

Year 10 TERMLY CURRICULUM

Computer Science

Creative iMedia

History

Geography

Religious, Social & Cultural Studies

Sociology

Term 1

System Security and Software - Students will learn about network threats and how these threats can be prevented. Students will also learn about different types of software and the role they play in computer systems. There is a large emphasis on the role of operating system software the relevant management applications that the operating system is involved with. In addition, students will learn about various utility software and the differences in licensing between open source and proprietary software.

Pre-Production skills - Students will start to learn key pre-production materials that will aid them in the planning of an interactive media product. This will include mind maps, mood boards, scripts, storyboards and concept designs. For each pre-production material students will learn the purpose, what content is required for each one, best practices and how could they be improved.

Exam board AQA Modules for year 10 (2020-22) • America, 1920–1973: Opportunity and inequality • Conflict and tension between East and West, 1945–1972 • Britain: Power and the people: c1170 to the present day • Elizabethan England, c1568–1603 In term one, we will cover America 1920-1973. This period study focuses on the development of the USA during a turbulent half century of change. It was a period of opportunity and inequality – when some Americans lived the 'American Dream' whilst others grappled with the nightmare of poverty, discrimination and prejudice. Students will study the political, economic, social and cultural aspects of these two developments and the role ideas played in bringing about change. They will also look at the role of key individuals and groups in shaping change and the impact the developments had on them. Details can be found:
https://www.aqa.org.uk/subjects/history/gcse/history-8145/subject-content/understanding-the-modern-world#AD_America_19201973_Opportunity_and_inequality

Term 1 for year 10 and the new GCSE students starts with studying Hazards. This topic focuses on three key areas, weather and tectonic hazards, as well as climate change. Students will be introduced to the wording of exam questions as we look to tackle the 1-3 mark questions.

In Term one students look at the topic of mental health. The topic explores mental illness and the realities of suicide in the UK

In Year 10 students will be introduced to the key concepts used in Sociology and how our culture is passed on. They will be introduced to one of the most popular areas of study in Sociology, which is basically about how we acquire our identities. Identity refers to all of the characteristics which make up individual's self. It refers to our 'sense of self' and how we think other people see us. There will be one written assessment at the end of the term.

Term 2

Data Representation - Students will learn how data is represented on a computer digitally using binary numbers. Students learn how binary is used to represent characters, sound and images. Students also learn about multiple compression methods as well as the benefits/drawbacks of compressing files. Computational Logic - Students will learn key computational logic concepts and how these are applied in real world computing systems. Students will gain the ability to create truth tables to model logic diagrams making use of AND/OR/NOT logic circuits. In addition, students will learn key computing related mathematical operators including DIV and MOD and how these can be applied to algorithmic solutions.

Photoshop - Photoshop is an industry level tool that is vital for the creation of digital graphics. Students will learn a range of Photoshop techniques including removing or changing backgrounds, blending images, changing colours, removing spots or mistakes from photos and many other techniques. This unit will make sure students are prepared for future KS4 study.

In term two, we will continue to cover America 1920-1973. This period study focuses on the development of the USA during a turbulent half century of change. It was a period of opportunity and inequality – when some Americans lived the 'American Dream' whilst others grappled with the nightmare of poverty, discrimination and prejudice. Students will study the political, economic, social and cultural aspects of these two developments and the role ideas played in bringing about change. They will also look at the role of key individuals and groups in shaping change and the impact the developments had on them. Details can be found:
https://www.aqa.org.uk/subjects/history/gcse/history-8145/subject-content/understanding-the-modern-world#AD_America_19201973_Opportunity_and_inequality

Term 2 sees the GCSE students move onto urban issues and challenges. Students will build on their existence knowledge from KS3 and will begin to look the evaluate aspect of the course with a focus on sustainability.

Term 2 students look at the topic of War and Conflict. They will examine the legitimacy of war in the eyes of those that hold a faith as well as the moral and ethical implications of war. This is followed by a citizenship topic, exploring media literacy. In this topic students explore how fake news impacts the political spectrum, looking at key events like Trump's presidency and the Iraq War.

Research methods - The skills of social research are transferrable into many careers. Most organisations are interested at times in researching their staff, customers or the local community. Sociologists base their ideas about society on research. The aim of sociology is to collect data in a logical and unbiased way. Some sociologists believe that sociology should aim to produce knowledge that is as reliable as that of science. Other sociologists believe that studying society is different from studying people. Sociologists need to try to understand people's meanings and motives. Thus, there are a range of methods used by sociologists, some collecting numbers and others collecting more detailed information. This unit will guide students in how to conduct research and all the issues to consider.

Year 10 TERMLY CURRICULUM

Computer Science

Creative iMedia

History

Geography

Religious, Social & Cultural Studies

Sociology

Term 3

Ethical, Legal, Cultural and Ethical Concerns - Students will spend this term looking at the impact of computers on the world around us, and how the growth of computer systems in our world is affecting key areas such as our environment and privacy. Students will learn about the key legislation surrounding the use of computer systems. Key skills covered throughout this unit is extended response in examinations. Networks - Students learn the fundamental rules that govern communication between computer systems. Students also study the hardware required for network communication as well as the different types of network setup and their correct application and advantages.

R082 - Developing Digital Graphics - The previous two terms study ensures that students are well prepared to begin the first compulsory coursework unit at the beginning of Year 10. Students will use their understanding of pre-production practice to develop and design a digital graphic in accordance with a given brief.

In term 3 students will study hot deserts looking at their creation and location. In addition students will also understand how plants and animals can survive in this harsh, extreme environment by studying the adaptations of life forms in hot deserts. The human uses and damages of this use in hot deserts are also learnt along with the process of desertification; its causes, impacts and differing sustainable strategies that can be used to prevent this. A case study, creative approach is used throughout the term, culminating in written essay style questions and GCSE exam questions as a form of continuing assessment throughout the term.

The next religious topic for students is looking at crime and punishment, analysis of the merits of the death penalty under the lens of Christian and Muslim beliefs. For their Citizenship topic students will examine political parties as well as the election system, giving them a great understanding of UK politics.

introduction to Families which is one of the most popular and familiar areas of Sociology. Everyone has experience of families at some time in their life, and everyone has opinions on the family. Families are changing in contemporary society and new family forms are emerging. Sociologists disagree about both the purpose of the family and how they view the changes in families. Some see the family as a vital part of society, performing functions that are necessary for the stability of society. Others see the family as an institution that maintains inequality between classes and men and women. Some sociologists point to high divorce rates, low rates of marriage and the rise in single parents as signs that the family is in decline. They see this as the cause of problems such as crime and poverty. Others see family changes as offering people more choice about how they want to live their lives. It considers the work of the following sociologists: Anthony Giddens; Charles Murray; George (GP) Murdock; Talcott Parsons; Willmott and Young; Eli Zaretsky; Karl Marx; Ann Oakley; Sylvia Walby; Rhona and Robert Rapoport; Delphy and Leonard; Esther Dermott; Sue Sharpe; Stephen Edgell; Jan Pahl; and Duncombe and Marsden.

Year 10 TERMLY CURRICULUM

Computer Science

Creative iMedia

History

Geography

Religious, Social & Cultural Studies

Sociology

Term 4

Systems Architecture - Students will study the hardware that underpins the internal workings of a computer system and gain an understanding of how these components work together and share data. Students will learn about a number of storage methods and there different methods of storing data.

R081 - Exam Study - Students will further their understanding of the R081 unit with a focus on file formats for multiple different types of media product. Students will carefully consider the benefits and limitations of different formats with specific reference to multiple types of creative media product. In addition, students will focus on effective reviews of interactive media products against a number of factors including style and suitability for audience

In term four, we continue studying Conflict and tension between East and West, 1945–1972 (the Cold War). This module enables students to understand the complex and diverse interests of different states and individuals and the ideologies they represented. It considers revolutionary movements during this time. It focuses on the causes and events of the Cold War and seeks to show how and why conflict occurred and why it proved difficult to resolve the tensions which arose during the Cold War. This study also considers the role of key individuals and groups in shaping change and how they were affected by and influenced international relations. Details can be found: https://www.aqa.org.uk/subjects/history/gcse/history-8145/subject-content/understanding-the-modern-world#BC_Conflict_and_tension_between_East_and_West_19451972

Term 4 sees students examine development specifically focussing on what makes countries rich and poor. Different ways of measuring development are discussed, and the causes of under-development are explored widely using case studies of Kenya and of TNCs like Nike to illustrate theories and points made.

Relationships and Family is the focus in term 4, exploring how the family dynamic has changed over time. Students will examine religious views on family members roles and the family set up in particular. The next Citizenship topic gets students looking at pressure groups and the role they play in UK politics.

The first 4 weeks will be continuing and finishing off Families Topic. The last 4 weeks of the term we will introduce Education topic. Everyone has had experience of school at some time in their life and you are fortunate enough to be in school now! One of the most important things about schools for parents and children is how pupils achieve. It is important for parents that their children have every chance of succeeding at school. But what we find is that there are clear patterns of inequality in the education system. Generally, there are differences in attainment between social classes, ethnic groups, and boys and girls. The evidence shows that, in this country, there is more chance of pupils doing well if they are upper or middle class, female and white (although some ethnic groups do very well). On average, middle class children tend to do better in the education system than working class children; girls tend to do better than boys; and ethnic groups such as African-Caribbean and Pakistani pupils, although improving, tend to do worse than other ethnic groups. That does not mean that all individuals within these disadvantaged groups have lower achievements, but as a group, their levels of attainment are lower. This is a matter of concern to the government and sociologists as it is an indication that social class, ethnic group membership and gender are still important influences on how individuals do in education and leading from this, their future life-chances. The labour market has changed and qualifications and success at school are more important now than ever. Sociologists have tried to explain these patterns and there are different explanations coming from the different theories. We will be looking at the effect of the child's background, the school and what goes on in the classroom and also in wider society to see if they can explain the differences in attainment. We will also examine the functionalist view that the education system performs valuable functions for society and the individual, the Marist view that it benefits the upper class, and the feminist view that it is patriarchal. It considers the work of the following sociologists: Stephen Ball; Howard Becker; Pierre Bourdieu; Paul Connolly; Davis and Moore; Emile Durkheim; Becky Francis; Bowles and Gintis; AH Halsey; David Hargreaves; Carolyn Jackson; Talcott Parsons; Diane Reay; Steve Strand; Tony Sewell; and Paul Willis.

Year 10 TERMLY CURRICULUM

Computer Science

Creative iMedia

History

Geography

Religious, Social & Cultural Studies

Sociology

Term 5

Programming skills and algorithms - Students will further develop the programming skills that they have been practising throughout KS3 and Year 10, by creating working solutions for the fundamental sorting and searching algorithms. Term 5 will be also be used for the recap of key knowledge identified as cohort weaknesses through regular assessment.

RO87 - Creating Interactive Multimedia Products - Students will begin their first optional coursework unit focussed on the creation of an interactive multimedia product. Students will investigate interactive media installations in a number of different environments and the key elements to consider in their design. They will use Microsoft PowerPoint to create an interactive installation which includes multiple pages and hyperlinks.

In term five, we begin studying Britain: Power and the people: c1170 to the present day. This thematic study will enable students to gain an understanding of the development of the relationship between the citizen and the state in Britain over a long period of time. It considers the causes, scale, nature and consequences of protest to that relationship. By charting the journey from feudalism and serfdom to democracy and equality, it reveals how, in different periods, the state responds to challenges to its authority and their impact. It allows students to construct an understanding of the rights and responsibilities of the citizen. Students will have the opportunity to see how ideas, events or developments in the wider world affected the course of Britain's political development and will promote the idea that ideas of authority, challenge and rights did not develop in isolation, but these developments should be seen in terms of how they affected Britain and British people. Students will study the importance of the following factors: • war • religion • chance • government • communication • the economy • ideas such as equality, democracy, representation • the role of the individual in encouraging or inhibiting change. Students will study how factors worked together to bring about particular developments at a particular time and their impact upon society. Details can be found: https://www.aqa.org.uk/subjects/history/gcse/history-8145/subject-content/shaping-the-nation#BB_Britain_Power_and_the_people_c1170_to_the_present_day

Students will begin this term by accurately locating the range of physical landscapes within the UK itself - utilising map skills, direction and scale, as well as the ability to describe and analyse. Students will then study a range of river-based processes, including processes of erosion and deposition and learn how to explain the impact that these have on specific named landforms. The impacts of flooding are looked at with regards to a named case study, alongside detailed natural and physical causes. The geographical skill of drawing and reading from a hydrograph is practiced during this term before going onto learn about how river flooding can be reduced and managed. Assessment takes the form of mostly GCSE exam style questions.

With issues around race so prevalent in the news it seems only right that students look at prejudice and discrimination in the 21st century. In term 5 students will explore how different faiths and ethnic groups experience levels of prejudice and how this has been combatted. The final Citizenship topic of the year looks at milestones in suffrage and rights in contexts including rights of the LGBTQ+ community.

We will continue finishing off the education topic and this will allow students to Reflect on their own education and future; Understanding how social life is ordered; Recognising the importance of education as a means of socialisation and cultural transmission; Understanding conflicting views of the society they live in; Developing the skills of communication and debate; Respecting conflicting points of view; Developing the ability to understand abstract ideas about society; Using the technical language of sociology with accuracy; Recognising the importance of processes within schools to educational outcomes; Understanding the different outcomes of education; Understanding the power of socialisation to affect individuals and groups; Developing the skills of communication and debate; Respecting conflicting points of view; Recognising the continuing impact of disadvantage on educational attainment; Using secondary data to investigate changes in patterns of educational attainment; Developing the ability to understand statistical data; Understanding how education has changed; Using sociological ideas to understand the importance of different factors in educational attainment.

Year 10 TERMLY CURRICULUM

	Design Technology	Engineering	Art	Food & Nutrition	Physical Education	Sport Science
Term 1	Core ContentThe students will be learning about the 'core' content of design & technology.Topics such as Energy consumption, Emerging technologies and Smart modern materials/ textiles.Students will complete an end of topic theory test on the chapters so far in 'core' content.	Introduction to Engineering & Soft Jaws.The students will be designing and making a set of soft jaws.They will learn about how to work safely in a workshop, measuring accurately, marking out, use a range of hand tools and lastly produce an engineering drawing. Students will be assessed on theory content and practical project.	Assessment Objectives - Students are given the assessment objectives for the GCSE coursework, exemplar work is shown so that all students have written and visual examples of how to achieve levels in art. Students will start the term by thinking about project ideas after choosing a title for their coursework from 3 given by the art teacher. All elements of the process are checked with the teacher so that student are sure of the expected elements and how to achieve them. Students need to start with drawing in pencil so they can build up their skill levels.	Nutritional needsThe students will learn about the nutritional needs of recipes and how it may impact on lifestyle. The students will also have an understanding of diets and health which a focus on the science behind it.Students will complete an end of topic theory test about what they have learnt in this term.	Invasion games - Students are taught a range of different concepts, strategies and tactics through invasion games. This furnishes students with the skills to analyse their own individual and team performances and make a decision as to what the situation requires. Students will understand the different roles in a team and by the end of the unit be able to plan and deliver a drill to improve on an aspect they identify as a weakness for their team. Net and wall games - Students are taught the tactics and rules to be able to play strategically. Once students have a sound understanding they devise their own drills and practices that they will showcase to a smaller group of students.	RO42 - Principles of training - The key stage 3 curriculum ensures that students have a basic understanding of the principles of training through practical form. Students will learn the theoretical element of the principles and apply these to practical activities across an extended project which will be submitted to the exam board as coursework.
Term 2	Core ContentThe students will be learning about the 'core' content of design & technology.Topics such as mechanical devices, electronic systems, ferrous and non-ferrous metals, polymers, fabrics/ fibres, timbers and structures.Students will complete an end of topic theory test on the chapters so far in 'core' content.	Drill SizerThe students will be designing and making a drill sizer. To complete this project the students will work independently using hand tools, selection of materials, the use of machines such as pillar drills and producing an effective finish to the product.Students will be assessed on theory content and practical project.	ExperimentingStudents will be able to experiment with scale and media choosing images that reflect their chosen project title.	Food ScienceThe students will use their previous knowledge about food science and will focus on the chemical properties of food, cooking process of foods and how heat is transferred.Students will complete an end of topic theory test about what they have learnt in this term.	Invasion games - Students are taught a range of different concepts, strategies and tactics through invasion games. This furnishes students with the skills to analyse their own individual and team performances and make a decision as to what the situation requires. Students will understand the different roles in a team and by the end of the unit be able to plan and deliver a drill to improve on an aspect they identify as a weakness for their team. Net and wall games - Students are taught the tactics and rules to be able to play strategically. Once students have a sound understanding they devise their own drills and practices that they will showcase to a smaller group of students.	
Term 3	Core ContentThe students will be learning about the 'core' content of design & technology.Topics such as past and present designers and Design strategies of the NEA.Students will complete an end of topic theory test on the chapters so far in 'core' content.	Junior HacksawThe students will be making a junior hacksaw.To make this item the students will learn how to use the milling machine, pillar drill, marking out whilst learning theory content e.g. how to produce an engineer's drawing.Students will be assessed on theory content and practical project.	ExperimentingStudents will be able to experiment with scale and media choosing images that reflect their chosen project title.	Food Wastage The students will focus about food spoilage within a kitchen and at home.Contamination, principles of food safety, sensory evaluation and food labelling and marketing.Students will complete an end of topic theory test about what they have learnt in this term.	Principles of Health and Fitness. Students will learn the key principles of health and fitness, the key measures of health and fitness and suitable training methods for improving fitness. Students will be furnished with a better understanding of the four main body systems; skeletal system, cardiovascular system, respiratory system and muscular system. Students will learn how these systems work and the particular roles they play, especially in relation to Health and Fitness.	RO41 - Reducing the risk of injury - Students will develop an understanding of different aspects of how they can reduce the risk of injury in a sporting environment. Students will understand about a vast array of factors and stakeholders contribute to ensuring the safety of performers, officials and spectators in all aspects of sport. This includes preparation carried out by the performer, officials, coaches and governing bodies and the different procedures put in place to ensure risks in sport are minimalised.
Term 4	NEA PracticeThe students will be practicing a smaller NEA challenge which they will need to investigate, design, develop, manufacture and evaluate their product.Students will complete a previous GCSE exam paper.	Testing of MaterialsThe students will focus on an investigation about testing of materials. Using a variety of tests e.g. stress testing and Izod to see what happens to each material and the impact it has. Students will be assessed on theory content and practical project.	Research on their key artistStudents will look at artists, designers and craftspeople that work in a style or genre connected to their title. Using their influences, it will help the student when creating their own work.	NEA PracticeThe students will learn and practice how to complete the NEA practicals. E.g. NEA 1 and NEA 2.The students will sit a practice mock exam.	Principles of Health and Fitness. Students will learn how to maintain a healthy lifestyle and how to plan and prepare for Health and Fitness. Students will learn how the impacts that health and fitness has on the different body systems, how diet impacts and causes of diet related diseases. Students will also learn about the process for instructors, organisations and individuals as they are preparing for exercise.	

Year 10 TERMLY CURRICULUM

Design Technology

Engineering

Art

Food & Nutrition

Physical Education

Sport Science

Term 5

NEA & Revision Students will be given 3 main contextual challenges from the exam board Pearson's. Each student will decide on which contextual challenge they will use for their NEA work. Students will investigate their chosen challenge. Revision will be on 'Timbers - materials' for this term.

CAD/ CAM The students will be learning about CAD and CAM. Using a variety of software such as 2D Design and Solidworks. Once learnt, the students will use the correct software to the CAM machinery e.g. Laser cutting and 3D Printing. Students will be assessed on theory content and practical project.

Development of ideas Students will develop ideas using their images and artist studies to create at least 2 different compositions. Each element of the coursework is marked according to the OCR marking guidelines. Students are given constant verbal feedback to improve and maintain levels.

British & International Cuisine The students will learn about British and international cuisine, food provenance, environmental impact, sustainability of food, food production and processing. Students will complete an end of topic theory test about what they have learnt in this term.

Developing a suitable health and fitness programme. Students will learn factors that can affect participation, how to devise a programme for a variety of people of different health and fitness levels and how to test an individual's fitness levels. Students will then carry out their fitness programme and analyse their results.

Year 10 TERMLY CURRICULUM

	English Language	English Literature	Media Studies	Drama	Modern Foreign Languages
Term 1	Explorations in Creative Reading and Writing- introduction to exam paper and development of skills needed to access this. Section A focus.	Interleaving curriculum- pairing An Inspector Calls with power and conflict poems:Power and Conflict Poetry- developing understanding of poems, analysis and comparative skills and exploring context and themes	Introduction to the course: Analysing genres and their key conventions. Introduction to media representations and audiences. Music Unit: Music Videos: The purpose of a music video, comparison of 2 key texts and analysis of media language and representation of artist	GCSE devising coursework - A mock run and actual course work will be carried out over this period. Performances will be based on a choice of stimulus chosen from a range. Research and rehearsal techniques will be applied before devising and rehearsing will take place, accumulating in a final internally assessed performance (which will be externally moderated). A portfolio will be written along side this explain students intentions, development and evaluation of the final performance. The Mock coursework will be carried out first to give opportunities for exploration and understanding of the assessment objectives and portfolio requirements before embarking on the real coursework task.	School Life - Describing your school, subjects and teachers and your opinions on them. Talking about the rules at school and what you should and shouldn't do. Giving examples of school activities and events. Comparing UK and Target Language Country schools. Practicing adjectival agreements and opinion verbs.
Term 2	Explorations in Creative Reading and Writing- introduction to exam paper and development of skills needed to access this. Section B focus	Interleaving curriculum- pairing An Inspector Calls with power and conflict poems:Power and Conflict Poetry- developing understanding of poems, analysis and comparative skills and exploring context and themes	Music Unit: Music Magazine - Looking at media language and content in MOJO magazine. The language used and the target audience through 2 selected editions of the magazine. Radio: BBC Radio1 - case study unit on the radio station and its evolution in the digital age. How this attracts audiences.		Future plans, Town and Home - Talking about your plans for the future, what you want to do after GCSE, dream job and careers. Describing where you live and the area around. What is there and isn't there in your area? What would your ideal town be like? Describe your house and what you do at home. That are some famous festivals in the Target Language Country?
Term 3	Language Paper 2 Section A: Summarising, analysing and comparing non-fiction texts.	Interleaving curriculum- pairing Romeo and Juliet with power and conflict poems:Power and Conflict Poetry- developing understanding of poems, analysis and comparative skills and exploring context and themes	News Unit: Focusing on newspaper conventions and analysis of language and audience including media ownership. Key Text: The Observer. News Unit & Theory: Digital news, social media and the inclusion of theorists such as Van Zoonen, Barthes, Strauss and Hall		Global Issues and Travel - Talking about where we normally go on holiday, who with, how long for, what we do on holiday and our opinions on holidays. Asking for help and directions, dealing with problems on holiday and other tourist transactions. Using the past tense to describe past holidays in detail, future tense to describe where you will go in the future and conditional tense to describe a holiday you would like to go on. Global issues like charity work and the environment.
Term 4	Spoken Language Endorsement: Students to start their spoken language coursework. Focus on writing skills- writing to argue, persuade and advise.	Interleaving curriculum- pairing Romeo and Juliet with power and conflict poems:Power and Conflict Poetry- developing understanding of poems, analysis and comparative skills and exploring context and themes	NEA - Creating Media. Coursework planning and research in response to set brief (print)		Free Time and Media - Talking about the sports and activities that you enjoy and don't like, giving opinions and reasons about them. Describing sports and hobbies that you used to do and that you will do using a variety of tenses. Describing the Music, TV and Cinema that we like or don't like and why. Comparing Music, TV and Cinema between the UK and Target Language country. Revising food and drink vocabulary and conversations in a café or restaurant in the Target Language country and discussing healthy living and lifestyles.
Term 5	Spoken Language Endorsement: Students to complete their spoken language coursework. Focus on writing skills- writing to argue, persuade and advise.	Interleaving curriculum- pairing Victorian fiction with power and conflict and language paper 2: GCSE Victorian Fiction (range of texts dependent on group)- understanding of Victorian novel, analysis of character and theme, exploration of context.	NEA: Creating - practical response to cwk brief	An Inspector Calls: Script study - Analysis of the script in terms of directing, acting and technical choices. Providing techniques required for attempting Section A of the End of GCSE Exam.	Family and Technology - Relationships in your family, the changing face of the family in the 21st century in UK and target country. Social media and new technologies and how we use them. Studying famous people in the target country.

Year 10 TERMLY CURRICULUM

Maths

Combined Science

Physics

Chemistry

Biology

Term 1

Students will consolidate Number content from KS3. Students will calculate roots and with integer and fractional indices. They will calculate with fractions and surds and multiples of π . Extension tasks for students completing the Higher course will include rationalising denominators, conversion of recurring decimals and their corresponding fractions and vice versa. Students will use the four operations to calculate with numbers in Standard Form. Students will apply and interpret limits of accuracy when rounding or truncating, including upper and lower bounds.

In Biology - We are going to explore Health, Disease and the Development of Medicines. This topic explores various types of diseases, how diseases spread and how we fight off diseases. We are then going to explore the topic of Genetics. This topic explores where the instructions for cells are located. In Chemistry - We are going to explore the structure of the periodic table focusing on group 1, group 7 and group 0. We will be learning about their properties and how they react. In Physics - We are going to explore light and the electromagnetic Spectrum. This topic explores the properties of the Electromagnetic Spectrum and its uses. STEAM Skills Focus - Communication

Forces and Motion. Vectors, scalars, distance-time graphs, acceleration, velocity-time graphs, resultant forces, Newton's laws of motion, momentum, mass and weight, stopping distances and crash hazards. STEAM Skills Focus - Practical lab skills, evaluating results, adaptability and communication.

We are going to be exploring how the Earth's Atmosphere has changed through the history of the planet. We will explore how human impact is continuing to impact the atmosphere and if it is causing global warming. STEAM Skills Focus - Critical Thinking

Health and Disease. This topic explores both communicable and non-communicable diseases. The way the body protects itself from diseases through chemical and physical barriers and the immune response. The production of medicines such as antibiotics and the use of immunisations to protect. Plant defences are also studied. STEAM Skills Focus - time management, research skills, evaluating skills, planning skills

Term 2

In addition to consolidating Algebra content from KS3, students will simplify and manipulate algebraic expressions, including those involving surds and algebraic fractions. Students will factorise and solve expressions and equations, both linear and quadratic, including the difference of two squares. They will solve simultaneous equations and linear inequalities. Students will deduce expressions to calculate the n th term of linear sequences. They will interpret simple expressions as functions, with inputs and outputs. Students will use the form $y = mx + c$ to identify parallel and perpendicular lines and find the equation of the line.

In Biology - We are going to finish exploring the topic of genetics and move on to exploring Natural Selection and Genetic Modification. This topic explores the development of the theory of evolution and the importance of biodiversity. In Chemistry - We are going to be exploring how energy changes in a chemical reaction through the process of bonds breaking and bonds making. We will also be exploring how to make chemical reactions happen faster; linking to particle collisions. In Physics - We are going to explore radioactivity through atomic models, electrons and orbits, background radiation, types of radiation and radioactive decay. STEAM Skills Focus - Problem-Solving

Energy and Forces doing work. Work, power, objects affecting each other, vector diagrams and rotational forces. STEAM Skills Focus - Practical lab skills, evaluating results, adaptability and communication.

This term we are going to be exploring how energy changes in a chemical reaction through the process of bonds breaking and bonds making. We will also be exploring how to make chemical reactions happen faster; linking to particle collisions. We are then going to use this time to identify gaps in knowledge, work to close those gaps and complete an assessment. STEAM Skills Focus - Problem-Solving

Natural and Artificial selection. This topic explores Darwin's theory of evolution as well as selective breeding and genetic engineering and their effects on agriculture and medicine. STEAM Skills Focus - communication, giving feedback, teamwork.

Term 3

Students will consolidate Geometry content from KS3. They will interpret and use scale factors for enlargements. Students will know circle definitions and properties and calculate arc lengths, angles and area of sectors. Students will solve problems involving surface area and volume of spheres, pyramids, cones and composite solids. They will apply the concept of congruence and similarity in similar figures. Students will apply Pythagoras' Theorem and trigonometric ratios to find angles and lengths in right-angled triangles.

In Biology - We are going to finish off exploring Natural Selection and Genetic Modification. We are then going to look at Hormones and communication. This topic explores how hormones control blood sugar levels, the menstrual cycle and osmoregulation through negative feedback cycles as well as thermoregulation and the structure and function of the kidneys. Chemistry - We are going to be exploring how the Earth's Atmosphere has changed through the history of the planet. We will explore how human impact is continuing to impact the atmosphere and if it is causing global warming. In Physics - STEAM Skills Focus - Collaboration

Astronomy. The solar system, gravity and orbits, the life cycle of stars, red-shift and the origin of the universe. STEAM Skills Focus - Team work and collaboration.

This term we are going to start learning about organic chemistry. We are going to learn about the structures and reactions of alkanes, alkenes, alcohols, carboxylic acids, addition polymers and condensation polymers (Esters). STEAM Skills Focus - Collaboration

Plants. This topic explores photosynthesis and factors that affect it, plant adaptations and plant hormones, their effects and uses. STEAM Skills Focus - Communication, practical and planning skills, delegating, making conclusions from observations

Year 10 TERMLY CURRICULUM

Maths

Combined Science

Physics

Chemistry

Biology

Term 4

Students will consolidate the Statistics & Probability content from KS3. They will interpret and construct tables and line graphs for time series graphs. Students will interpret, analyse and compare the distributions of data sets through appropriate graphical representation. Students will infer properties of populations or distributions from a sample and apply statistics to describe a population. Students will use a probability model to predict the outcomes of future experiments, calculate the probability of dependent and independent combined events. This will include using tree diagrams and other representations.

In Biology - We are going to be finishing our topic of Hormones and communication. We are then going to explore the idea of how plants are structured and the chemical reactions that happen inside the plant. In Chemistry - We are going to be exploring how chemists use maths skills use maths skills to support their predictions for chemical reactions and support their findings from their research. In Physics - We are going to explore Energy. This topic explores the concepts of work and power & forces and their effects. This topic explores how objects affect each other and how to represent their movement. STEAM Skills Focus - Problem-Solving

Electricity, Circuits, Magnetism and the Motor Effect. Circuit components, current, charge, energy, resistance, electrical power, electrical safety, static electricity, dangers and uses of static electricity and electric fields. STEAM Skills Focus - Teamwork, delegation and evaluating results.

This term we are going to be exploring how chemists use maths skills to support their predictions for chemical reactions and support their findings from their research. STEAM Skills Focus - Communication

Cellular Respiration. This topic explores aerobic and anaerobic respiration and their effect on the body. As well as how the body is adapted for respiration including the adaptations of the lungs for gas exchange and the structure and function of the heart and blood vessels. STEAM Skills Focus - Group work, making predictions, communication, research.

Term 5

Students will consolidate Ratio, Proportion and Rates of Change from KS3. Students will apply ratio notation, and/or scale factors to compare lengths, areas and volumes. They will solve problems, which require conversion between related compound units in both numerical and algebraic contexts. They will setup, solve and interpret the answers in growth and decay problems, including compound interest. They will understand that X is inversely proportional to Y is equivalent to X is proportional to $1/Y$. They will recognise and interpret graphs that illustrate direct and inverse proportion.

In Biology - We are going to be exploring how chemicals are moved around the body and the role some organs have in this process. In Chemistry - We are going to be exploring the role of hydrocarbons as fuels. How they are obtained from the Earth and how we meet our demand. We will also be preparing for the End of Year Assessment. In Physics - We are going to explore magnetism and the Motor Effect. This topic explores how magnetic forces are generated. Additionally we will explore the particle model. This topic explores the link between particle arrangement and the energy needed to change state. STEAM Skills Focus - Creativity

Magnetism and the Motor Effect. Magnetism, electromagnetism, the motor effect, generators and dynamos, transformers and the national grid. STEAM Skills Focus -Teamwork, delegation and evaluating results.

This term we are going to explore how to identify different ions which are present in solution. We are also going to use this term to consolidate our learning from the last 2 years, identify gaps and work on closing the gaps. This is done in preparation for an end of year assessment. STEAM Skills Focus - Collaboration

Hormones and communication. This topic explores how hormones control blood sugar levels, the menstrual cycle and osmoregulation through negative feedback cycles as well as thermoregulation and the structure and function of the kidneys. STEAM Skills Focus - - creativity, comprehension, ability to use information correctly, collaboration.