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.	

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.

			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.	

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.

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. We want 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 that follow the layout of the GCSE format. Each topic includes either a written, devised or scripted aspect. Topics are chosen to develop creativity, 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. Not only are these essential to GCSE Drama but are crucial skills for life beyond Sale High School. Students develop knowledge of theatrical styles, script writing, vocal skills and physical skills which are crucial to building confidence, communication skills and literacy skills. Students implement and improve these skills through a variety of context, working to transfer skills successful in order 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
Watch different types of theatre from different time periods and countries
Write for particular audiences, considering the emotions/experiences of the character they are portraying.
Work with challenging topics in order to expand their understanding of 'real' issues, including mental health issues and peer pressure.
Extra-curricular drama 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 for a specific event.
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	Skills Building	**Introduction to the course**- students participate in a variety of workshops to develop skills and understanding of the theatre practitioners Brecht, Stanislavski, Frantic Assembly and Artaud. Students will begin devising from a stimulus (in preparation for the Component 2 devising unit) and will be assessed on a piece of devised theatre based on **Artaud's Theatre of Cruelty**. This initial focus is in gaining confidence, team building and using exemplar work to demonstrate the expectations and performance standards. Students will also be introduced to Willy Russel's Blood Brothers.	Epic Theatre (Alienation Technique) and non-naturalism, Emotion recall (Method Acting), Physical theatre, 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). This is performed to selected students from our theatre company, Platinum Stars, ending with the students learning how to effectively evaluate and reflect on their progress.	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	The students will be placed under controlled assessment/supervised time. All lessons are marked towards their final GCSE grade. They will: • Be given a collection of stimuli and collectively choose one stimulus to focus on. Research their chosen stimulus • Develop ideas • Collaborate with group • Rehearse, refine and develop work in progress • Analyse and evaluate individual process of creating devised drama • Create a devising logbook	How to create meaning from a stimulus, and be able to communicate to a group of peers your artistic ideas, themes and characters. Students will learn to develop their own artistic intentions. They will re-visit the repertoire of performance skills they have learnt and developed from Key Stage 3 and put these strategies into practice. Demonstration of performance skills, demonstrating a high level and wide range of theatrical skills. They will learn how to 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. Students will then learn the art of self-reflection, analysis and evaluation in the form of their devising log: Students will create a devising logbook (maximum 2500 words) **Log 1** – **Response to a Stimulus** In this section students are expected to explain 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.	AQA GCSE Drama Component 2 Devised performance and log book (40% of final grade). Marked by teacher and sent to AQA examiner for moderation.
SPRING	Continue Component 2 Devising	Continued work on Component 2 (as above)		

SUMMER	Component 1 – Understanding drama	**Introduction to Component 1 – Understanding drama** We merge practical lessons (exploring the script of Blood Brothers) 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. Students will be re-introduced to non-performance elements of the theatre, such as roles and responsibilities in the theatre and stage positioning, stage configurations.	Students will learn technical language associated with both performance and non-performance elements of the theatre including stage positioning, stage configurations, sound, 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 Russel's Blood Brothers.	In house exam style timed questions, whiteboards, targeted questioning.

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 learning together is empowering. Students study a variety of musical styles, each leading to a music making experience, performance and evaluation. The topics covered include 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 both 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
- I will view the world from different perspectives

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 (MPRSTTTTDHI – 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. ¾, 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 word 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

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

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

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.	Apply the terms Monophonic, homophonic, polyphonic, contrapuntal to music and include pedal and chordal homophony 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. Talk about different types of vocal works e.g. opera and oratorio. 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

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'.

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

In year 10, students are afforded the opportunity to develop their understanding of the set Literature texts studied in the form of live performances and workshops. In the Autumn term, we will be welcoming performers into school for an on-site visit, which will be delivered in our Main Hall. They will be offering our students a performance of both Shakespeare's 'Macbeth' and Charles Dickens' 'A Christmas Carol', both of which will be assessed in the AQA Literature Paper 1. Following this, in early Spring we will also be running a trip to Sale Waterside to watch another live performance of Shakespeare's 'Macbeth'.

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 Section A	Pupils will learn: - How to approach each exam question and how to manage their time effectively in the exam - 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 - The difference between language and structural techniques and the reasons why a writer may use specific techniques for effect	Pupil will build on their prior knowledge of the QTA response to reading and learn how to apply this to the new context of the GCSE English Language paper. They will also develop the ability to choose evidence thoughtfully and analyse the effects of the writer's choices in detail. Pupils will develop close reading skills on unseen fictional texts. Finally, pupils will develop an understanding of the assessment objectives for each question within the reading section and develop techniques to answer these successfully.	Pupils 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.
Autumn 2	Language Paper 1 Section B	Pupils will learn: - How to create effective descriptive and narrative writing pieces - How to craft language to create characters, imagery and settings	Pupils will continue to build their writing skills and extend their use of punctuation, vocabulary, language and structural features.	Pupils will complete a section B practise assessment with teacher feedback. This will then be followed by their winter exam where they

		- How to incorporate dialogue effectively into narrative writing - To develop their use of punctuation, vocabulary and structural features - How to respond to an unseen picture or written prompt - How to successfully plan and use this plan to create an effective piece of creative writing	Pupils will be taught how to create effective figurative descriptions and develop the skills to be able to create detailed images in the reader's minds. Pupils will develop their ability to plan fictional pieces from a prompt. Finally, they will develop their ability to write effectively in the time given under exam constraints.	will complete a full Language Paper 1 exam.
Spring 1	Power and Conflict Poetry	Pupils 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 approach the exam questions and effective exam technique - How to develop their essay writing skills to provide a more in-depth and thoughtful analysis - How to craft a comparative essay successfully	Pupils will learn how to successfully compare poems including comparison of their themes, techniques and contexts. Pupils 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. Pupils will build the ability to comment on contextual factors in detail and with purpose.	Pupils will complete a pre-assessment and assessment on poetry during this half term. The pre-assessment will assess the pupils' ability to analyse a single poem. Whilst the assessment will assess the pupils' ability to compare two of the anthology poems to reflect the GCSE exam. Spelling bee of key words.

Spring 2	An Inspector Calls	Pupils will learn: - The content and contextual factors surrounding the play An Inspector Calls - How to apply the exam and analysis skills we have learnt within the poetry unit to a play - 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 An Inspector Calls, 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	Pupils will gain an in-depth knowledge of the play An Inspector Calls and learn how to comment critically upon it. Pupils will continue to develop their essay writing style and ability to respond to an unseen exam question. Pupils 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 An Inspector Calls during this half term. For this exam component, the pupils are given a choice of 2 questions, and they are not provided with an extract. The pre-assessment will focus on a single question whereas for the assessment pupils will have the option between 2 essay questions to mimic the final GCSE exam. Spelling bee of key words
Summer 1	Language Paper 2	Pupils will learn: - How to apply their analytical structures and knowledge onto non-fiction texts - How to compare two non-fiction texts - How to approach two unseen extract in an exam and how to manage time effectively under exam conditions	Pupils will develop the comparison skills learnt during the poetry unit to unseen non-fiction texts. Pupils will further develop their analysis skills and how they comment on writers' techniques and intentions.	Pupils will have the opportunity to do an assessed answer for each question throughout this half term – with teacher feedback on key skills.

		- How to comment on and explain the writer's perspectives and attitudes towards a certain topic - How to succinctly summarise when comparing two unseen texts - How to apply skills from literature and fiction analysis to a non-fiction text	Pupils will continue to develop close reading skills and how to manage time effectively in a challenging exam.	Spelling Bees of key word vocabulary.
Summer 2	Language Paper 2 and Speaking and Listening Endorsement	Pupils will learn: - How to create an effective piece of argumentative non-fiction writing - How to use structural 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 respond to a written prompt - How to present an argument for an opinion piece - 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 - How to apply the creative writing skills to a performance	Pupils 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.	Pupils will complete a full Language Paper 2 as part of their Summer Exam series. They will also complete the Speaking and Listening Endorsement for their GCSE, this will create the final grade for this element. This grade will be submitted to the exam board for review.

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	Students will cover PIES for each life stage	Understanding and applying the concept of PIES (Physical,	Assessment opportunities are provided through

	their first coursework	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) 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)	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. 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.	hands down questioning, discussions, brain storming, spider diagrams, quizzes, verbal feedback, self and peer assessment.

		6. Later Adulthood – PIES Understand the physical, intellectual, emotional and social development; Later Adulthood (65+ years)		
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: 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	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 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 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 How do professionals work together	Understand who different services must work together in order to treat a patient Demonstrate how professional are able to support a patient with a specific condition. They will connect	Assessment opportunities are provided through hands down questioning, discussions, brain storming, spider diagrams, quizzes, verbal feedback, self and peer assessment.

		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	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.	

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 flood plain zoning along the River Mersey 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. Visit a beach or coastal area and consider how the processes of erosion, transportation and deposition are acting on the zone.

Half term	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
1	Paper 1 Section A Part i: The Challenge of Natural Hazards - Tectonic Hazards	• Definition of a natural hazard. Types of natural hazard. Factors affecting hazard risk. • Plate tectonics theory. Global distribution of earthquakes and volcanic eruptions and their relationship to plate margins. Physical processes taking place at different types of plate margin (constructive, destructive and conservative) that lead to earthquakes and volcanic activity. • Primary and secondary effects of a tectonic hazard. Immediate and long-term responses to a tectonic hazard. Use named examples to show how the effects and responses to a tectonic hazard vary between two areas of contrasting levels of wealth. • Reasons why people continue to live in areas at risk from a tectonic hazard. How monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard.	• Dot maps (analysis including patters / distributions) • Describing and explaining patterns, processes and impacts • Categorising and comparing impacts • Using case study facts • Assessing impacts	• Exam practise done in class 'To what extent does the wealth of a country impact the effects of tectonic hazards?' [9 marks] • End of unit assessment consisting of knowledge, skill and extended writing sections. • 'Do Now' and 'Quick Quiz' time in lessons to focus on hinge questions posed to all students. • Teacher analysis of verbal responses and quality of classwork.
1	Paper 2 Section A Part i: Urban Issues and Challenges - Mumbai	• The global pattern of urban change. Urban trends in different parts of the world including HICs and LICs. Factors affecting the rate of urbanisation – migration (push–pull theory), natural increase. The emergence of megacities. • A case study of a major city in an LIC or NEE to illustrate:	• Dot maps – distribution • Choropleth maps – comparing values • Describing and explaining patterns, processes and impacts • Comparing features	• Exam practise done in class 'Assess the extent of challenges created by urban growth in LICs/NEEs. Use a case study of a city in an LIC/NEE.' [9 marks]

		• The location and importance of the city, regionally, nationally and internationally. Causes of growth: natural increase and migration. • How urban growth has created opportunities: social: access to services – health and education; access to resources – water supply, energy. Economic: how urban industrial areas can be a stimulus for economic development • how urban growth has created challenges: managing urban growth – slums, squatter settlements, providing clean water, sanitation systems and energy, providing access to services – health and education, reducing unemployment and crime, managing environmental issues – waste disposal, air and water pollution, traffic congestion. • An example of how urban planning is improving the quality of life for the urban poor.	• Using case study facts • Assessing features • Evaluating usefulness	• End of unit assessment consisting of knowledge, skill and extended writing sections. • 'Do Now' and 'Quick Quiz' time in lessons to focus on hinge questions posed to all students. • Teacher analysis of verbal responses and quality of classwork.
2	Paper 1 Section B Part i: The Living World - Ecosystems and Tropical Rainforests	• An example of a small-scale UK ecosystem to illustrate 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.	• Food webs and nutrient cycling diagrams • Topological maps • Annotating diagrams • Analysing photographs • Choropleth maps • Describing causes • Use of case study facts • Thorough explanations • Analysis of impacts	• Exam practise done in class 'Some economic activities in tropical rainforests have major environmental impacts.' Do you agree?' [9 marks] • End of unit assessment consisting of knowledge, skill and extended writing sections.

		• Changing rates of deforestation. A case study of a tropical rainforest to illustrate: 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.	• Evaluating solutions	• 'Do Now' and 'Quick Quiz' time in lessons to focus on hinge questions posed to all students. • Teacher analysis of verbal responses and quality of classwork.
2	Paper 2 Section B Part i: The Changing Economic World – Development	• 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. • An overview of the strategies used to reduce the development gap: investment, industrial development	• Data analysis • Demographic Transition Model and Population Pyramids – analysing visual representations of development • Knowledge of case studies – using facts to describe. • Thorough explanations • Evaluation of strategies	• Exam practise done in class 'Aid is the best way to reduce the development gap.' To what extent do you agree?' [6 marks] • End of unit assessment consisting of knowledge, skill and extended writing sections. • 'Do Now' and 'Quick Quiz' time in lessons to focus on hinge questions posed to all students.

		and tourism, aid, using intermediate technology, Fairtrade, debt relief, microfinance loans. • An example of how the growth of tourism in an LIC or NEE helps to reduce the development gap.		• Teacher analysis of verbal responses and quality of classwork.
3	Paper 2 Section B Part i: The Changing Economic World – Nigeria	• A case study of one LIC or NEE to illustrate: the location and importance of the country, regionally and globally. • The wider political, social, cultural and environmental context within which the country is placed. • The changing industrial structure. 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 TNC(s) to the host country. • The changing political and trading relationships with the wider world. • International aid: types of aid, impacts of aid on the receiving country. • The environmental impacts of economic development. • The effects of economic development on quality of life for the population.	• Pie charts • Flow diagrams • Data analysis • Reading secondary sources • Use of case study facts to describe • Thorough explanations • Analysis and evaluation of strategies	• Exam practise done in class 'TNCs only have positive impacts on the host country.' To what extent do you agree?' [9 marks] • End of unit assessment consisting of knowledge, skill and extended writing sections. • 'Do Now' and 'Quick Quiz' time in lessons to focus on hinge questions posed to all students. • Teacher analysis of verbal responses and quality of classwork.
4	Paper 1 Section C Part i: UK Physical Landscapes - Coasts	• An overview of the location of major upland/lowland areas and river systems. • Wave types and characteristics. • Coastal processes: weathering processes – mechanical, chemical. Mass movement – sliding, slumping and rock falls. Erosion – hydraulic power, abrasion and	• Physical maps (analysis) • Drawing diagrams • Annotating diagrams • Cost-benefit analysis • Using key terms	• Exam practise done in class 'Explain how different coastal landforms are created through erosion. Use the photograph and your own

		attrition. Transportation – longshore drift. Deposition – why sediment is deposited in coastal areas. • How geological structure and rock type influence coastal forms. Characteristics and formation of landforms resulting from erosion – headlands and bays, cliffs and wave cut platforms, caves, arches and stacks. Characteristics and formation of landforms resulting from deposition – beaches, sand dunes, spits and bars. An example of a section of coastline in the UK to identify its major landforms of erosion and deposition. • The costs and benefits of the following management strategies: hard engineering – sea walls, rock armour, gabions and groynes. Soft engineering – beach nourishment and reprofiling, dune regeneration. Managed retreat – coastal realignment. An example of a coastal management scheme in the UK to show: the reasons for management, the management strategy, the resulting effects and conflicts.	• Use of case study facts to describe and explain • OS map analysis • Photograph analysis	understanding' [6 marks] • End of unit assessment consisting of knowledge, skill and extended writing sections. • 'Do Now' and 'Quick Quiz' time in lessons to focus on hinge questions posed to all students. • Teacher analysis of verbal responses and quality of classwork.
5	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 potential risks of both human and physical fieldwork and how these risks might be reduced.	• Setting and testing hypotheses • Writing risk assessments • Data collection – primary and secondary data • Data presentation – graphs, radar diagrams, annotated	• Exam practise done in class 'For one of your fieldwork enquiries, assess the extent to which the accuracy of the results and the reliability of the conclusions could be improved.' [9 marks] • End of unit assessment consisting

			photographs and evaluating these • Analysing data • Writing conclusions • Evaluating • Application of these skills to unfamiliar contexts	of knowledge, skill and extended writing sections. • 'Do Now' and 'Quick Quiz' time in lessons to focus on hinge questions posed to all students. • Teacher analysis of verbal responses and quality of classwork.
6	Paper 2 Section C: The Challenge of Resource Management - Food	• The significance of food, water and energy to economic and social well-being. An overview of global inequalities in the supply and consumption of resources. • An overview of resources in relation to the UK. • Food: the growing demand for high-value food exports from low income countries and all-year demand for seasonal food and organic produce. Larger carbon footprints due to the increasing number of 'food miles' travelled, and moves towards local sourcing of food. The trend towards agribusiness. • Water: the changing demand for water. Water quality and pollution management. Matching supply and demand – areas of deficit and surplus. The need for transfer to maintain supplies. • Energy: the changing energy mix – reliance on fossil fuels, growing significance of renewables. Reduced domestic supplies of coal, gas and oil. Economic and	• Flow line maps / proportional maps • Using secondary sources • Issue evaluation • Using case study facts to describe • Thorough explanations • Analysing impacts • Conflict matrix	• Exam practise done in class ''There are economic and environmental issues associated with the exploitation of energy sources.' Use evidence from Figure 10a and Figure 10b to explain this statement. [6 marks] • End of unit assessment consisting of knowledge, skill and extended writing sections. • 'Do Now' and 'Quick Quiz' time in lessons to focus on hinge

		environmental issues associated with exploitation of energy sources. • Areas of food surplus (security) and food deficit (insecurity): global patterns of calorie intake and food supply. Reasons for increasing food consumption: economic development, rising population. Factors affecting food supply: climate, technology, pests and disease, water stress, conflict, poverty. Impacts of food insecurity – famine, undernutrition, soil erosion, rising prices, social unrest. • Overview of strategies to increase food supply: irrigation, aeroponics and hydroponics, the new green revolution and use of biotechnology, appropriate technology. An example of a large scale agricultural development to show how it has both advantages and disadvantages. • Moving towards a sustainable resource future. The potential for sustainable food supplies: organic farming, permaculture, urban farming initiatives, fish and meat from sustainable sources, seasonal food consumption, reduced waste and losses. An example of a local scheme in an LIC or NEE to increase sustainable supplies of food.		questions posed to all students. • Teacher analysis of verbal responses and quality of classwork.

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. We focus 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

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 10: Religion and Ethics

Intent:

At Sale High School, our aim for Religious and Ethics classes in Key Stages 3 and 4 is to provide students with an academically rigorous and enriching study of religion, philosophy, theology, and ethics. Our curriculum empowers students to thrive in a diverse, multi-faith society by fostering a deep understanding of religious and philosophical concepts. Students gain religious literacy, promoting tolerance and respect for diversity, exploring their own spirituality, and appreciating global beliefs and cultures. This empowerment extends to addressing moral and ethical dilemmas, understanding beliefs' impact on current issues and cultures, nurturing well-rounded individuals who are academically proficient, spiritually aware, culturally sensitive, and morally responsible.

At KS3, students begin by exploring fundamental philosophical inquiries such as, 'What is religion?' and 'Is death the end?'. Followed by an in-depth examination of various religious traditions, centering on Abrahamic religions in Year 7 and Dharmic traditions in year 8, to understand how beliefs shape the practices and behaviors of religious people across the world. Throughout KS3, students will also engage with 'big questions' which encourages students to utilise skills acquired in other humanities subjects to analyses and examine topics.

Our KS3 curriculum serves as the foundation for the skills essential in KS4, where students embark on a Religious Studies GCSE course through the WJEC Eduqas exam board (Route A). This GCSE experience not only provides firsthand experience of GCSE-level work but also continues to develop the skills of critical thinking, empathy, and cultural understanding. It prepares 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

In Year 10 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 a Christian and Islamic place of worship. The RE department also invites guest speaking from various charities and religions allowing students to engage with people of other faiths from outside the school. In addition, teachers host an 'interfaith club' where students from various different background (religious and non-religious) can explore different culture, traditions and festivals in a fun an interactive way.

Half term	Topic	Key skills I will learn in this topic	Key knowledge	Assessment opportunities (Summative and formative) Key pieces
Autumn 1	Issues of Life and Death	Students will be able to: ○ Examine scientific and religious creation stories and their compatibility. ○ Investigate human purpose, environmental ethics, and climate change. ○ Explore sanctity of life, impacting abortion and euthanasia debates. ○ Compare Muslim and Christian views on abortion and euthanasia. ○ Analyse utilitarianism as an ethical theory. ○ Discuss Peter Singer's stance on euthanasia and related debates. ○ Contrast Muslim and Christian views on euthanasia and abortion. ○ Study diverse beliefs about the afterlife and funeral customs.	Students will know - Key terms: Abortion, Euthanasia, utilitarianism Resurrections, Judgement, Heaven, Hell, sanctity of life, Khalifa and fitrah. - Various scientific theories and religious creation stories about how the universe began and explore the compatibility and conflicts between scientific explanations of creation and religious beliefs. - Different religious and philosophical views on the purpose of human existence, environmental stewardship, climate change, and conservation. - Belief in the sanctity of life, including its implications for ethical issues like abortion and euthanasia. - How to compare and contrast Muslim and Christian approaches to the topics of abortion and euthanasia. - How to present others and their own views on ethical debates in a discuss question. - How to explain different religious beliefs about what happens to individuals after they die and examine the rituals, customs, and beliefs surrounding funeral ceremonies	Spelling Bees of key word vocabulary (once across the half term, with revision HW opportunities) All assessments test core knowledge/vocabulary and include a practice GCSE style question: Assessment 1: Why might there be differences of belief about creation within the same religion? Mid-term: Explain reasons why religious believers consider it important to care for the planet. End-of-topic: “It is a woman's right to choose abortion.” Discuss

Autumn 2	Christian Belief	Students will be able to: ○ Explore the Divine Nature of God. ○ Investigate the Role of Jesus in Christianity. ○ Examine the beliefs and implications of Resurrection and Ascension. ○ Delve into the concept and significance of Atonement. ○ Analyse the Impact and Relevance of Jesus in Christian Faith. ○ Engage in the Debate: Human or Divine – The Nature of Jesus. ○ Discover the Holy Spirit's Role and the Gifts It Bestows. ○ Evaluate How the Holy Spirit Empowers Evangelism. ○ Reflect on Christian Beliefs about Life, Death, and the Afterlife. ○ Scrutinise the Bible as the Ultimate Source of Authority in Christianity.	Students will know - Key terms: Nature, Annunciation, Resurrection, Ascension, Atonement, Salvation, Holy Spirit, Evangelism, Evangelical, and Authority. - Critically evaluate theological concepts of God. - Examine biblical passages and historical accounts of Jesus, assessing his significance. - Christian teachings about Jesus' resurrection and ascension, analysing their implications. - How to explain the theories of atonement, recognising its importance in Christian salvation. - Jesus' ongoing impact on doctrine and practice. - How to engage in structured debates on Jesus' nature, honing persuasive and logical skills. - The impact of Holy Spirit's gifts on individuals and communities. - Real-world evangelism examples, enhancing critical thinking and presentation abilities. - How to interpret scripture and compare its role in different Christian denominations.	Spelling Bees of key word vocabulary (once across the half term, with revision HW opportunities) All assessments test core knowledge/vocabulary and include a practice GCSE style question: Assessment 1: Describe the crucifixion of Jesus. Mid-term: Explain why Christians believe the Resurrection of Jesus is important. End-of-topic: 'For Christians, the Bible is the most important source of authority.' Discuss **Winter Exam –** Mock GCSE style paper which combines Paper 1 (themes) and Paper 3 (Islam)

Spring 1	Christian Practice	Students will be able to: ○ Explain Christian rituals and their significance. ○ Understand the theological aspects of baptism and its importance in Christian doctrine. ○ Explore the sacramental and symbolic dimensions of the Eucharist for different denominations. ○ Learn about traditions and rituals in Christian celebrations like Easter and Christmas. ○ Study the histories of pilgrimages to Taizé and Walsingham and their importance to Christians. ○ Understand how church activities build community. ○ Explain the importance of evangelism. ○ Analyse the historical impact of Christianity in Britain and its contemporary relevance in society. ○ Understand persecution and reconciliation within Christianity.	Students will know: - Key terms: Sacrament, Pilgrimage, Eucharist, Consubstantiation, Transubstantiation, Persecution, Reconciliation, and Evangelism. - Explain religious rituals and their significance for Christians. - Describe theological aspects of baptism and assess its importance in Christian doctrine. - Analyse the importance of the Eucharist as a sacrament and its symbolic interpretations across denominations. - Understand traditions and rituals in Christian celebrations like Easter and Christmas. - Examine Taizé and Walsingham pilgrimages' histories and their significance to Christians. - Recognize how church activities foster local, national, and global community. - Explain the significance of evangelism and mission work for Christians, considering challenges and rewards. - Analyse Christianity's historical impact in Britain and its contemporary relevance in society. - Understand persecution and reconciliation within Christianity.	Spelling Bees of key word vocabulary (once across the half term, with revision HW opportunities) All assessments test core knowledge/vocabulary and include a practice GCSE style question: Assessment 1: Describe a celebration of baptism. Mid-term: Explain why pilgrimage to Taizé is important to Christians. End-of-topic: 'Pilgrimage is the most important Christian practice.' Discuss

Spring 2 and Summer 1	Revision	Students will be able to: ○ Revise all the topics we have covered with in the GCSE course. ○ Use subject specific vocabulary effectively. ○ Discuss strategic approaches to assist them in engaging with effective revision. ○ Provide practice questions of varying difficulty. ○ Engage in collaborative group activities to help with knowledge recall. ○ Share exam day preparation strategies. ○ Recommend additional resources for further practice. ○ Encourage continuous skill improvement.	Students will know - Employ Vocabulary - Strategies for how to answer different questions - Strategies for how to deal with pressure of exams. - How to work on feedback effectively. - How to avoid common mistakes and misconceptions. - How to boost confidence when in GCSE exam environments. - How to prepare for Assessments	**PPE Exam –** Mock GCSE style paper combines Paper 1 (themes) and Paper 2 (Christianity)
Summer 2	Post-GCSE: Religion, Philosophy, and Ethics through film, media and modern day culture	Students will be able to: ○ Analyse and critique religious, philosophical, and ethical themes in modern media, recognizing their impact on culture. ○ Evaluate diverse belief systems and ethical dilemmas in media, connecting them to classical concepts. ○ Engage in thoughtful discussions about moral and ethical issues in films and media, using critical thinking to assess cultural representations.	Students will know - Develop a deeper understanding of the intersection between religion, philosophy, and ethics in the context of modern society. - Create meaningful and informed responses to media content that touch on religious, philosophical, and ethical matters. - Cultivate an awareness of the ethical responsibilities and considerations associated with media production and consumption. - Explore potential career paths or further academic pursuits related to religion, philosophy, ethics, and media studies.	No assessment for this topic.

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 by 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 1	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. •	Students will know • Understand	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

Yr 10 MFL. FRENCH Overview SOL.

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 know**ledge 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.

Discussions around :

- post 16 choices and the benefits/disadvantages of university,
- the dangers of social media,
- global and environmental issues,
- social issues
- healthy lifestyle
- customs and festivals.

At KS4, students will work through topics from 3 key themes.
Theme 1: Identity and culture
Theme 2: Local, national, international and global areas of interest
Theme 3: Current and future study and employment.

As we cover the subtopics within these themes, students focus on both comprehensions skills and production skills. They are equipped with the vocabulary and skills to deal with extended written and aural texts on this topic. (Comprehension) And students prepare extended responses for written and oral assessments on each topic in 3 themed booklets. (Production). The themes and topics covered in each half term are indicated in the table below.

Year 10

Term	**Topic**	**Theme and questions**	**Assessment**	**Linguistic progression / focus**
Autumn 1	**Me, my family and friends: relationships with family and friends** **Marriage / partnerships**	**THEME 1** **Q1 Self** **Q2 Family** **Q3 Description** **Q4 Marriage**	**Writing –** extended responses **Writing** – translation to Eng **Reading & listening** – kerboodle **Speaking** mini test	• **Consolidate adjective agreement & BRAGS adjectives** • **Consolidate Comparisons / superlatives** • **Adverbs** of frequency • Consolidate tenses – **irregular verbs** – etre / avoir • **present / futur proche** • **interrogative words** – comment / qui / quel(le)/ quand • **Introduce imperfect and conditional of IESAO** • **Introduce more possessive adjectives** • **Reflexive verbs** (s'entendre, se disputer, se marier) present tense • **Emphatic pronouns** (ie with sans / avec) • **modal verbs: vouloir** • **Infinitive phrases** - je voudrais / j'aimerais / avoir l'intention de…/avoir envie de…/avoir tendance à.. + INF
Autumn 2	**Home, town, neighbourhood and region** **Home & local area**	**THEME 2A** **Q1 Home town** **Q2 Town in the past** **Q3 Ideal town**	**Writing** – photocard & Qs family / future **Writing** – 90/40 word exam task town	• Consolidate and extend - **prepositions of place** – incl à côté de / près de / loin de / au milieu de / en face de • **interrogative words** – où/ pourquoi • **irregular verbs** – aller / faire • **modal verb** - pouvoir (ou on peut + INF) • **tenses** –imperfect

			Winter exam Reading Listening Writing Speaking	• Notes clues about size / quantity ie. –aine = approx –ette = mini eg maisonette • Environ, à peu près • **Indefinite articles** – chaque, quelque
Spring 1 *Spring 2* *Summer 1*	**My studies / Life at school** **Education post-16** **Career choices & ambition**	**THEME 3A** **Q1 Subjects study** **Q2 Subjects dislike** **Q3 Post 16 studies** **THEME 3B** **Q4 school** **Q5 uniform** **THEME 3C + 3D** **Q6 university** **Q7 ideal job**	**Writing –** extended responses **Writing** – 90 word exam task - school **EXAMPRO** Reading & listening **Writing –** extended responses	• revise tu v vous • Building on prior learning ie ferme – fermier • Endings of jobs – eur/euse ier/ière • **demonstrative adjectives** (ce / cette) • **relative pronoun** – (ce) qui /(ce) que / quand / si • **demonstrative pronouns** – celui / cette • **possessive pronouns** – le mien / la mienne • Use of **impersonal 'on' 'il'** – on doit / il faut / il est nécessaire • ***tenses*** *–consolidate perfect (j'ai laisse tombé / j'ai choisi) and* ***introduce pluperfect*** *– j'avais pensé* ***Introduce futur simple*** *– j'étudierai* • **present participle** - endings –ant = -ing (pres participle) • **Adverb ending patterns – 'ly'** • recognition of **subjunctive phrases** ie bien que / il faut que / pour que je puisse / je ne crois pas que ce soit las cas • **venir de +INF**…
Summer 1 *Summer 2*	**Free-time activities** **⍰ Music, cinema and TV** **⍰ Food and eating out** **⍰ Sport** **⍰ Shopping** **Technology in everyday life:** **Social media / mobile technology**	**THEME 1** **Q4 freetime** **Q5 last weekend** **Q6 tv/film/music** **Q7 technology**	**Writing –** extended responses **Summer Exams** – R L S W	• **Consolidate all tenses.** 2 x present 3 x past 3 x future • consolidation of **irregular present tense** including aller faire voir pouvoir vouloir • Consolidate - **Frequency adverbs**– normalement / chaque jour / de temps en temps / souvent / quelquefoin & parfois • **REVISE perfect tense** with avoir / être = SAP v SEP • Consolidate - **Direct object pronouns -** me te le/la nous vous les • Consolidate - Comparisons – plus/moins que and • superlatives le plus/moins • Perfect tense with reflexives and negatives • Superlative adjectives – le meilleur / le pire • TIF Indirect object pronouns

Yr 11 MFL. Overview SOL .

Term	**Topic**	**Theme & questions**	**Assessment**	**Linguistic progression / focus**
Autumn 1a	**Travel &tourism** ****THEME 1D** *Customs and festivals in French-speaking countries/communities*	Theme 2 Q4. Destination and journey Q5 accommodation Q6 activities	**EXAMPRO / past paper questions** - R & L **Writing** – extended responses **Writing** – 90 / 150 / translation task **Speaking** - TEAMS tool. Pronunciation.	consolidation of **preterite and imperfect** tenses **sequencing** words, expressions and phrases **Imperfect tense** (incl weather expressions …c'était etc) **Use of quand phrases, incl + future tense** – quand j'irai en france je verrai… **Imperatives** – sing + pl **Prepositions** en/au/aux **Pronouns** 'y' and 'en' **Qualifiers / intensifiers** – assez, trop, peu de, très etc **Adverbs of frequency** ***narratives*** *and sequencing* – au début / puis / à la fin
	Education post-16 Career choices & ambition	**THEME 3** Q3.3 future plans Q3.6 university Q3.7 ideal job	**Writing** – extended responses **Writing** – 90 / 150 exam questions **Speaking/writing** – RP & P/C	**pres. participle** en_____ant = -ing **adverb endings** -ement / -ament = ly **M / F noun endings** - jobs – eur/euse ier/ière **formal/informal** speech - revise tu v vous **recognition of subjunctive** ie bien que / il faut que **venir de & infinitive**… - to have just…
Autumn 1b	**Global issues: The environment**	**THEME 2 C** Q2.7 environment	**Speaking.** Oral PPE **Writing** 90/150 word exam task **Winter exam**. **R L W**	Drill phonetic of grapheme – ion ie la pollution Consolidate - **'il faut' 'il est nécessaire' + infinitive** Consolidate – **comparative / superlative** **Indefinite articles** (quelqu'un, tout le monde, personne, chacun) **modal verbs linked to behaviours** (must do/can do/should do/could do etc) using **conditional tense** past tense for effects of behaviours on environment

				***si* sentences** revised for outlining consequences of actions pluperfect tense perspective
Spring 2a	**Social issues: charity / voluntary work / equality** **poverty / homelessness**	**THEME 2 B** Q2.8 social issues*	**Exampro L R** **Speaking/writing** – RP & P/C **Writing –** 90 / 150 exam task & translation	**CONT. Conditional tense of modal** ie on devrait, on pourrait…& infin Gender patterns ie integration / allocation usually (f) Verbs that take the infinitive ie pouvoir / vouloir / devoir / falloir **Link adjectives / verbs / nouns** ie recycler / recyclable / le recylcage **Vouloir que** + subjunctive
Spring 2b	**Social issues: healthy/unhealthy eating and living** ***Consolidate **THEME 1D***	**THEME 2B** *Customs and festivals in French-speaking countries/communities*	**PPE Reading Listening Writing** **Speaking.** Final oral PPE **Writing –** 90 / 150 exam task & translation	Consolidate **il faut & infin** to give advice Drill **partitive article** Drill '**de' after negative** Consolidate - forming negatives incl more unusual **ne……. aucun(e)** Revisit **adverbs of frequency** Revisit **avoir and etre phrases**- incl avoir peur / froid / faim / soif etc
Summer 3a	**Revision and preparation for assessment**		**Exampro** R & L **Writing** – drilling all exam tasks	

Yr 10 and 11 MFL. Overview and tracker.

Curriculum Map Year KS4 MFL Spanish

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 know**ledge 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.

Dicussions around :

- post 16 choices and the benefits/disadvantages of university,
- the dangers of social media,
- global and environmental issues,
- social issues
- healthy lifestyle
- customs and festivals.

At KS4, students will work through topics from 3 key themes.
Theme 1: Identity and culture
Theme 2: Local, national, international and global areas of interest
Theme 3: Current and future study and employment.

As we cover the subtopics within these themes, students focus on both comprehensions skills and production skills. They are equipped with the vocabulary and skills to deal with extended written and aural texts on this topic. (Comprehension) And students prepare extended responses for written and oral assessments on each topic in 3 themed booklets. (Production). The themes and topics covered in each half term are indicated in the table below.

Yr 10

Term	Topic	Theme and questions	Assess	Linguistic progression.
Autumn 1a	Me, my family and friends: relationships with family and friends	Theme 1 Q1 self Q2 family Q3 description	**Writing** Extended responses **Writing** Photocard self family **Reading** exam questions	**Consolidate adjectival rules** **Review present tense. For photo: present continuous** **Introduce IMPERFECT and CONDITIONAL of SHET** **Indirect object pronoun phrases for opinions** **Modal verbs :** *soler* **reflexive verbs**: *casarse/enfadarse/llevarse bien con* **comparatives** *más que/menos que*; adverbs of frequency **interrogative words** such as *quién, cómo, cuántos, qué, cuándo*
Autumn 1b	Home, town, neighbourhood and region	Theme 2 Q1. Home town Q2. Manchester in the past Q3 ideal town	**Writing** 90 words : town **Listening and Reading**: exampro- town **Winter exam** **Reading Listening Speaking Writing**	**Consolidated SHET in imperfect present, conditional** **Conditional and imperfect conjugations** **Modal verbs :** *acabar de, poder* **Prepositions** **Quantifiers** **irregular verbs** *ir/hacer* **sub clauses** enhancing descriptions using *que, donde* **interrogative**s *dónde* and *por qué*
Spring 2a	My studies	Theme 3 Q1 subjects and preferences Q2 dislikes Q3 post 16 studies	**Writing** Extended responses: Subjects and likes Dislikes Post 16	**Tenses: 2 x present (consolidate gerund** *: estoy esyudiano, estaba suspendiendo)* **4 x past – <u>introduce perfect and pluperfect</u>** *(he decidido, he dejado, he elejido, había pensado)* **3 x future – introduce simple future** **Pronoun phrases in various tenses and change of indirect object pronouns ;** *eg me molestaba, nos castigaría* **Direct object pronouns:** *'lo encuentro aburrido'*

			Speaking : pronunciation assessment-TEAMS tool.	**Model verbs:** *tener que, (varied tenses)hay que,* **comparative and superlative** in expressing opinions about subjects
Spring 2b	My school School life Uniform	Theme 3 Q4 school Q5 uniform	**Listening and Reading** assessment Exampro - school **Writing**. 40/90 words and respond to a photo card - school	**Focus revisit of tenses: imperfect and conditional (Including SHET)** **Model verbs***: hay que, tener que, se debe, (varied tenses)* **If clauses**
Summer 3a	Free-time activities Sport and hobbies Music Cinema and TV	Theme 1 Q4 free time Q5 last weekend (narrative)	**Writing** (90/ 150 words- free time) **Listening and Reading** assessment exampro- free time	**Consolidate all 9 tense.** 2 x present 4 x past 3 x future consolidation of present tense including irregular verbs *salir, querer, preferir, ver, dar* **adverbs of frequency** **cuando clauses** **disjunctive pronouns** such as *conmigo* and *para mí* **narratives** *and sequencing* **model verbs:** *después de, antes de, al…*
Summer 3b	Technology social media Food and eating out	6 TV/film /music Q7 technology	**Speaking**. TEAMS tool Pronunciation.	**Model verbs**: recap on *deber/tener que* + infinitive/*hay que* + infinitive and introduce conditional forms – affirmative and negative ..

Yr 11 Overview

Term	Topic	Theme and questions	Assess	Grammar focus
Autumn 1	Social issues: healthy/unhealthy living	Theme 2 Q 9 health	**Writing** Photocard & 90 word **Listening and Reading** Exampro	**Model verbs**: recap on *deber/tener que* + infinitive/*hay que* + infinitive and introduce conditional forms – affirmative and negative **reflexive constructions** such as *se puede, se necesita* *es mejor/sería major* ***'if; clauses*** **negative** *nunca* previous health habits using **imperfect tense** **present continuous** *estoy engordando/ intentando* **perfect + future** *he decidio que voy a comer..*
Autumn 1b	Travel and tourism Festivals	Theme 2 Q 4. Destination and journey Q5 accommodation Q6 activities	**Listening and Reading** exampro **Writing** Photocard holidays **Speaking.** Oral PPE Winter exam. **Reading Listening Writing**	consolidation of **preterite and imperfect** tenses **sequencing** words, expressions and phrases ***antes de/después de haber etc/mientras/desde hace/acabar de*** developing greater complexity in spoken and written accounts of past events or experiences **weathe**r expressions with *hacer*
Spring 2a	Global issues Environment	Theme 2 Q7. environment	**Listening & Reading** Exampro	-modal verbs linked to behaviours (must do/can do/should do/could do etc) -past tense for effects of behaviours on environment -*si* sentences revised for outlining consequences of actions -pluperfect tense perspective
	Social issues Charity Poverty/homelessness	Theme 2 Q 8. Social issues	**L and R** Exampro **Writing** Role play Photo card Translations **Speaking Oral PPE** **Feb PPE** **Listening Reading Writing**	*querer* + infinitive *querer que* + subjunctive *es posible que* + subjunctive *para que* + subjunctive imperfect continuous

Spring 2b	Future plans -university -marriage -ambitions -careers	Theme 3 and theme 1 Theme 3 Q6 : University Q7 : future job Theme 1: Q 9 marriage	**Writing** 90/150 word future jobs and ambition **Speaking** Photo card marriage	revisiting adjectives to describe and use of *que* to describe ideal partner and **enhance descriptions** **Gerund** revision of **future tense** to outline future plans **direct and indirect** object pronouns enhanced statements of possibility including **subjunctive after conjunctions of time** (*cuando*) *quisiera*
Summer 3a	Customs and festivals in Spanish-speaking countries/communities		**Listening and Reading** Exampro	preterite of regular verbs and irregulars *ser/ir/hacer* reflexive verbs in preterite preterite and imperfect tenses together describing a past event/festival actions and opinions
Summer 3b			GCSE examinations	

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, equipment monitor and officials. 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 air 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.

Why I study Physical Education?

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

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. Linking physical activity and sport to health fitness and mental wellbeing Benefits of a warm up and cool down Officiating 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.	Ball mastery Receiving and releasing Ball striking Creating and manipulating space Moving with the ball Attacking Defending Wing play Playing through midfield Press / Pass and move Switching play 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
	Basketball		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 Benefits of a warm up and cool down Officiating 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.	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. Verbal feedback will be given lesson by lesson and students who show high standards every lesson are rewarded
	HRF		CV endurance Speed Muscular Strength Muscular Endurance Flexibility Agility Power Training methods Fitness testing Heart Rate calculations	
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	Grip and carry Ball handling	Heart – their ability to lead and make good, kind

		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	Receiving and releasing Tackling Rucks Mauls Line-outs Switch/scissor pass Implementation of skills into games	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
	HRF	Officiating 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.	CV endurance Speed Muscular Strength Muscular Endurance Flexibility Agility Power Training methods Fitness testing HR calculations	
Block 2 Girls	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities (Summative and formative) Key pieces
	Badminton	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
	OAA		Teamwork Map reading	

		Benefits of a warm up and cool down Umpiring 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.	Compass work Problem solving Planning Designing routes Setting challenges	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
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 Benefits of a warm up and cool down Umpire/Timer/Scorer Comparison of times/distance in relation to different events and records	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. Verbal feedback will be given lesson by lesson and students who show high
	Cricket		Throwing Catching Batting Bowling Ground Fielding Rules and Regulations Implementation of skills into games	

	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	standards every lesson are rewarded
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 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	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		Throwing Catching Batting Bowling Ground Fielding Rules and Regulations Implementation of skills into games	

		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.		

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** – 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.	-PowerPoint -YouTube -Text Book pages 51 – 61.	-Delivery of **'Fitness Testing'** 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 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.	-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.

		-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.		-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 - 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.	-PowerPoint -YouTube -Text Book pages 73 – 78.	-Delivery of **'Injury Prevention and Training Seasons'** 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 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.**	-PowerPoint -YouTube	-Delivery of **'Ethical Issues'** PowerPoint resource.

		-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.	-Text Book pages 126 – 134.	-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.** -Commercialisation - Sponsorship and the media - Positive and negative impacts of sponsorship and the media - Positive and negative impacts of technology	-PowerPoint -YouTube -Text Book pages 113 – 125.	-Delivery of **'Commercialisation'** 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.
3.1.1 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	-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.

		-Joints (Synovial and freely-movable) and the different types of joints -How movement occurs		
	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 -Structure of the heart -Cardia cycle, cardiac output and stroke volume -Mechanics of breathing -Interpretation of a spirometer trace	-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.
	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	-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.

		-Long-term effects of exercise		
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) **3.2.1.2 The use of goal setting and SMART targets to improve and/or optimise performance.** -Evaluating performance and outcomes -SMART targets	-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 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.** -Sedentary lifestyles introduced -Obesity and its effect on performance -Somatotypes	-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.
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.**	-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.

		-Introduction of the different planes (frontal, transverse, sagittal) and axes (longitudinal, transverse, sagittal) of movement in sport.		

Curriculum Map Year 10: PSHE

PSHE Intent Statement - 'PSHE lessons are designed to help students to prepare for a happy, safe, fulfilling and considerate life in the 21st Century. Students are to be empowered to make well-informed decisions which take into account the needs of others and which support them in becoming healthy, productive and respected members of their community.'

Cultural capital/enrichment: Assemblies: School ethos, anti-bullying week, disability history month, national citizenship, apprenticeship week, revision for exams, growth mindset, British values, respect, vapes, Manchester-a great city, words have power, good manners, conflict resolution
Student leadership opportunities: school council, ambassadors, form captain

Half term	Topic	Key knowledge	Key skills I will learn in this topic	Assessment opportunities Key pieces
Autumn 1	Transition to KS4/ Mental and physical health	Students develop and practice revision strategies to cope with the demands of KS4. Students learn to reframe negative thinking. They can recognise mental ill health, cope with change, loss, grief. Promote emotional wellbeing and managing influences of lifestyle decisions. Value the importance of sleep and understand why it is important.	Skills to assess their areas of strength and development, evaluate and act upon feedback. Students will develop new learning skills and identify learn what new challenges they will phase. Skills to build self-confidence self-esteem, and mental health are affected positively and negatively by internal and external influences and ways of managing this Develop a broad range of strategies — cognitive and practical — for promoting their own emotional wellbeing, for avoiding negative thinking and for ways of managing mental health concerns including strategies for good sleeping habits.	assessment opportunities are provided through hands down questioning, discussions, brain storming, spider diagrams, quizzes, responding to scenarios, continuums, verbal feedback, self and peer assessment
Autumn 2	Mental and physical health	Students learn best ways to cope with stress of exams. Know about fertility, possible outcomes of pregnancy, issues around abortion and taking responsibility for our sexual health.	Skills to recognise warning signs of common mental and emotional health concerns (including	Formative assessment opportunities include no hands up

		Students learn what they should know about breast cancer	stress, anxiety and depression), and how to access treatment Take increased personal responsibility for maintaining and monitoring health including cancer prevention, screening and skills for self-examination	questioning and white boards. Continuums Self-assessment of criteria at the end of the unit
Spring 1	Mental and physical health	Students learn about men's health, blood, stem cell and organ donation including choices and issues. They learn how to spot relationship abuse and how to report sexual abuse when something is not right.	Skills to access health services available to people; strategies to become a confident user of the NHS and other health services; to overcome potential concerns or barriers to seeking help Identify risk and manage personal safety in new social settings, workplaces, and environments, including online	Formative assessment opportunities include no hands up questioning and white boards. Spider diagrams, quizzes, responding to scenarios Continuums Self-assessment of criteria at the end of the unit
Spring 2	Relationships	Students learn about the dangers of sharing sexual images and why consent is so important, the concept of consent in maturing relationships That they are different kinds of long- term relationships including legal status. The roles and responsibilities of parents.	Develop characteristics and benefits of strong, positive relationships, including mutual support, trust, respect and equality Strategies to access reliable, accurate and appropriate advice and support with relationships, and to assist others to access it when needed Skills to access information and support for relationships including those experiencing difficulties	assessment opportunities are provided through hands down questioning, discussions, brain storming, spider diagrams, quizzes, responding to scenarios, continuums, verbal feedback, self and peer assessment
Summer 1	Careers	Students learn what is the importance of personal presentation and how to make themselves self- employable and how to apply for jobs. Writing a CV and personal statement, routes to	Skills for career progression, including in education, training and employment information, advice and guidance available to them on next	assessment opportunities are provided through hands

		employment and how businesses are structured and organised. They will learn about the employment sectors and types, and changing patterns of employment	steps and careers; how to access appropriate support and opportunities Develop confidence to be informed and take the next step.	down questioning, discussions, brain storming, spider diagrams, quizzes, responding to scenarios, continuums, verbal feedback, self and peer assessment
Summer 2	Financial literacy	Students learn how do I stay in control of money, understand credit and debit and consumer rights. They can keep finances secure, understand payslips and deductions as well as understanding that making money choices affect mental well-being.	Skills for effective budget, including the benefits of saving Evaluate the financial advantages, disadvantages and risks of different models of contractual terms, including self-employment full-time, part-time and zero-hours contracts	Formative assessment opportunities include no hands up questioning and white boards. Spider diagrams, quizzes, responding to scenarios Continuums Self-assessment of criteria at the end of the unit

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:** ***GCSE Combined Science – Edexcel Specification.***	**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.	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.	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.	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

	Chemistry Topic 8 - Types of substance and acids and alkalis	-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. -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.	- 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: 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.	Literacy task – 6 mark question. Describe the difference between and concentrated and dilute acid and a strong and weak acid. 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	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.	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.	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

	development of medicines **Biology Topic 6** – Plant Structure and their functions. Start	-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. 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.	Literacy skills: answering extended writing GCSE questions. 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.	between selective breeding and genetic modification Spelling bees - BT5
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. ***Pupils will also spend some time reviewing key concepts from Physics topics 1 and 2 studied in Year 9.*** 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.	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	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.

		-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. -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.	stored energy and energy transfers; convert between newton-metres and joules. Make 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 ×λ wave speed (metre/second, m/s) = distance (metre, m) ÷ time (second, s) t x v. -Apply the relationships between frequency and wavelength across the electromagnetic spectrum.	Spelling bees Physics topic 4 and 5
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	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	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.

		-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. 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.	compute rates, 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) × distance moved in the direction of the force (metre, m) E = F × 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) × gravitational field strength (newton per kilogram, N/kg) × change in vertical height (metre, m) ΔGPE = m× g ×Δh. Recall and use the equation to calculate the amounts of energy associated with a moving object: kinetic energy (joule, J) = 2 1 × mass (kilogram, kg) × (speed)2 ((metre/second)2, (m/s)2) 2 2 1 KE = × m× v Recall and use the equation: power (watt, W) = work done (joule, J) ÷ 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.	Spelling bees – Physics topic 6

		-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 ⇌ 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 2diabetes 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.	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	End of year exams – 3 x paper 1s (Biology, Chemistry and physics) Literacy task – based around a 6 mark

	Physics Topic 9 – Electricity and circuits **(Any content not completed will be covered in year 11)**	-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. -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)**	Literacy skills: answering extended writing GCSE questions. Maths Skills: Recall and use the equation: energy transferred (joule, J) = charge moved (coulomb, C) × potential difference (volt, V) E = Q×V. Recall and use the equation: charge (coulomb, C) = current (ampere, A) × time (second, s) Q = I ×t Recall and use the equation: potential difference (volt, V) = current (ampere, A) × resistance (ohm, Ω) V = I × 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 ×V ×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 ×V electrical power (watt, W) = current squared (ampere2, A2) × resistance (ohm, Ω) P = I × R 2.	question from the exam. Spelling bees – General key words.

Curriculum Map Year 10: Triple Science (GCSE Chemistry, Biology and Physics)

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.

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.

Half term	Topic	Key knowledge: *GCSE Biology, GCSE Chemistry and GCSE Physics – Edexcel Specification.*	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	***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.	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.	Baseline 30 mark knowledge test. ***(Biology, Chemistry and Physics)*** End of topic test - Chemistry –

	types of substances. **Review Biology** – Topics 1-4 (1 week) including additional triple 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)	-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. -the limitations of particular representations and models to, include dot and cross, ball and stick models and two- and three-dimensional representations. ***Biology (this includes content from ley concepts covered in year 9 which will be reviewed)*** 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.	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 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.	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. End of topic test – Physics topic 3

		-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. -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.	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. 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)	

		-that the acceleration, g, in free fall is 10 m/s2. -Newton's first law, Newton's second law and Newtons 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. -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	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 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× a Define weight, recall and use the equation: weight (newton, N) = mass (kilogram, kg) × gravitational field strength (newton per kilogram, N/kg) W = m× g 1a, 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 × 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) ΔGPE = m× g ×Δh. Recall and use the equation to calculate the amounts of energy associated with a moving object: kinetic	

		-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. -that changes in atoms and nuclei can a generate radiations over a wide frequency range and can be caused by absorption of a range of radiations.	energy (joule, J) = 2 1 × mass (kilogram, kg) × (speed)2 ((metre/second)2, (m/s)2) 2 2 1 KE = × m× v. 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 ×λ wave speed (metre/second, m/s) = distance (metre, m) ÷ time (second, s) t x v.	
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.	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.	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

		-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. -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.	Calculate masses of reactants and products from balanced equations, given the mass of one substance Calculate the concentration of solutions in g dm. 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 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) × distance moved in the direction of the force (metre, m) E = F × 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) × gravitational field strength (newton per kilogram, N/kg) × change in vertical height (metre, m) ΔGPE = m× g ×Δh. Recall and use the equation to calculate the amounts of energy associated with a moving object: kinetic energy (joule, J) = 2 1 × mass (kilogram, kg) × (speed)2 ((metre/second)2, (m/s)2) 2 2 1 KE = × m× v Recall and use the equation: power (watt, W) = work done (joule, J) ÷ time taken (second, s)	acid and a strong and weak acid.

		-the orbits of moons, planets, comets and artificial -the Steady State and Big Bang theories including evidence which support them. - 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-	**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 ⇌ 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.	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 πr2. 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	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

	ordination, control and homeostasis - Start	-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 -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.	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. Evaluate data from a life cycle assessment of a product.	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

		- 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. -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 2diabetes 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	**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.	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.	Knowledge tests– Biology, Chemistry and Physics. End of topic test - Chemistry

	Biology Topic 7 - Animal co-ordination, control and homeostasis - Finish	-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. -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.**	Maths skills: calculate yields and atom economy. Change the subject of a mathematical equation. Provide answers to an appropriate number of significant figures. Convert units where appropriate particularly from mass to moles. .	Topics 14-16 Quantitative analysis Literacy task – 6 mark question. End of topic test – Animal co-ordination, control and homeostasis
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	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.	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

		-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 -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 a 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.	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. Recall and use the equation: energy transferred (joule, J) = charge moved (coulomb, C) × potential difference (volt, V) E = Q×V. Recall and use the equation: charge (coulomb, C) = current (ampere, A) × time (second, s) Q = I ×t Recall and use the equation: potential difference (volt, V) = current (ampere, A) × resistance (ohm, Ω) V = I × 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 ×V ×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 ×V electrical power (watt, W) = current squared (ampere2, A2) × resistance (ohm, Ω) P = I × R 2.	group 1 and Group 7. Spelling bees – key words from paper 1.

		-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. -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	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.**		End of Year exams – Biology, Chemistry and Physics paper 1.

	Review all core practicals Chemistry **Review Physics** topics – 6-11. Review all core practicals **Review Biology** topics 1-6 Review all core practicals			Literacy task – key questions 6 marks) Spelling bees – key words from paper 1.

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	Demonstrate an understanding of why computers have secondary storage and the ability to give examples of types of Secondary Storage.	
		The advantages and disadvantages of different storage devices and storage media relating to these characteristics	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)	

	Data Storage		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	
		How to convert between denary numbers to binary numbers (Vice Versa)	Understanding the Denary number range 0-255	
		Binary Addition	Learn to add two 8-bit binary numbers together	
		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)	
Spring 1&2	Networks	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)	

		Hardware needed for a LAN	Understanding the tasks performed by the following pieces of Hardware: 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.	
	Systems Software	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 Legislation relevant to Computer Science: The Data Protection Act 2018 Computer Misuse Act 1990 Copyright Designs and Patents Act 1988 Software licences (i.e. open source and proprietary)	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. 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 Features of proprietary	
Summer 1&2	Algorithms	Computational Thinking Principles of computational thinking: Abstraction Decomposition Algorithmic Thinking Designing, creating and refining algorithms	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	
		Standard searching algorithms: Binary search Linear search Standard sorting algorithms: Bubble sort Merge sort Insertion sort	Understand the main steps of each algorithm and successfully implement them on different sets of data	
	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	Practical use of the techniques in a high-level language.	

		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.	
	Boolean Logic	Simple logic diagrams using the operators AND, OR and NOT	Recognition of each gate symbol	
		Logic Circuits/Diagrams	Understanding of how to create, complete or edit logic diagrams	
		Truth Tables	Knowledge of the truth tables for each logic gate	
		Combining Boolean operators using AND, OR and NOT	Ability to work with more than one gate in a logic diagram	
	Languages	Characteristics and purpose of different levels of programming language:	Understand and identify the differences between high- and low-level programming languages	
		The purpose of translators	Explain how a translator works and the need for them	

		The characteristics of a compiler and an interpreter	Explain and demonstrate the differences, benefits and drawbacks of using a compiler or an Interpreter	

Curriculum Map Year 10: Design & Technology

Intent:

In Design &Technology, students learn to make informed choices about the use of technology, and to consider the impact of technological change on our world. They come to understand how technological decision making is influenced by cultural, ethical, environmental, political, and economic factors. They learn how products and systems are designed and manufactured, how to be innovative and to make creative use of a variety of resources including traditional and digital technologies, to improve the world around them.

At the centre of the subject is creativity and imagination. Design & Technology is a subject which draws, develops and implements a range of different disciplines including mathematics, science, engineering, computing, geography, business studies and art. Design and technology is more than a practical subject. The knowledge gained from learning the subject allows students to understand how the world around them has been created. Also, through first-hand experiences they can see that things are designed and made to help people in their daily lives. To that end, through designing and making products, students will realise their ability to respond to needs and wants, whilst solving real-life problems.

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
Students are encouraged to attend design and technology lunch clubs to help develop core skills in design and making. Students are also encouraged to participate in both internal competitions and external ones such as the Design Ventura competition and the V and A innovate challenge. Students also have access to industry experts through external and internal visits.

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. 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 :**	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. 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.	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 • Making skill. Key assessed pieces are. • Trinket box (make) • 2 point perspective drawing (design) • Big mark question • Timbers end of unit test • Product analysis • Cad skills (make)

		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 proprieties and their uses. Understand the environmental impact of using polymers to make products. Understand Advantages and disadvantages of CAD CAM.	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. 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	• Polymers end of unit assessment • Metal project(make) • Orthographic drawing (design) • Metals end of unit assessment • Pop up card (make) • Textile project(make) • Prototypes (designs) • Mechanisms board

		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.	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	
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.	