a trip to visit Jodrell bank for those pupils who have a keen interest in Physics.

Half term	Topic	Key knowledge: <i>GCSE Biology, GCSE Chemistry and GCSE Physics – Edexcel Specification.</i>	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
Autumn 1	Chemistry - Review topics 1—4 The atom and periodic table (2 Weeks) Chemistry – Topics 5, 6 and 7. Ionic and covalent bonding and types of substances. Review Biology – Topics 1-4 (1 week) including additional triple	Chemistry -pupils will review previous key concepts that can be found on the Year 9 curriculum map as well as continuing with the new content. Chemistry Pupils will learn: -how ionic bonds are formed. -that an ion is an atom or group of atoms with a positive or negative charge -- -the use of the endings –ide and –ate in the names of compound - how to deduce the formulae of ionic compounds - how a covalent bond is formed when a pair of electrons is shared between two atoms and that covalent bonding results in the formation of molecules. 1 -the different physical properties of ionic, simple molecular, giant molecular and metallic bonds. -that graphite and diamond are different forms of carbon and that they are examples of giant covalent substances. -the structures and uses of graphite and diamond -the properties of fullerenes including C60 and graphene in terms of their structures and bonding. -that simple polymers consist of large molecules containing chains of carbon atoms.	Pupils will learn: -Appropriate experimental techniques to complete required investigations. - how to complete.... Core Practical: Investigate biological specimens using microscopes, including magnification calculations and labelled scientific drawings from observations. Core Practical: Investigate the effect of pH on enzyme activity. Core Practical: Investigate the use of chemical reagents to identify starch, reducing sugars, proteins and fats Core Practical: Investigate osmosis in potatoes. Physics Core Practical: Investigate the suitability of equipment to measure the speed, frequency	Baseline 30 mark knowledge test. (Biology, Chemistry and Physics) End of topic test -Chemistry – Topics 5, 6 and 7. Ionic and covalent bonding and types of substances. Literacy task – 6 marks – describe the properties of ionic, covalent and metallic bonding. Spelling bees- Chemistry T5 End of topic test – Biology 1 – 4 including new triple content. Literacy task – 6 marks Compare the mitosis and meiosis.

content (focus first on new triple content. Review Physics Topics 1 and 2 (2 lessons) including the additional Triple content focus on topic 3 (2 weeks) Physics topic 3 – Conservation of energy Physics Topic 4 and 5 – Waves, light and the electromagnetic spectrum (start)	-the properties of metals, including malleability and the ability to conduct electricity. -the limitations of particular representations and models to, include dot and cross, ball and stick models and two- and three-dimensional representations. <i>Biology (this includes content from key concepts covered in year 9 which will be reviewed)</i> Pupils will learn: -the sub-cellular structures of eukaryotic and prokaryotic cells and their functions. -how specialised cells are adapted to their function. -how changes in electron microscopy, have enabled us to see cell structures and organelles with more clarity and detail than in the past. -the mechanism of enzyme action including the active site and enzyme specificity. -how enzymes can be denatured due to changes in the shape of the active site. -the effects of temperature, substrate concentration and pH on enzyme activity. -the importance of enzymes as biological catalysts in the synthesis of carbohydrates, proteins and lipids and their breakdown into sugars, amino acids and fatty acids and glycerol. - how the energy contained in food can be measured using calorimetry. -how substances are transported into and out of cells, including by diffusion, osmosis and active transport. - mitosis is part of the cell cycle, including the stages and how mitosis is important in growth, repair and asexual reproduction. -the division of a cell by mitosis produces two daughter cells, each with identical sets of chromosomes. -cancer is the result of changes in cells that lead to uncontrolled cell division. - how plants and animals grow and the importance of cell differentiation. - the function of embryonic stem cells, stem cells in animals and meristems in plants. -the structures and functions of the brain and how the difficulties of accessing brain tissue inside the skull can be overcome by using CT scanning and PET scanning to investigate brain function. -the structure and function of the nervous system and the structure and function of a reflex arc. -the structure and function of the eye, including defects and how they can be corrected. -the advantages and disadvantages of asexual and sexual reproduction. -the role of meiotic cell division. -the structure of DNA and how it can be extracted and how the genome is the entire DNA of an organism and a gene as a section of a DNA molecule that codes for a specific protein. -the order of bases in a section of DNA decides the order of amino acids in the protein and that these fold to produce specifically shaped proteins such as enzymes. -the stages of protein synthesis, including transcription and translation.	and wavelength of a wave in a solid and a fluid. Use ray diagrams to show the similarities and differences in the refraction of light by converging and diverging lenses. Core Practical: Investigate refraction in rectangular glass blocks in terms of the interaction of electromagnetic waves with matter Core Practical: Investigate how the nature of a surface affects the amount of thermal energy radiated or absorbed. Construct two-dimensional ray diagrams to illustrate reflection and refraction. Core Practical: Investigate the relationship between force, mass and acceleration by varying the masses added to trolleys. Use methods for measuring human reaction times and recall typical results. Literacy skills: answering extended writing GCSE questions. Maths Skills: (Biology, Chemistry and Physics) Calculate the numbers of protons, neutrons and electrons in simple ions given the atomic number and mass number. Represent three dimensional shapes in two dimensions and vice versa when looking at chemical structures. Relate size and scale of atoms to objects in the physical world. Estimate size and scale of atoms. Carry out rate calculations for chemical reactions. Calculate with numbers written in standard form. Plot, draw and interpret appropriate graphs. Calculate the percentage gain and loss of mass. Demonstrate an understanding of the relationship between quantitative units in relation to cells, including: a milli (10⁻³) b micro (10⁻⁶) c nano (10⁻⁹) d pico (10⁻¹²) e calculations with numbers written in standard form.	End of topic test – Physics topic 3
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	-how genetic variants in the non-coding and coding DNA of a gene can affect phenotype by influencing the binding of RNA polymerase and altering the quantity of protein produced. -the work of Mendel in discovering the basis of genetics. -definitions for key words: chromosome, gene, allele, dominant, recessive, homozygous, heterozygous, genotype, phenotype, gamete and zygote. -how the sex of offspring is determined at fertilisation. -the inheritance of the ABO blood groups with reference to codominance and multiple alleles -how sex-linked genetic disorders are inherited -the causes of variation that influence phenotype. -the outcomes of the Human Genome Project and its potential applications within medicine. -the effects of genetic mutations. -the work of Darwin and Wallace in the development of the theory of evolution by natural selection. -how the emergence of resistant organisms supports Darwin's theory of evolution. -the evidence for human evolution, based on fossils and stone tools. -how the anatomy of the pentadactyl limb provides scientists with evidence for evolution. -how genetic analysis has led to the suggestion of the three domains rather than the five kingdoms classification method. -selective breeding and its impact on food plants and domesticated animals. -the process of tissue culture and its advantages in medical research and plant breeding programmes. -that genetic engineering is a process which involves modifying the genome of an organism to introduce desirable characteristics and the main stages of genetic engineering. -the advantages and disadvantages of genetic engineering. -the advantages and disadvantages of agricultural solutions to the demands of a growing human population, including use of fertilisers and biological control. -the benefits and risks of genetic engineering and selective breeding. Physics Pupils will learn: -that a scalar quantity has magnitude (size) but no specific direction and that a vector quantity has both magnitude (size) and a specific direction. -that velocity is speed in a stated direction. -some typical speeds encountered in everyday experience for wind and sound, and for walking, running, cycling and other transportation systems. -that the acceleration, g, in free fall is 10 m/s². -Newton's first law, Newton's second law and Newton's third law. -that an object moving in a circular orbit at constant speed has a changing velocity and that for motion in a circle there must be a resultant force known as a centripetal force that acts towards the centre of the circle.	Understand and use direct proportions and simple ratios in genetic crosses (1c). Understand and use the concept of probability in predicting the outcome of genetic crosses. Recall and use the SI unit for physical quantities and use multiples of units, including giga (G), mega (M), kilo (k), centi (c), milli (m), micro (μ) and nano (n) being able to convert between different units. Use significant figures and standard form where appropriate Relate changes and differences in motion to appropriate distance-time, and velocity-time graphs, and interpret lines and slopes. Apply formulae relating distance, time and speed, for uniform motion, and for motion with uniform acceleration, and calculate average speed for non-uniform motion Apply formulae relating force, mass and relevant physical constants, including gravitational field strength, to explore how changes in these are inter-related. Apply formulae relating force, mass, velocity and acceleration to explain how the changes involved are inter-related. Calculate relevant values of stored energy and energy transfers; convert between newton-metres and joules. Recall and use the equations: a (average) speed (metre per second, m/s) = distance (metre, m) ÷ time (s) Analyse distance/time graphs including determination of speed from the gradient. Recall and use the equation: acceleration (metre per second squared, m/s²) = change in velocity (metre per second, m/s) ÷ time taken (second, s) () t v u a – = Use the equation: (final velocity)² ((metre/second)², (m/s)²) – (initial velocity)² ((metre/second)², (m/s)²) = 2 × acceleration (metre per second squared, m/s²) × distance (metre, m) v – u = 2 × a × x Analyse velocity/time graphs to: a compare acceleration from gradients qualitatively, calculate the acceleration from the gradient	
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	-that inertial mass is a measure of how difficult it is to change the velocity of an object. -that the stopping distance of a vehicle is made up of the sum of the thinking distance and the braking distance, including factors that affect stopping distance. -the dangers caused by large decelerations and estimate the forces involved in typical situations on a public road. -what is meant by conservation of energy and the changes involved in the way energy is stored when a system changes. -that where there are energy transfers in a closed system there is no net change to the total energy in that system and that mechanical processes become wasteful when they cause a rise in temperature so dissipating energy in heating the surroundings. -ways of reducing unwanted energy transfer including through lubrication, and thermal insulation. -the effects of the thickness and thermal conductivity of the walls of a building on its rate of cooling qualitatively. -how efficiency can be increased. -the main energy sources available for use on and trends in the use of energy resources. -that waves transfer energy and information without transferring matter. -the terms frequency, wavelength amplitude, period, wave velocity and wavefront as applied to waves. -the difference between longitudinal and transverse. -the effects of a reflection, refraction, transmission and absorption of waves at material interfaces. -how the human ear works. -that sound with frequencies greater than 20 000 hertz, Hz, is known as ultrasound and that sound with frequencies less than 20 hertz, Hz, is known as infrasound. - the uses of ultrasound and infrasound. -with the aid of ray diagrams, reflection, refraction and total internal reflection (TIR). -the difference between specular and diffuse reflection. -how colour of light is related to a differential absorption at surfaces and transmission of light through filters. -the effects of different types of lens in producing real and virtual images. -that all electromagnetic waves are transverse, that they travel at the same speed in a vacuum. -the order of the EMS including the uses and dangers of the waves. -that different substances may absorb, transmit, refract or reflect electromagnetic waves in ways that vary with wavelength -that for a body to be at a constant temperature it needs to radiate the same average power that it absorbs. -that radio waves can be produced by, or can themselves induce, oscillations in electrical circuits.	and determine the distance travelled using the area between the graph line and the time axis. force (newton, N) = mass (kilogram, kg) × acceleration (metre per second squared, m/s²) $F = m \times a$ Define weight, recall and use the equation: weight (newton, N) = mass (kilogram, kg) × gravitational field strength (newton per kilogram, N/kg) $W = m \times g$ Define momentum, recall and use the equation: momentum (kilogram metre per second, kg m/s) = mass (kilogram, kg) × velocity (metre per second, m/s) $p = m \times v$. Use Newton's second law as: force (newton, N) = change in momentum (kilogram metre per second, kg m/s) ÷ time (second, s) Recall and use the equation to calculate the change in gravitational PE when an object is raised above the ground: change in gravitational potential energy (joule, J) = mass (kilogram, kg) × gravitational field strength (newton per kilogram, N/kg) × change in vertical height (metre, m) $\Delta GPE = m \times g \times \Delta h$. Recall and use the equation to calculate the amounts of energy associated with a moving object: kinetic energy (joule, J) = $\frac{1}{2} \times \text{mass (kilogram, kg)} \times (\text{speed})^2$ ((metre/second)², (m/s)²) $\frac{1}{2} KE = \frac{1}{2} m \times v^2$. Interpret diagrams to represent energy transfers. Recall and use the equation to calculate energy efficiency. Recall and use both the equations for all waves: wave speed (metre/second, m/s) = frequency (hertz, Hz) × wavelength (metre, m) $v = f \times \lambda$ wave speed (metre/second, m/s) = distance (metre, m) ÷ time (second, s) $t \times v$.	
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		-that changes in atoms and nuclei can generate radiations over a wide frequency range and can be caused by absorption of a range of radiations.		
Autumn 2	Chemistry - Topic 8 Acids and Alkalis Chemistry – Topic 9 Calculations involving masses - start Physics Topic 4 and 5 – Waves, light and the electromagnetic spectrum (finish) Physics Topic 6 and 7 – Radioactivity Physics Topic 7 – Astronomy	Chemistry Pupils will learn: that acids in solution are sources of hydrogen ions and alkalis in solution are sources of hydroxide ions. -the effect of acids and alkalis on indicators, including litmus, methyl orange and phenolphthalein. -the higher the concentration of hydrogen ions in an acidic solution, the lower the pH; and the higher the concentration of hydroxide ions in an alkaline solution, the higher the pH. -the terms dilute and concentrated, with respect to amount of substances in solution. -the terms weak and strong acids, with respect to the degree of dissociation into ions. -a base is any substance that reacts with an acid to form a salt and water only and that alkalis are soluble bases. - the general reactions of aqueous solutions of acids -the chemical test for: hydrogen and carbon dioxide. -an acid-alkali neutralisation is a reaction in which hydrogen ions (H⁺) from the acid react with hydroxide ions (OH⁻) from the alkali to form water. -the general rules which describe the solubility of common types of substances in water - how to use the solubility rules as to whether or not a precipitate will be formed. - the method used to prepare a pure, dry sample of an insoluble salt. -the law of conservation of mass -why, in a reaction, the mass of product formed is controlled by the mass of the reactant which is not in excess. Physics Pupils will also learn: an atom has a positively charged nucleus, consisting of protons and neutrons, surrounded by negatively charged electrons, with the nuclear radius much smaller than that of the atom and with almost all of the mass in the nucleus. -the typical size (order of magnitude) of atoms and small molecules. -the structure of nuclei of isotopes using the terms atomic (proton) number and mass (nucleon) number and using symbols in the format using symbols in the format. -that isotopes of an element differ in mass by having different numbers of neutrons. -the relative masses and relative electric charges of protons, neutrons, electrons and positrons.	Pupils will learn: Appropriate experimental techniques to complete required investigations. - how to complete.... -carry out simple neutralisation reactions of acids. Carry out tests for hydrogen and carbon dioxide. - Prepare an insoluble salt by precipitation. - Core Practical: Investigate the preparation of pure, dry hydrated copper sulfate crystals starting from copper oxide including the use of a water bath 3.18 Describe how to carry out an acid-alkali titration, using burette, pipette and a suitable indicator, to prepare a pure, dry salt. Literacy skills: answering extended writing GCSE questions. Maths Skills: Calculate relative formula mass given relative atomic masses. Calculate the formulae of simple compounds from reacting masses or percentage composition and understand that these are empirical formulae. Deduce: a the empirical formula of a compound from the formula of its molecule b the molecular formula of a compound from its empirical formula and its relative molecular mass. Describe an experiment to determine the empirical formula of a simple compound such as magnesium oxide. Calculate masses of reactants and products from balanced equations, given the mass of one substance Calculate the concentration of solutions in g dm³. Recall that one mole of particles of a substance is defined as: a the Avogadro constant number of particles (6.02 × 10²³ atoms, molecules, formulae or ions) of that substance b a mass of 'relative particle mass' g	End of topic test - Physics Topic 4 and 5 – Waves and EMS Winter Exam – Biology, Chemistry and Physics. Literacy task – EMS Spelling bees End of topic test - Chemistry - Topic 8 Acids and Alkalis. Literacy task-Describe the difference between and concentrated and dilute acid and a strong and weak acid.

	-that in an atom the number of protons equals the number of electrons and is therefore neutral. - that in each atom its electrons orbit the nucleus at different set distances from the nucleus - that electrons change orbit when there is absorption or emission of electromagnetic radiation. -how atoms may form positive ions by losing outer electrons. -that alpha, β^- (beta minus), β^+ (positron), gamma rays and neutron radiation are emitted from unstable nuclei in a random process. -that alpha, β^- (beta minus), β^+ (positron) and gamma rays are ionising radiations. - what is meant by background radiation, the origins of background radiation from Earth and space and methods for measuring and detecting radioactivity - that an alpha particle is equivalent to a helium nucleus, a beta particle is an electron emitted from the nucleus and a gamma ray is electromagnetic radiation. -how and why the atomic model has changed over time. -the process of β^- decay (a neutron becomes a proton plus an electron and the process of β^+ decay (a proton becomes a neutron plus a positron) -the effects on the atomic (proton) number and mass (nucleon) number of radioactive decays -how the activity of a radioactive source decreases over a period of time. -the unit of activity of a radioactive isotope is the Becquerel, Bq and that the half-life of a radioactive isotope is the time taken for half the undecayed nuclei to decay or the activity of a source to decay by half. -the dangers of ionising radiation and the precautions taken to ensure the safety of people exposed to radiation. - the differences between contamination and irradiation effects. -treatment of tumours using radiation applied internally or externally -some of the uses of radioactive substances in diagnosis of medical conditions, including PET scanners and tracers and why isotopes used in PET scanners have to be produced nearby. -the advantages and disadvantages of nuclear power for generating electricity. -that nuclear reactions, including fission, fusion and radioactive decay, can be a source of energy. The process of nuclear fission and how a chain reaction is controlled in a nuclear reactor, including the action of moderators and control rods. -that the products of nuclear fission are radioactive. -the process of nuclear fusion and the difference between nuclear fusion and nuclear fission. -how and why weight can change -What our solar system consists of including the names of planets in order from the sun. -how ideas about the structure of the Solar System have changed over time. -the orbits of moons, planets, comets and artificial -the Steady State and Big Bang theories including evidence which support them.	Calculate the number of: a moles of particles of a substance in a given mass of that substance. Deduce the stoichiometry of a reaction from the masses of the reactants and products Balance equations representing alpha-, beta- or gamma-radiations in terms of the masses and charges of the atoms involved, Calculate the net decline, expressed as a ratio, in a radioactive emission after a given number of half-lives. Use given data to balance nuclear equations in terms of mass and charge. Draw and interpret diagrams to represent energy transfers. Use the equation: work done (joule, J) = force (newton, N) $\times$ distance moved in the direction of the force (metre, m) $E = F \times d$ Use the equation to calculate the change in gravitational PE when an object is raised above the ground: change in gravitational potential energy (joule, J) = mass (kilogram, kg) $\times$ gravitational field strength (newton per kilogram, N/kg) $\times$ change in vertical height (metre, m) $\Delta GPE = m \times g \times \Delta h$. Recall and use the equation to calculate the amounts of energy associated with a moving object: kinetic energy (joule, J) = $\frac{1}{2} \times \text{mass (kilogram, kg)} \times (\text{speed})^2$ ((metre/second)², (m/s)²) $\frac{1}{2} KE = \frac{1}{2} m \times v^2$ Recall and use the equation: power (watt, W) = work done (joule, J) $\div$ time taken (second, s)	
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		- that if a wave source is moving relative to an observer there will be a change in the observed frequency and wavelength. -how the red-shift in light received from galaxies is at different distances away from the Earth and why the red-shift of galaxies provides evidence for the Universe expanding. -the evolution of stars of similar mass to the Sun. how the balance between thermal expansion and gravity affects the life cycle of stars. -the evolution of stars with a mass larger than the Sun. -how methods of observing the Universe have changed over time including why some telescopes are located outside the Earth's atmosphere.		
Spring 1	Chemistry – Topic 9 Calculations involving masses - finish Chemistry Topics 10 – 13 Electrolytic processes, obtaining metals - Biology Topic 5 – Health disease and the development of medicines. Biology Topic 6 – Plant structures and their functions Biology Topic 7 - Animal co-ordination, control and homeostasis - Start	As above for chemistry calculations section. Chemistry Pupils will learn: -that electrolytes are ionic compounds in the molten state or dissolved in water. -electrolysis as a process in which electrical energy, from a direct current supply, decomposes electrolytes. Pupils will be able to explain the movement of ions during electrolysis and the products formed. -oxidation and reduction in terms of loss or gain of electrons and that reduction occurs at the cathode and that oxidation occurs at the anode in electrolysis reactions. -the relative reactivity of some metals, by their reactions with water, acids and salt solutions and that these reactions show the relative tendency of metal atoms to form cations. - displacement reactions as redox reactions, in terms of gain or loss of electrons. - how metals are extracted depending on their reactivity and that the extraction of metals involves reduction of ores. -oxidation as the gain of oxygen and reduction as the loss of oxygen. -alternative biological methods of metal extraction. -the advantages of recycling metals, including economic implications and how recycling can preserve both the environment and the supply of valuable raw materials. -that a life-cycle assessment for a product involves consideration of the effect on the environment of obtaining the raw materials, manufacturing the product, using the product and disposing of the product when it is no longer useful. -that chemical reactions are reversible, the use of the symbol $\rightleftharpoons$ in equations and that the direction of some reversible reactions can be altered by changing the reaction conditions --what is meant by dynamic equilibrium. -how the formation of ammonia is a reversible reaction between nitrogen and hydrogen and the conditions that effect the position of equilibrium. -that most metals are transition metals and their typical properties. -that the oxidation of metals results in corrosion and how rusting of iron can be prevented	Pupils will learn: Appropriate experimental techniques to complete required investigations. Investigate electrolysis. Investigate methods for extracting metals from their ores. Investigate simple oxidation and reduction reactions. Investigate the rusting of iron. Electroplate a metal object. Core Practical: Investigate the effects of antiseptics, antibiotics or plant extracts on microbial cultures Core Practical: Investigate the effect of light intensity on the rate of photosynthesis Literacy skills: answering extended writing GCSE questions. Maths Skills: Plot, draw and interpret appropriate graphs. Construct and interpret frequency tables and diagrams, bar charts and histograms. Calculate cross-sectional areas of bacterial cultures and clear agar jelly using πr^2. Carry out rate calculations for chemical reactions. Understand and use inverse proportion – the inverse square law and light intensity in the context of factors affecting photosynthesis. Use percentiles and calculate the percentage gain and loss of mass. Write half equations for reactions occurring at the anode and cathode in electrolysis.	End of topic test - Chemistry Topics 10 – 13 Electrolytic processes, obtaining metals Literacy task – 6 mark question describing the purification of copper (core practical) Spelling Bees – Chemistry T10 End of topic test – Astronomy End of topic test – Biology Health and disease End of topic test – Plant structures and their functions Literacy task 6 mark question Biology based. Spelling bees - P6

		-what electroplating is and why it is used -What an alloy is and specific examples of advantages and disadvantages. Biology Pupils will learn: -health as a state of complete physical, mental and social well-being. -the difference between communicable and non-communicable diseases -why the presence of one disease can lead to a higher susceptibility to other diseases - how to describe a pathogen as a disease-causing organism, including viruses, bacteria, fungi and protists, -Descriptions of some common infections. -how pathogens are spread and how this spread can be reduced or prevented. -how sexually transmitted infections (STIs) are spread and how this spread can be reduced. -how the physical barriers and chemical defences of the human body provide protection from pathogens. -the role of the specific immune system of the human body in defence against disease. - the body's response to immunisation. - that antibiotics can only be used to treat bacterial infections -the process of developing new medicines, -the effect of lifestyle factors on non-communicable diseases. - what cardiovascular disease is and how you can treat it. -the lifecycle of a virus. -how some plants defend themselves both physical and chemical barriers. -different ways plant diseases can be detected and identified, -the advantages and disadvantages of immunisation, including the concept of herd immunity. -that antibiotics can only be used to treat bacterial infections because they inhibit cell processes in the bacterium but not the host organism. -the aseptic techniques used in culturing microorganisms in the laboratory. -the production of monoclonal antibodies and the use of monoclonal antibodies. Pupils will also learn: -photosynthetic organisms as the main producers of food and therefore biomass. -photosynthesis in plants and algae is an endothermic reaction that uses light energy to react carbon dioxide and water to produce glucose and oxygen. -the effect of limiting factors on the rate of photosynthesis. -the structure of the root hair cell is adapted to absorb water and mineral ions. - how the structures of the xylem and phloem are adapted to their function in the plant. -how water and mineral ions are transported through the plant by transpiration. -the structure and function of the stomata. -how sucrose is transported around the plant by translocation.	Evaluate data from a life cycle assessment of a product.	
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		-how plants are adapted to survive in extreme environments. -how plant hormones control and coordinate plant growth and development. -the commercial uses of auxins, gibberellins and ethene in plants. Pupils will learn: -where hormones are produced and how they are transported from endocrine glands to their target organs. -that adrenalin is produced by the adrenal glands to prepare the body for fight or flight. ----how thyroxine controls metabolic rate as an example of negative feedback. -the stages of the menstrual cycle, including the role of the hormones; oestrogen and progesterone, in the control of the menstrual cycle. -the interactions of oestrogen, progesterone, FSH and LH in the control of the menstrual cycle. - how hormonal contraception influences the menstrual cycle and prevents pregnancy. -the use of hormones in Assisted Reproductive Technology (ART) including IVF and clomifene therapy. -the importance of maintaining a constant internal environment in response to internal and external change. -how the hormone insulin controls blood glucose concentration and how this is maintained. -the cause of type 1 and type 2 diabetes and how it is controlled. -how thermoregulation takes place and how the hormone insulin controls blood glucose. -the structure of the urinary system and how the structure of the nephron is related to its function in filtering the blood and forming. -the effect of ADH. -the treatments for kidney failure and that urea is produced from the breakdown of excess amino acids in the liver.		
Spring 2	Chemistry – Topics 14 – 16 Quantitative analysis, dynamic equilibrium and fuel cells Biology Topic 7 - Animal co-ordination, control and homeostasis - Finish	Chemistry Pupils will learn: -that the actual yield of a reaction is usually less than the theoretical yield and that the causes of this. -the atom economy of a reaction forming a desired product. -why a particular reaction pathway is chosen to produce a specified product -the molar volume, of any gas at room temperature and pressure, as the volume occupied by one mole of molecules of any gas at room temperature and pressure -the Haber process is a reversible reaction between nitrogen and hydrogen to form ammonia. -how the rate of attainment of equilibrium is. -how, in industrial reactions, including the Haber process, conditions used are related to: the availability and cost of raw materials and energy supplies, the control of temperature, pressure and catalyst used.	Pupils will learn: -appropriate experimental technique to complete required investigations. Prepare a substance and calculate the percentage yield, given the theoretical yield. Literacy skills: answering extended writing GCSE questions. Maths skills: calculate yields and atom economy. Change the subject of a mathematical equation. Provide answers to an appropriate number of significant figures.	Knowledge tests– Biology, Chemistry and Physics. End of topic test -Chemistry Topics 14-16 Quantitative analysis Literacy task – 6 mark question. End of topic test – Animal co-ordination, control and homeostasis

		-that fertilisers may contain NPK to promote plant growth. -how ammonia reacts with nitric acid to produce a salt that is used as a fertiliser. -the laboratory preparation of ammonium and the production is carried out on a much larger scale. -that a chemical cell produces a voltage until one of the reactants is used up. -that in a hydrogen–oxygen fuel cell hydrogen and oxygen are used to produce a voltage and water is the only product. -the strengths and weaknesses of fuel cells for given Biology – Continued from above.	Convert units where appropriate particularly from mass to moles. .	
Summer 1	Chemistry Topics 17 – 19 Groups of the periodic tables and rates of reaction. Start. Summer exam revision Physics Topics 8, 9, 10 and 11 - Energy, forces and their effects and Electricity and circuits and static electricity - Start.	Chemistry -why some elements can be classified as alkali metals (group 1), halogens (group 7) or noble gases (group 0), based on their position in the periodic table. -that alkali metals are soft and have relatively low melting points. -the reactions of lithium, sodium and potassium with water and how to explain the pattern of reactivity in terms of electronic configuration. -the colours and physical states of chlorine, bromine and iodine at room temperature. -the pattern in the physical properties of the halogens. - the chemical test for chlorine. -the reactions of the halogens, with metals to form metal halides and that the halogens, chlorine, bromine and iodine, form hydrogen halides which dissolve in water to form acidic solutions. - the relative reactivity of the halogens; chlorine, bromine and iodine, as shown by their displacement reactions with halide ions in aqueous solution - why these displacement reactions are redox reactions in terms of gain and loss of electrons, identifying which of the substances are oxidised and which are reduced. -the relative reactivity of the halogens in terms of electronic configurations. -why the noble gases are chemically inert and how the uses of noble gases depend on their inertness, low density and/or non-flammability. -the pattern in the physical properties of some noble gases and use this pattern to predict the physical properties of other noble gases. -how reactions occur when particles collide and that rates of reaction are increased when the frequency and/or energy of collisions is increased. -the effects on rates of reaction of changes in temperature, concentration, surface area to volume ratio of a solid and pressure -a catalyst is a substance that speeds up the rate of a reaction without altering the products of the reaction, being itself unchanged chemically and in mass at the end of the reaction. - that enzymes are biological catalysts and that enzymes are used in the production of alcoholic drinks. - an exothermic change or reaction is one in which heat energy is given out. -an endothermic change or reaction is one in which heat energy is taken in -that the breaking of bonds is endothermic and the making of bonds is exothermic	Pupils will learn: Appropriate experimental techniques to complete required investigations. Investigate displacement reactions of halogens reacting with halide ions in solution. Investigate the effect of potential catalysts. Measure temperature changes. Core Practical: Investigate the effects of changing the conditions of a reaction on the rates of chemical reactions by: a measuring the production of a gas (in the reaction between hydrochloric acid and marble chips) b observing a colour change (in the reaction between sodium thiosulfate and hydrochloric acid). Construct electrical circuits to: a investigate the relationship between potential difference, current and resistance for a resistor and a filament lamp b test series and parallel circuits using resistors and filament lamps. Investigate the forces of attraction and repulsion between charged objects. Literacy skills: answering extended writing GCSE questions. Maths Skills: Drawing and interpreting appropriate graphs from data to determine rate of reaction. Determining gradients of graphs as a measure of rate of change to determine rate. Proportionality when comparing factors affecting rate of reaction. Calculating energy changes. Interpretation of charts and graphs when dealing with reaction profiles.	End of topic test – Physics topic 8 and 9. Literacy task – 6 mark question – Physics based. Spelling bees – Biology Topic 6 End of topic test -Chemistry Groups 17-19 Literacy task – 6 mark question. Describe the reactivity of group 1 and Group 7. Spelling bees – key words from paper 1.

	-the overall heat energy change for a reaction is: exothermic if more heat energy is released in forming bonds in the products than is required in breaking bonds in the reactants or endothermic if less heat energy is released in forming bonds in the products than is required in breaking bonds in the Physics Pupils will also learn: -the changes involved in the way energy is stored when systems change. -the different ways that the energy of a system can be changed. -how to measure the work done by a force and understand that energy transferred (joule, J) is equal to work done (joule, J). -how in all system changes energy is dissipated so that it is stored in less useful ways. - that mechanical processes become wasteful when they cause a rise in temperature so dissipating energy in heating the surroundings. - that power is the rate at which energy is transferred and use examples to explain this. -that one watt is equal to one joule per second, J/s. -how objects can interact at a distance without contact. - difference between vector and scalar quantities using examples and use vector diagrams to illustrate resolution of forces, a net force, and equilibrium situations. -the principle of moments in situations where rotational forces are in equilibrium -how levers and gears transmit the rotational effects of forces -the structure of the atom. -how to draw and use electric circuit diagrams including circuit symbols. -the differences between series and parallel circuits. -that a voltmeter is connected in parallel with a component to measure the potential difference. -that potential difference (voltage) is the energy transferred per unit charge passed and hence that the volt is a joule per coulomb. -that an ammeter is connected in series with a component to measure the current, in amp, in the component. -that an electric current is the rate of flow of charge and the current in metals is a flow of electrons. -how changing the resistance in a circuit changes the current and how this can be achieved using a variable resistor. -if two resistors are in series, the net resistance is increased, whereas with two in parallel the net resistance is decreased. -how current varies with potential difference for the following devices and how this relates to resistance a filament lamps b diodes c fixed-resistors. - how the resistance of a light-dependent resistor (LDR) varies with light intensity and how the resistance of a thermistor varies with change of temperature -that electrical energy is dissipated as thermal energy to the surroundings when an electrical current does work against electrical resistance.	Recall and use the equation: energy transferred (joule, J) = charge moved (coulomb, C) $\times$ potential difference (volt, V) $E = Q \times V$. Recall and use the equation: charge (coulomb, C) = current (ampere, A) $\times$ time (second, s) $Q = I \times t$ Recall and use the equation: potential difference (volt, V) = current (ampere, A) $\times$ resistance (ohm, Ω) $V = I \times R$. Calculate the currents, potential differences and resistances in series circuits Recall and use the equation energy transferred (joule, J) = current (ampere, A) $\times$ potential difference (volt, V) $\times$ time (second, s) $E = I \times V \times t$. Recall and use the equations: power (watt, W) = energy transferred (joule, J) $\div$ time taken (second, s). electrical power (watt, W) = current (ampere, A) $\times$ potential difference (volt, V) $P = I \times V$ electrical power (watt, W) = current squared (ampere², A²) $\times$ resistance (ohm, Ω) $P = I \times R$ 2.	
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		-ways of reducing unwanted energy transfer through low resistance wires. -the advantages and disadvantages of the heating effect of an electric current. -power is the energy transferred per second and is measured in watts. -how, in different domestic devices, energy is transferred from batteries and the a.c. mains to the energy of motors and heating devices. -direct current (d.c.) is movement of charge in one direction and that alternating current (a.c.) is the movement of charge changes direction. -that in the UK the domestic supply is a.c., at a frequency of 50 Hz and a voltage of about 230 V. -the parts and function of wires in a plug and of fuses or circuit breakers in ensuring safety with electricity. -how an insulator can be charged by friction, through the transfer of electrons. -how the material gaining electrons becomes negatively charged and the material losing electrons is left with an equal positive charge. -that like charges repel and unlike charges attract. -Examples of common electrostatic phenomena in terms of movement of electrons. -how earthing removes excess charge by movement of electrons. -some of the uses and dangers of electrostatic charges in everyday situations. - an electric field is the region where an electric charge experiences a force and the shape and direction of the electric field around a point charge and between parallel -how the concept of an electric field helps to explain the phenomena of static electricity.		
Summer 2	Revision for end of Year exam. Review chemistry topics 5-8 Review all core practicals Chemistry Review Physics topics – 6-11. Review all core practicals Review Biology topics 1-6 Review all core practicals	Continued content from Summer 1 (Physics Topic 9 and Chemistry Topics 17-19) and where time allows review of content as per topics to the left. Revision and review of previous of previous paper 1 content. Any paper 2 content which doesn't get covered will move forwards into Year 11.		End of Year exams – Biology, Chemistry and Physics paper 1. Literacy task – key questions 6 marks) Spelling bees – key words from paper 1.

Please note that pupils will study all three sciences across the 2 years. At the end of the two years pupils will complete 6 exams (2 x Biology, 2 x Chemistry and 2 x Physics) This Curriculum map covers what they will learn for GCSE Biology, Chemistry and Physics in Year 10.