skipton girls' high school
an engineering academy

Curriculum Intent
2017/18

Our approach to the curriculum is holistic, coherent and integrated. The curriculum we offer is personalised and aspirational. It is subject to an on-going and rigorous review process, using our analysis of data and the wider ambitions of teaching and learning to ensure that the curriculum is effective in meeting the needs of **all students**.

Curriculum design aims to maximise opportunities and reflect the high expectations of all students at Skipton Girls' High school. We also recognise the broader development of students and the importance of learning both in and outside the classroom and within and across subject areas. Structures are in place to ensure that all students can access the full curriculum offer and take-up of opportunities outside the classroom are monitored.

All staff at SGHS recognise their role in ensuring the quality of the curriculum offer and understand that outstanding teaching and learning is at the heart of a world class curriculum.

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Year 7 – Key Stage 3

Maths

- secure and deepen their understanding and confidence with number work and calculations
- develop understanding of shape and space with 3D shapes and angle rules.
- be introduced to algebra and progress into graphs and transformations
- represent, summarise, and compare discrete data sets

English

- Promote challenging fiction and non-fiction which encourages students to read and explore their world and imagination.
- Study writers from across the 19th-21st centuries, in a range of genres.
- Develop creative and analytical writing skills so that students can express themselves precisely, accurately, and in detail.
- Prepare students for potential later study in GCSE Drama and Media Studies, through study of playwrights such as Shakespeare and Kafka, theatrical forms including physical theatre and improvisation, and through analysis of a range of media forms.
- Units of work incorporate a range of reading, writing and drama, and fiction and non-fiction to encourage a breadth of cultural knowledge and understanding.

Science

Physics

Year 7 Physics kicks off with an introduction to Energy: the currency of the Universe. This is one of the most important ideas in Physics and will be used in every year group. Then we go on to look at forces and motion in space and the Physics behind sending a probe to another planet. Next up is Waves, focussing specifically on Sound. We finish off with electricity: making your hair stick up, building batteries from fruit and understanding simple circuits.

Chemistry

In Year 7 the Chemistry studied is covered by two broad contexts. Cook covers; safety, states of matter, change of state, chemical changes, fair testing and scientific models, all from a perspective the students will be familiar with, cooking. Forensics covers; making accurate observations, solutions, sublimation, separation techniques, diffusion, accuracy, precision and reliability, indicators, pH and reactions of acids.

Biology

The Key Stage 3 Biology courses are centred on four main contexts for learning. The first of these is "Teaching Hospital", in which students explore the tissues, organs and systems that are integral to the professionals working in different hospital departments. After being introduced to the seven life processes carried out by all living organisms, students move on to look at cells, microscopy, organisation, unicellular organisms and diffusion, as part of the 'Cytology department'. They then consider the 'Obstetrics and Gynaecology department', looking at puberty, fertility, the role of the placenta in foetal development, and birth. Finally, students explore the department of 'Nutrition and Dietetics', which introduces them to the importance of a balanced diet, daily energy requirements, and the structure and function of the human digestive system.

The second context is 'Sport Academy'. This allows students to explore the structure and function of the human body in more detail. This context is divided up into subunits entitled 'Getting Moving', in which students study the role of the musculoskeletal system in movement; 'Breathe Strong', which focuses on the structure and function of the gas exchange system and the effect of exercise, asthma and smoking; and 'Drugs and Sport', where students learn about how performance-enhancing and other drugs affect the body, and the biology of addiction.

Computing

The Computing syllabus has been designed to cover the three main areas of Digital Literacy, Computer Science and Information Technology. The students will be introduced to the IT skills they will need to support other subjects across the curriculum and will be introduced to programming, algorithms, some more complex elements of software packages and an understanding of computer hardware and how it works.

An Overview of the Year 7 Curriculum:

- An introduction to SGHS Systems, OneDrive, Email and Firefly
- Website Development – Students are taught to use the Dreamweaver software along with being introduced to CSS and HTML
- Computing Theory - An Introduction to Binary, Binary Addition and ASCII
- Micro:bit Projects – Students will be introduced to block programming using JavaScript Blocks. They are introduced to programming basics and then will develop these skills to create bespoke projects using the micro:bit technologies
- Spreadsheet Modelling – Students will complete a series of lessons looking at the basic functions of spreadsheet modelling which will lead to some of the more complex themes and the introduction of some of the basic programming constructs.

Humanities

History

Yr7 study British History and its turning points from the causes and consequences of the Norman Conquest of 1066 to the changes brought about by the Industrial Revolution 1750-1900. This includes Feudalism, Magna Carta, the Black Death, and the religious roller-coaster of the English Reformation under the Tudors and Stuarts and the English Civil War. Yr7 is completed by applying all they have learnt to a local project on Skipton and how it reflects the historical developments that they have studied (e.g. building of the castle, church, development of the medieval town, and the impact of the industrial revolution on trade and transport in Skipton).

Geography

Students will study a range of Human and Physical themes throughout Year 7 whilst developing a range of key geographical skills. All students will study:

- Weather and Climate (Focus on the British Isles)
- Natural Resources (Focus on Tropical Rainforests and Water)
- Settlement
- Fieldwork Opportunity – Humanities visit to Skipton to investigate how the land use has changed over time

Religious Studies

In Year 7 we take a thematic approach and students are introduced to some of the central beliefs and practices of Christianity, Islam and Hinduism through a study of a search for meaning, belief in God, sacred writings, pilgrimage and worship.

Modern Foreign Languages

French or Spanish

Students are taught to understand and respond to spoken and written language from a variety of authentic sources. They are encouraged to speak with increasing confidence, fluency and spontaneity, finding ways of communicating what they want to say, including through discussion and asking questions, and continually improving the accuracy of their pronunciation and intonation. As far as writing is concerned, by the end of Key Stage 3, students should write at varying length, for different purposes and audiences, using the variety of grammatical structures that they have learnt.

Through their studies, students can also discover and develop an appreciation of the culture in countries were French/Spanish is the official language.

The topics covered are:

Self, Family and Relationships, School, House and Home, Local Area and Environment, Hobbies and Free time, Media, Holidays, Health and Work and Future Plans.

Design Engineering

To prepare our students for the rapidly changing world of Engineering, all students will develop a diverse range of skills. From understanding a range of materials and their properties to how these can be manufactured into products using Computer Aided Design and Computer Aided Manufacture. The skills and topics learnt are designed to develop student's independence, creativity and problem solving abilities. Each project focus will be placed in context with a broader theme such as sustainability, energy conservation and new technologies such as automated/driverless vehicles.

- Autumn Term - Celebration Themed tea light holder – Introduction to CAD & CAM
- Spring Term – USB LED Lamp – Introduction to Electronics
- Summer Term – Microbit Robot – Development of Programming & Systems

Food and Nutrition

Students start by studying Food Safety and Food Hygiene, which sets out the knowledge, understanding and skills required to cook and apply the principles of Food Science, Nutrition and Healthy Eating. Students study twelve skill groups through practical activities. Students learn how these food preparation skills can be applied and combined to achieve specific outcomes. All students will study:

- Hazards in the Food Environment
- Eat Well Guide: 8 Tips for Healthy Eating & Living
- Macronutrients & Micronutrients
- Nutritional Needs of Different Life Stages
- Special Dietary Needs/Requirements
- Staple Foods from different countries
- Popular Cultural Cuisine

PHSCE

The PHSE curriculum follows four strands that encompass all aspects of personal, health and social development including active citizenship, careers and relationships and sex education. These strands are based on the themes of emotional and physical health, understanding and building relationships, becoming an effective learner and thinking to the future. An age appropriate approach has been taken to the topics covered and the style of lesson delivery in each year group. From an interactive and experiential approach in key stage 3 to an increasingly academic, research-based focus in years 10 and 11. It is important to note that the PHSE curriculum is constantly adapting and developing to meet the interests and needs of our students and that their feedback in incredibly important in helping to shape this. An ethos of inclusivity, equality and celebration of diversity runs through the content and delivery of all lessons.

All lessons in year 7 take a fun and active approach to the four strands and include such activities as a community project, understanding the brain, becoming a teenager (including menstruation and puberty), exploring risk-taking behaviour, building friendships and managing friendship difficulties and bullying.

Art and Design

In line with the structure of the National Curriculum, students in Key Stage 3 will concentrate on investigating and making and developing their knowledge and understanding of the work of artists, designers and craftspeople. Students will develop a range of skills in a broad range of media, focus on the use of colour, mark making and printmaking and will develop the use of a sketchbook. They will develop their design skills and work in 2 and 3 dimensions using the work of Pop Art, Impressionism, Post Impressionism and Abstract Expressionism as their inspiration. During the Summer term, students will all experience and draw birds at first hand, whilst on a day trip to Harewood House. This will then inform their work in the classroom as they develop their ideas in 3 dimensions as part of a unit on stage design.

Music

In Year 7 Student learn how to use the elements of music creatively through a variety of topics from a range of musical contexts. Performance, composition, and notation are explored through the topics of Vocal Samba, Arrangement, Gamelan music and Composer's Toolkit. Students learn about instrumental timbres by studying Programme music and develop ensemble performance skills by performing as a 'class band'.

Physical Education

Students take part in a variety of activities working on skill development and performance. Each week, students take part in one games lesson and one performance lesson.

Autumn Term
Lesson 1 Netball/Hockey
Lesson 2 Gymnastics/Dance

Spring Term
Lesson 1 Badminton/Football
Lesson 2 Gymnastics/Dance

Summer Term
Lesson 1 Cricket/Rounders/Tennis
Lesson 2 Athletics

Year 8 – Key Stage 3

Maths

- work with powers, roots and scientific forms of number
- develop their understanding of proportion and proportional change
- explore 2D and 3D circular shapes
- improve their algebraic manipulation skills
- generate sequences and non-linear graphs
- represent, summarise and compare continuous data sets
- learn about experimental and theoretical probability

English

- Promote challenging fiction and non-fiction which encourages students to read and explore their world and imagination.
- We study a range of thematic units (e.g. 'Adventure'), in which students read and craft writing on the theme, including fiction and non-fiction.
- In preparation for possible GCSE Drama or Media Studies, we incorporate further work on devising theatrical performances from existing stimulus, and production of media forms including magazines.
- Students study Shakespeare, interpreting his work from a literary, and dramatic, perspective, and further developing their understanding of his historical and social contexts.
- Students regularly write at length, both creatively and analytically, to encourage their independent thinking, reflection and self-editing.

Science

Physics

At the start of Year 8 we look at Energy in the home, studying how Physics can help calculate and reduce the amount spent on electricity and gas. Next come light, colour and how our eyes work. Then we look at magnetism and electromagnetism: how compasses help us to navigate and how electromagnets are used in the creation of speakers in sound systems. The Physics of motion comes next. Then we look at Space and our place in the universe, starting with Earth, then the Solar System, then our galaxy and finally the universe as a whole. Year 8 finishes with a brief look at Particle Physics, one of the most exciting areas of Physics currently.

Chemistry

In Year 8 we look at atoms, elements and compounds, conservation of mass and balancing equations, the periodic table, metals, combustion, fuels and thermal decomposition. We revisit acids and neutralisation making use of the skills in balancing equations learned earlier in the year. We look at energy transfer in reactions covering exothermic and endothermic changes including the contexts of displacement reactions and the extraction of metals. We complete the year eight course by looking at materials including rocks and the rock cycle.

Biology

The third of the Key Stage 3 contexts for learning is 'The Circular Economy', which is underpinned by the idea of recycling as much waste as possible to minimise the negative impacts of humans upon the environment, but they do this through consideration of how living systems are 'non-linear', exploring the important concept of cycling in biology. They study the crucial processes of photosynthesis and respiration, engaging in experiments to ascertain whether the leaves of photosynthetic plants store starch and how light intensity affects the rate of photosynthesis, as well as plant reproduction as an introduction to life cycles.

The final Key Stage 3 contexts is entitled 'Women in Science', named as such in order to link to the pastoral system at SGHS: we begin by looking at the life and work of Rosalind Franklin, who played a key role in discovering the structure of the hugely important molecule DNA, yet did not receive the Nobel prize as her male colleagues did because the role of women in Science was, at that time, massively overlooked. Once students have learnt about the structure of DNA and the concept of the gene, they consider its role in heredity, variation between organisms, selection – both natural and artificial, extinction and biodiversity. Students also develop key Working Scientifically skills in investigation planning and data collection and analysis.

Computing

Throughout Year 8 students will continue to study computing and build upon the skills they have been introduced to in Year 7. In Year 8, the curriculum still focuses on the three main strands of the National Curriculum - Digital Literacy, Computer Science and Information Technology. This year is used to develop more programming skills, including the introduction of textual programming.

An Overview of the Year 8 Curriculum:

- An introduction to the development of algorithms and programming constructs through the use of Flowol.
- Computing Theory - Fundamentals of computer systems. What's inside a computer? Looking at hardware and software
- Students will be introduced to Python Programming through a series of teacher led programming exercises including the development of their own bespoke programs

- Data Management - An Introduction to Databases – which includes relational databases – Students will also be introduced to SQL (Standard Query Language
- Mobile App Development - Students will design and program their own mobile phone applications using the online programming environment AppInventor.

Humanities

History

Year 8 explore and evaluate the causes and impact of the British Empire and slavery on individuals and the world and the causes and impact of the French Revolution of 1789. Students analyse in-depth the causes and consequences of WW1 including the Treaty of Versailles and the rise of the Nazis in Germany and evaluate the impact on The German people. Students investigate the background to and significance of the Holocaust and complete KS3 by creating their own individual project on a self-selected aspect of WW2 using the historical skills they have learnt.

Geography

Students will study a range of Human and Physical themes throughout Year 8 whilst developing a range of key geographical skills. All students will study:

- Population and Migration
- Tectonics (Focus on earthquakes, volcanoes and tsunamis)
- Tourism (Global to local scales)
- Fieldwork Opportunity – Investigate the impacts of tourism in Malham and management strategies in place in response to this

Religious Studies

In Year 8 we continue with a thematic approach, but the students are encouraged to explore further the issues of commitment, identity and belonging through a study of the figure of Jesus and the relevance of Christianity in twentieth Britain. Students also study the religions of Sikhism and Judaism. Finally, we introduce the students to philosophy and consider some key questions such as:

- Why are we here?
- What happens after death?
- Is God real?

Modern Foreign Languages

French or Spanish

Students are taught to understand and respond to spoken and written language from a variety of authentic sources. They are encouraged to speak with increasing confidence,

fluency and spontaneity, finding ways of communicating what they want to say, including through discussion and asking questions, and continually improving the accuracy of their pronunciation and intonation. As far as writing is concerned, by the end of Key Stage 3, students should write at varying length, for different purposes and audiences, using the variety of grammatical structures that they have learnt.

Through their studies, students can also discover and develop an appreciation of the culture in countries were French/Spanish is the official language.

The topics covered are:

Self, Family and Relationships, School, House and Home, Local Area and Environment, Hobbies and Free time, Media, Holidays, Health and Work and Future Plans.

German

In addition to French or Spanish, some students will have the opportunity to use two of their language lessons per fortnight to study German,

The topics covered are:

Introducing myself and my family, Free time activities, School, Food and Drink, Where I live

The main grammar points covered are: German word order, an introduction to the use of cases (nominative / accusative / dative), the present tense, the future tense and giving opinions.

Design Engineering

Building on the skills developed in Year 7, students will now apply those skills in new contexts. New skills and knowledge in Year 8 include PCB design, soldering and the introduction of 3D Computer Aided Design. The projects are designed to reinforce learning from Year 7 and develop students understanding. All projects will also have a broader context theme such as electronic products, materials recycling and automation.

- Autumn Term – Electronic Timer Project - Development of Electronics
- Spring Term – Mechanisms & Motion – Linkages and Levers
- Summer Term – Metal Pendant - Development of Engineering Skills

Food and Nutrition

Students will continue to develop their knowledge and understanding of Food Preparation and Nutrition skills and explore the principles of Food Science. Both practical and written elements of the course emphasise on the Science of Foods and include a range of Science based investigations. All students will study:

- Nutrition: Analyse the nutritional content using an online nutritional package (Food A Fact of Life)
- Investigate the functions of bread ingredients and a carry out a Yeast Investigation
- Issues around Food: Social, Moral & Cultural
- Investigate the functions of cake ingredients and types of raising agents
- Foods from Around the World and Cultural Cuisine

PSHCE

Building on the work completed in year 7 the topics covered in Year 8 include the following: the future – who am I and who do I want to be? Exploring the neuroscience of learning; developing emotional understanding and wellbeing; investigating youth crime, and understanding diversity, equality and difference.

Art and Design

Students will develop their skills and techniques through investigating and making and incorporating their research and analysis of the work of artists, designers and craftspeople. Students will use sketchbooks, work from direct observation and learn new techniques and processes. They will develop their ability to analyse the work of artists and designers and use the work of others to inspire their own development and ideas. They will study units of work covering still life, shape and form, developing their drawing skills using a variety of media. They will learn about facial proportion through a unit of work on portraiture and develop their creativity in a unit about the built environment.

Music

In Year 8 we build on the skills introduced in Year 7 by composing Blues song and learning about music in context, working with chords, inversions and structures. Students explore context, audience and purpose by composing to a range of briefs and continue to explore music from other cultures by studying Reggae music.

Physical Education

Students take part in a variety of activities working on skill development and performance. Each week, students take part in one games lesson and one performance lesson.

Autumn Term
Lesson 1 Netball/Hockey
Lesson 2 Gymnastics/Dance
Spring Term
Lesson 1 Badminton/Football
Lesson 2 Cheerleading/Rhythmic Gymnastics

Summer Term
Lesson 1 Cricket/Rounders/Tennis
Lesson 2 Athletics

Year 9 – GCSE Bridge

Maths

Students will:

- explore accuracy in calculations
- develop their understanding of proportionality
- improve skills of construction
- discover, use and apply Pythagoras' Theorem
- make geometric conjectures and proofs
- work with linear and non-linear graphs
- derive and solve 2 simultaneous equations, graphically and algebraically use tree diagrams to calculate probabilities

English

- Promote challenging fiction and non-fiction which encourages students to read and explore their world and imagination.
- Students regularly write independently, at length, to develop their critical thinking skills, reflection and self-editing.
- There is an increasing focus on "whole-text" skills in preparation for GCSE study. These novels and plays, including previous GCSE set texts such as The Woman in Black (focusing on Gothic fiction) continue to be supplemented with additional poetry, and extracts of fiction and non-fiction to provide a richer cultural understanding of the texts in context.
- Students also continue to regularly experience Media and Drama, through responses to their units of study.

Science

Physics

In Year 9 we start the AQA Physics GCSE course. We look at describing motion using forces; study the weird world of Dark Matter and Dark Energy; introduce electrical circuits; study the different ways that we try to use energy in efficient ways, minimising loss; the Electromagnetic spectrum and the various ways that we use this; then finish up with a study of the atom, looking at its structure and at nuclear fission and fusion.

Chemistry

In Year 9 we start the AQA GCSE Chemistry 8462 course. We look at atoms, elements, compounds, pure substances and mixtures, the periodic table, the extraction of metals focussing on their uses in real world situations. We develop and extend knowledge from

KS3. We also introduce crude oil, alkanes and alkenes. We complete the year with a study of the atmosphere, how it has changed over time and how humans are thought to be changing it by looking at the greenhouse effect and methods of reducing our carbon footprint. Throughout the GCSE course we complete a number of required practical activities, designed to develop experimental skills.

Biology

As students continue their study of the GCSE Biology topic 'Environment', they look in detail at the impact of humans upon the environment through activity such as waste production and management, land use, destruction of peat bogs and deforestation, and how this is influencing climate change. They then explore conservation programmes designed to maintain biodiversity, before looking at the carbon and water cycles, decay, adaptations and extremophiles. They carry out a required practical investigation into the effect of temperature on the rate of decay of milk.

The second Year 9 topic is entitled 'Species': students begin by being introduced to the concept of species before they undertake research comparing different classification systems, then increase their knowledge and understanding of the causes of variation – including mutation – so that they can apply this to evolutionary theories (including the theory of natural selection proposed by Charles Darwin) and how fossils and resistant bacteria provide evidence for evolution, extinction and the formation of new species.

The final Year 9 topic – 'Characteristics' – enables students to engage with some cutting edge techniques in biotechnology: namely, genetic engineering (including the role of genetically modified organisms in crop production, vaccine development, and possible control of the Zika virus) and cloning techniques. Students produce their own cloned plants through stem cuttings and tissue culture, and consider the ethics associated with the prospect of cloning humans.

Computing

During Year 9 students will continue to build on the programming and digital literacy skills. There will be a deeper focus on programming skills and a look at some of the GCSE theory to give the students a good insight into the GCSE Computer Science syllabus which will be one of their option choices.

An Overview of the Year 9 Curriculum:

- Virtual Reality - Students to build their own VR "world" based on an area of Computer Science theory e.g Binary, Storage, Ethics, Computing Law
- Theory – Ethics – Students will consider the Ethical and Moral implications of Computers and will run a series of debates on this area
- Makey Makey Projects - Coding simple games in Scratch in project teams. Produce a working game and present in showcase

- Python Programming - Students to build upon their skills through completing a selection mini challenges
- Photoshop – Students are introduced to Adobe Photoshop and will develop their skills in order to create their own Magazine Front Cover

Humanities

History

Yr9 examine the changes and continuity of British society and politics through time through an examination of crime, punishment and the justice system. Beginning in Roman Britain to the present day - examining how the changing social, economic and political context and values of British society are reflected in the changes in the justice system over 2000 years - with an in-depth case-study of Whitechapel in the late Victorian era.

Geography

Students will study a range of Human and Physical themes throughout Year 9 whilst developing a range of key geographical skills. All students will study:

- The Coastal Environment
- Development and Globalisation
- Extreme Environments (Focus on polar and desert regions)
- Climate Change

GCSE Religious Studies

All students start a GCSE in Religious Studies. We follow AQA specification A.

This involves an in-depth study of the beliefs and practices of Christianity and Buddhism.

Modern Foreign Languages

French or Spanish

Students follow the AQA GCSE specification and build upon previous years' study to broaden vocabulary and increase use of more complex grammatical structures. Students are examined in the four skills: Speaking, Listening, Reading and Writing.

Through studying a GCSE in a modern foreign language, students should develop their ability and ambition to communicate with native speakers in speech and writing. The study of a modern foreign language at GCSE should also broaden students' horizons and encourage them to step beyond familiar cultural boundaries and develop new ways of seeing the world.

Students will develop their ability to communicate confidently and coherently with native speakers in speech and writing, conveying what they want to say with increasing accuracy, express and develop thoughts and ideas spontaneously and fluently as well as listen to and understand clearly articulated, standard speech at near normal speed. They will deepen their knowledge about how language works and enrich their vocabulary in order to increase their independent use and understanding of extended language in a wide range of contexts. Finally, they will gain a better understanding and appreciation of others' traditions and customs.

The topics covered are arranged in three themes which are re-visited all through Key Stage 4:

THEME 1: IDENTITY AND CULTURE
Topic 1: Me, my family and friends
Topic 2: Technology in everyday life
Topic 3: Free-time activities
Topic 4: Customs and festivals in French-speaking countries/communities

THEME 2: LOCAL, NATIONAL, INTERNATIONAL AND GLOBAL AREAS OF INTEREST
Topic 1: Home, town, neighbourhood and region
Topic 2: Social issues
Topic 3: Global issues
Topic 4: Travel and tourism

THEME 3: CURRENT AND FUTURE STUDY AND EMPLOYMENT
Topic 1: My studies
Topic 2: Life at school/college
Topic 3: Education post-16
Topic 4: Jobs, career choices and ambitions

German

In addition to French or Spanish, some students will have the opportunity to use two of their language lessons per fortnight to study German,

The topics covered are: Introducing myself and my family, Free time activities, School, Food and Drink, Where I live

The main grammar points covered are: German word order, an introduction to the use of cases (nominative / accusative / dative), the present tense, the future tense and giving opinions.

Design Engineering

Students will continue to build upon the knowledge and skills that they have secured in Year 7 & Year 8. The level of demand is also designed to prepare students who wish to continue

with Engineering at GCSE. The development of electronics/systems is key to the Mood Lamp project as this has the opportunity for students to program the circuit and the LED sequence. The mechanisms project is designed to broaden and develop student's knowledge around how things work. Finally, the SOLIDWORKS task is develop students ability in using this industry standard software.

- Autumn Term – Mood Lamp - CAD/CAM project and development of systems knowledge
- Spring Term – Mechanical Automata – Development of Mechanisms – CAMs and Followers
- Summer Term – 3D CAD – Skill development in SOLIDWORKS 3D software.

Food and Nutrition

Students build upon a range of practical skills and explore the Science of foods in detail through several investigations. All students study the following:

- Food Poisoning Bacterium
- Food Preparation Techniques
- Deboning & Portioning a Chicken
- Filleting a Fish
- Nutritional content of Meat Analogue's/Replacements
- Function of protein in the body
- Types of fish theory
- Types of Cooking methods
- Analysis of the different types of vegetarians
- Exploring the functions of eggs
- Macronutrients and Micronutrients (Sources, functions, effects of excess or deficiency)
- Social & Moral Issues around foods
- Nutritional needs of different groups
- Energy Needs of Individuals
- Nutritional Profiling

PSHCE

The topics in year 9 are focussed on the issues affecting the development of our young people as they reach a complicated time in their lives. These include body image and self-esteem; mental health and emotional wellbeing; staying safe in relationships including the use and misuse of drugs and alcohol; effective strategies for learning; preparing for the future – education and employment; promoting global citizenship.

Art and Design

Students will continue to develop their skills and techniques in order that they can make informed choices for GCSE. Work will focus on developing creativity and individual skills however students will undertake some group work to create a class sculpture or event to develop their skills of communication and working as a team. They will develop their painting and drawing skills, work in 3 dimensions, learn about working in mixed media and learn new printmaking techniques. They will develop their ability to analyse the work of artists and designers, using the work of others to inspire their own development and ideas. They will explore artists and art movements through some study of art history.

Music

In year 9 students continue to build on the skills developed in years 7 and 8 by focusing on ensemble performance and song writing which will prepare them for the demands of the GCSE course.

Physical Education

Students continue with the development of skills and performance alongside a deeper focus on increasing physical fitness and gaining an understanding of the benefits that physical activity can have on your health.

3 lessons over 2 weeks (Lesson 2 every other week)

Autumn Term
Lesson 1 Netball/Hockey
Lesson 2 Dance/Fitness

Spring Term
Lesson 1 Badminton/Football
Lesson 2 Dance/Fitness

Summer Term
Lesson 1 Cricket/Rounders/Tennis
Lesson 2 Athletics

Year 10 – Key Stage 4

GCSE Maths

Students will:

- be introduced to trigonometry, circle theorems and vectors
- Students will also start exploring content of the new curriculum such as:
- solving problems involving exponential growth and decay
- investigate quadratic and geometric sequences
- find and interpret gradients of non-linear graphs
- find and interpret areas under graphs
- know and use the equation of a circle

GCSE English

The department takes a conceptual approach to the teaching of English Language and English Literature GCSEs – we teach the skills necessary for the Language GCSE through the Literature texts, incorporating creative and persuasive writing as responses to the texts and their themes.

In Year 10, students will usually complete their Shakespeare text (a choice dependent on the class and their teacher), the AQA Love and Relationships poetry anthology, and one additional text – either the 19th century novel or modern play/novel. Non-fiction extracts will be used to support their contextual understanding and prepare them for Paper 2 of the Language course.

They will build on their existing analytical skills to develop independent essay writing, practicing regularly, and developing the vocabulary necessary to deal with dense and thought-provoking literature.

Triple Science

There is an expectation that most students will be entered for the separate sciences at GCSE.

GCSE Physics

Year 10 Physics takes an in-depth look into the Physics of motion; the use and behaviour of satellites; magnetic and electric fields; how electricity is produced and supplied around the country via the National Grid; how we utilise our knowledge of sound waves; and the 3 types of ionising radiation including their uses.

GCSE Chemistry

Year 10 students continue with the AQA GCSE Chemistry course. We cover structure and bonding, including nanotechnology & polymers. We move onto quantitative chemistry allowing students to apply their maths skills. We look at the rate of reactions. We revisit and develop understanding of energy changes throughout all topics students develop both practical and problem-solving skills. Finally, we investigate the reactions and properties of the different groups in the periodic table.

GCSE Biology

Beginning with the topic 'Food', students will look at factors affecting food security and how farming, sustainable fisheries and biotechnology (building on ideas developed in Year 9) offer solutions. They then move on to look at a key source of food for consumers – plants – by studying plant tissues, organs and photosynthesis, before focussing on how animals, including humans, release nutrients and energy from food through digestion and respiration, respectively, and how substances are transported between cells and around the body. Practical work will include investigating the effect of factors on the rate of photosynthesis and enzyme-controlled reactions, and the effect of salt or sugar solutions on plant tissue through osmotic effects. Students will then study cells and reproduction, including the role of microscopes, cell division and genetics.

Humanities

GCSE History

Yr10 study the GCSE Edexcel Units Early Elizabethan England 1558-1588, which examines the challenges Elizabeth faced in terms of religion, succession and plots both at home and abroad whilst building an empire in the Age of Exploration; and the Development of America West 1835-1895 examining the lives of Plains Indians, the development and settlement of the West, the impact of cattle ranching and railroads and the destruction of the Plains Indians way of life.

GCSE Geography

Year 10 will study the following topics as part of the AQA specification:

- The Challenge of Natural Hazards (Tectonics, Weather and Climate Change)
- The Changing Economic World
- Challenge of Resource Management (Focus on Water)
- Urban Issues and Challenges
- Fieldwork Opportunity – Students will study the characteristics of a local river and how they change with distance downstream

GCSE Religious Studies

In the second year of the GCSE course students will study religious, philosophical and ethical arguments related to the following issues through both Christian and non- religious perspectives:

- Relationships and families
- Religion and life
- Religion, peace and conflict
- Religion, human rights and social justice

GCSE Business Studies

The new GCSE Business specification will give students the opportunity to explore real business issues and how businesses work. A relevant and diverse specification students will consider the practical application of business concepts. The units provide opportunities to explore theories and concepts in the most relevant way, through the context of events in the business and economic world. In Year 10 students will study investigate the purpose of business activity, the role of business enterprise and entrepreneurship, and the dynamic nature of business. Students will study the importance of external influences on business and how businesses change in response to these influences. Students will study the interdependent nature of business operations, human resources, marketing and finance.

GCSE Modern Foreign Languages

French/Spanish/German

Students follow the AQA GCSE specification and build upon previous years' study to broaden vocabulary and increase use of more complex grammatical structures. Students are examined in the four skills: Speaking, Listening, Reading and Writing. The topics covered are arranged in three themes which are re-visited all through Key Stage 4:

THEME 1: IDENTITY AND CULTURE
Topic 1: Me, my family and friends
Topic 2: Technology in everyday life
Topic 3: Free-time activities
Topic 4: Customs and festivals in French-speaking countries/communities

THEME 2: LOCAL, NATIONAL, INTERNATIONAL AND GLOBAL AREAS OF INTEREST
Topic 1: Home, town, neighbourhood and region
Topic 2: Social issues
Topic 3: Global issues
Topic 4: Travel and tourism

THEME 3: CURRENT AND FUTURE STUDY AND EMPLOYMENT
Topic 1: My studies
Topic 2: Life at school/college

Topic 3: Education post-16
Topic 4: Jobs, career choices and ambitions

GCSE Drama

GCSE Drama offers creativity, practical skills and written practice. Students develop key drama skills such as voice, stagecraft, movement and gesture, and improvisation.

Students devise pieces based on a stimulus, such as poem, song, or novel extract, keeping a written log of their process and evaluating their work. They also work on scripted work.

For their written examination, students work on a set text, and then write an evaluation of a theatrical performance they have seen.

Students also have the opportunity to focus on a technical element such as costume, lighting, and staging.

GCSE Media

Students will study a broad range of media forms and products, providing a comprehensive and balanced study of the media that encompasses audio-visual, print-based and online forms, as well as exploring the interrelationships between them.

- advertising and marketing
- film
- magazines
- music video and online, social and participatory media studied through a single music topic
- newspapers
- radio
- television
- video games.

Component 1: Exploring the Media: Written examination: 1 hour 30 minutes: 40% of qualification

Component 2: Understanding Media Forms and Products: Written examination: 1 hour 30 minutes: 30% of qualification

Component 3: Creating Media Products: Non-exam assessment: 30% of qualification

GCSE Engineering

Students taking the GCSE Engineering will complete both a coursework element, worth **40%** of the GCSE, and a 2-hour exam, worth **60%** of the GCSE. Students will build on their

knowledge and skills for KS3 and will deepen their understanding further. The course is delivered with the theory being supported by practical application. All students in Year 10 will complete a focused practical task, which echo's the requirements for the controlled assessment in Year 11. The brief for their project is set on the 1st June in Year 10, students will then have 30 hours, under supervision, to complete a portfolio of evidence and a practical outcome based on the brief provided.

The coursework will combine the student's prior knowledge of 2D/3D CAD & CAM, materials and processes to design and make their project:

The theory element is broken down as follows and is fully detailed on Firefly in the form of a digital textbook:

- Engineering Materials
- Engineering Manufacturing Processes
- Systems
- Testing and Investigation
- The impact of Modern Technologies
- Practical Engineering Skills

GCSE Food Technology

The Food Preparation & Nutrition course equips students with an array of culinary techniques, as well as knowledge of Nutrition, Food Traditions and Kitchen Safety. The course sets out the knowledge, understanding and skills required to cook and apply the principles of Food Science, Nutrition and Healthy Eating.

Students study twelve skill groups through practical activities and learn how these food preparation skills, can be applied and combined to achieve specific outcomes.

Throughout the course, students learn about the Science of Food, which forms the core basis of all the assessments undertaken. Students study the following modules over the two years:

1. Food, Nutrition & Health
2. Food Science
3. Food Safety
4. Food Choice
5. Food Provenance
6. Food Preparation & Cooking Techniques

There are two Non-Examination Assessments (NEA's) which form 50% of the qualification. These controlled assessments are untaken in controlled time in school only.

NEA 1: Task 1: Food investigation (30 marks)

- Understanding of the working characteristics, functional and chemical properties of ingredients (Food Science).
- Practical investigations are a compulsory element of this NEA task.
- Written or electronic (1,500-2000 words) including photographic evidence of the practical investigation
- 10 hours Controlled Assessment
- 15% of the final GCSE marks

NEA 2: Task 2: Food preparation assessment (70 marks)

- Knowledge, skills and understanding in relation to the planning, preparation, cooking, presentation of food and application of nutrition related to the chosen task.
- Prepare, cook and present a final menu of three dishes within a single period of no more than three hours, planning in advance including how this will be achieved
- Written or electronic portfolio including photographic evidence of the three final dishes
- 20 hours Controlled Assessment
- 35% of the final GCSE marks

Written Exam: 1 hour 45 minutes:

- 100 Marks – 50% of GCSE
- Multiple choice questions (20 marks)
- Five questions each with several sub questions (80 marks)

PSHCE

In Year 10 students will cover a range of topics that stretch their understanding and knowledge regarding their own development and the issues that affect them – these topics include: 6 strategies for effective learning; exploring the influence of social media; growing up in multi-cultural Britain; relationships, sex and sexual health; looking ahead to education, employment and the future.

GCSE Art and Design

GCSE Art & Design Exam board AQA: Art, Craft and Design

Autumn and Spring Term

Students will learn new skills, techniques and processes under a unit based called Natural Forms. They will cover the 4 assessment objectives through researching and analysing the work of artists, designers and craftspeople AO1, exploring and developing their ideas through working with a variety of media and processes AO2, recording ideas through their analysis, annotation, drawing, painting and photography. Students will work in sketchbooks and on sheets as required. They will produce a final outcome for AO4 of their own choice using the influences and inspiration of work leading up to this.

Summer Term
Students will pursue their own Personal Project selected from one of the themes from a previous exam paper. They will cover the 4 assessment objectives through researching and analysing the work of artists, designers and craftspeople AO1, exploring and developing their ideas through working with a variety of media and processes AO2, recording ideas through their analysis, annotation, drawing, painting and photography AO3. Students will work in sketchbooks and on sheets as required.

GCSE Photography

GCSE Photography Exam board: AQA: Photography
Component 1 = 60% of the GCSE
Component 2 = 40% of the GCSE

Autumn and Spring Term (component 1)
Students will learn new skills, basic camera techniques, processes and a grounding in the history of Photography; these tasks will include practical and written mini projects which cover:

- Using DSLR cameras
- how to compose photographs
- exploring depth of field
- what makes a good photograph
- using photoshop

Under a project titled the Natural World they will cover the 4 assessment objectives through researching and analysing the work of Photographers.

AO1: Develop ideas through investigations, demonstrating critical understanding of sources.
AO2: Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.
AO3: Record ideas, observations and insights relevant to intentions as work progresses.
AO4: Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.

They will produce a final outcome for AO4 of their own choice using the influences and inspiration of work leading up to this.

Summer Term
Students will pursue their own Personal Project selected from one of the themes from a previous exam paper. They will cover the 4 assessment objectives through researching and analysing the work of photographers. Students will work in sketchbooks and on sheets as required.

GCSE Music

In Years 10 and 11 Students follow the Edexcel specification and study set works from the 4 areas of study: Instrumental Music 1700-1820, Vocal Music, Music for Stage and Screen and Fusions. In addition to this they perform music as a soloist and as part of an ensemble and compose music to a brief and from their own choice.

GCSE Computing

The OCR GCSE Computer Science Qualification is taught in Year 10 and 11 should the students opt for Computer Science. The qualification builds on the knowledge, understanding and skills established through the Computer Science elements of the Key Stage 3 programme of study. The content has been designed not only to allow for a solid basis of understanding but to engage learners and get them thinking about real world application. The course is made up of three main elements; Paper 1 – Computer Systems (50%), Paper 2 - Computational thinking, algorithms and programming (50%) and a compulsory Programming Controlled Assignment must be completed as a required element of the course.

Unit 1:
Computer Systems

- Systems Architecture
- Memory
- Storage
- Wired and wireless networks
- Network topologies, protocols and layers
- System security
- System software
- Ethical, legal, cultural and environmental concerns

Unit 2:
Computational thinking, algorithms and programming

- Algorithms
- Programming techniques
- Producing robust programs
- Computational logic
- Translators and facilities of languages

- Data representation

GCSE PE

Students opt to take GCSE PE throughout Year 10/11. At SGHS we follow the AQA Syllabus and there is a mixture of both theoretical and practical learning. The course is assessed with 40% Practical and 60% theory. Within practical lessons students will be assessed on three sports. During the theory lessons a variety of topics are covered including 'Applied anatomy and physiology' and 'Sports Psychology' to name but a few.

Core PE

Students co-construct the curriculum and choose the programme of study that would interest them the most and they would like to follow for the year. This ensures all students are given the opportunity to take part in physical activity within the sports they enjoy and promote lifelong participation in physical activity.

Year 11 – KS4

Maths

Students will

- manipulate surds and use them in exact calculations
- use Pythagoras' Theorem and trigonometry in 3D applications and non-right angled problems
- make conjectures and proofs with circle theorems and vectors
- solve non-linear simultaneous equations

Students will continue exploring content of the new curriculum such as:

- general iterative processes
- composite functions
- geometric progressions
- graphs of exponential and trigonometric functions

English

Students will complete the final whole text for their Literature course and begin to unpick the process of applying the skills learned to the examination-style questions for the Language course.

They continue to write regularly, both analytically and creatively, and further develop their response to unseen texts including poetry and non-fiction.

Students will also have to complete a brief presentation on a topic of their choice, as an additional endorsement for their Language GCSE. We guide students through a TEDTalk model, so that they can often access the top band, ensuring their presentation includes an argument thread throughout. This work also supplements the non-fiction writing skills tested on in the Language course.

Science

Physics

Students will start off the year looking at atomic structure and how our current understanding of the structure of the atom has developed over time. Then we look at nuclear fission and fusion as energy resources. Next comes the study of gases before an in-depth look at electromagnetism and the way that it has shaped so many technological developments over the past 100 years. We will have finished the course with time for revision before the examinations and will spend time particularly going over the required practicals studied throughout Year 9 to 11.

Chemistry

In year 11 students explore analytical chemistry, studying ion tests. They also review the reactions of acids and develop skills in titration. Students also learn about the importance of assessing the sustainability of resources when evaluating materials for given functions. Students develop further their knowledge of organic Chemistry including the study of biological molecules such as DNA. Finally, they complete the content by looking at equilibria and the importance of the Haber process & fertilisers. Students continue to develop their practical skills and will also revise content from Year 9 and 10 & develop their exam technique & hone their revision strategies prior to the exam.

Biology

- In year 11, they will begin by studying the new specification content of health and disease, including plant disease. They will be looking at differences between communicable and non-communicable disease and identifying symptoms and spread of disease. They will then move onto coordination of plants and animals including the nervous system in animals and hormones in plants and animals and how they work to control organisms growth and responses. Students will also need to look at the new content of the eye and the brain and be able to label parts and describe the role of each part. They will then have to link this to the other parts of the body, including the kidney and reproductive organs and how they communicate to respond appropriately to the environment.
- Students continue to develop their practical skills by carrying out required practicals, which will be examined in the end of Key stage exam and will also revise content from Year 9 and 10 & develop their exam technique & hone their revision strategies prior to the exam.

Humanities

History

Year 11 study GCSE Edexcel unit 'Weimar and Nazi Germany' exploring the political, social and economic issues of Weimar and the subsequent rise and control of the Nazi State with particular reference to different historical interpretations.

Geography

Students will continue to student various Human and Physical themes from the AQA specification:

- River Landscapes in the UK continues from Year 10
- Glacial Landscapes in the UK
- The Living World (Ecosystems, tropical rainforests and cold environments)
- Geographical Issues Evaluation (Pre-release material)
- Fieldwork Opportunity – Impact of human activity in the Lake District

Modern Foreign Languages

French/Spanish/German

Students follow the AQA GCSE specification and build upon previous years' study to broaden vocabulary and increase use of more complex grammatical structures. Students are examined in the four skills: Speaking, Listening, Reading and Writing.

The topics covered are arranged in three themes which are re-visited all through Key Stage 4:

THEME 1: IDENTITY AND CULTURE
Topic 1: Me, my family and friends
Topic 2: Technology in everyday life
Topic 3: Free-time activities
Topic 4: Customs and festivals in French-speaking countries/communities

THEME 2: LOCAL, NATIONAL, INTERNATIONAL AND GLOBAL AREAS OF INTEREST
Topic 1: Home, town, neighbourhood and region
Topic 2: Social issues
Topic 3: Global issues
Topic 4: Travel and tourism

THEME 3: CURRENT AND FUTURE STUDY AND EMPLOYMENT
Topic 1: My studies
Topic 2: Life at school/college
Topic 3: Education post-16
Topic 4: Jobs, career choices and ambitions

GCSE Engineering – Details as per Year 10

GCSE Business Studies

The new GCSE Business specification will give students the opportunity to explore real business issues and how businesses work. A relevant and diverse specification, students will consider the practical application of business concepts. The units provide opportunities to explore theories and concepts in the most relevant way, through the context of events in the business and economic world. Students will study the purpose of human resources, marketing and finance, their role within business and how they influence business activity.

GCSE Food Nutrition

Please see Year 10 entry

GCSE Art and Design

Autumn Term
Students continue work begun in the Summer term of Year 10. They will pursue their own ideas as part of a project/theme selected from a previous exam paper. They will cover the 4 assessment objectives through researching and analysing the work of artists, designers and craftspeople AO1, exploring and developing their ideas through working with a variety of media and processes AO2, recording ideas through their analysis, annotation, drawing, painting and photography AO3 and then presenting a final outcome for AO4 in the form of a painting, sculpture, mixed media piece, series of prints, film or installation. Students will work in sketchbooks and on sheets as required.

Spring and beginning of Summer Term

EXAM BOARD SET TASK Students will receive an exam paper from the AQA exam board in January. They will select a theme from this paper and prepare work to cover the first 3 assessment objectives, including developing their ideas through studying the work of artists, drawing, photography and experimenting with different media. They will refine their ideas, working towards a final outcome for AO4. This AO4 piece of work will be completed over 10 hours under exam conditions over 2 days in their art classroom.

All work for GCSE Art and Design is marked internally and then externally moderated by the exam board AQA.

GCSE Photography

Autumn Term (component 1)
Students continue work begun in the Summer term of Year 10. They will pursue their own ideas as part of a project/theme selected from a previous exam paper. They will cover the 4 assessment objectives and produce a Photographic response.

AO1: Develop ideas through investigations, demonstrating critical understanding of sources.
AO2: Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.
AO3: Record ideas, observations and insights relevant to intentions as work progresses.
AO4: Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.

Students will work in sketchbooks and on sheets as required.

Spring and beginning of Summer Term (component 2)

EXAM BOARD SET TASK Students will receive an exam paper from the AQA exam board in January. They will select a theme from this paper and prepare work to cover the first 3 assessment objectives, including developing their ideas through studying the work of different Photographers and experimenting with different media. They will refine their

ideas, working towards a final outcome for AO4. This AO4 piece of work will be completed over 10 hours under exam conditions over 2 days in their art classroom.

All work for GCSE Art and Design is marked internally and then externally moderated by the exam board AQA.

Core PE

Students co-construct the curriculum and choose the programme of study that would interest them the most and they would like to follow for the year. This ensures all students are given the opportunity to take part in physical activity within the sports they enjoy and promote lifelong participation in physical activity.

A-Level

History

Year 12 and 13 study the reformed A Level AQA 'Unit 1H Tsarist and Communist Russia 1855-1964' exploring the challenges facing the Tsarist regime and its eventual collapse, followed by the emergence of Communist dictatorship 1917-1941 and the rise and impact of the Stalinist system and the Great Patriotic War 1941-1964. 'Unit 2M Wars and Welfare: Britain in Transition 1905-1957' examines the Liberal Crises of 1906-1914; the Impact of World War I on the political, social and economic landscape of Britain; the political and economic issues of 1920s Britain; the Government reaction to the problems of the 1930s; and the impact of WW2 and reconstruction on Britain 1939-1957.

Politics

This AQA Politics A level course develops students' knowledge & understanding of the complexities of political systems, theories, and concepts, and requires the ability to apply political principles to real life situations. It is examined in three 2 hour exams – all equally weighted. Students study three A Level modules based on 'The Government and Politics of the UK'; a comparative module 'The Government and Politics of the America'; and finally a module on 'Political Ideologies'. There is no coursework element.

Geography

Students will study the AQA specification which comprises of 3 components:

- Component 1: Physical Geography (Water and Carbon Cycles/Glacial Systems and Landscapes)
- Component 2: Human Geography (Population and the Environment/Changing Places)
- Component 3: Independent Geographical Investigation (Planning Phase)
- Fieldwork opportunities in a range of human and physical settings (Hydrology study, socio-economic inequalities study, glacial evidence investigation)

In Year 13 students will continue to study the range of Human and Physical themes which are started in Year 12. They will also complete a 4000 word investigation based on a fieldwork study they have planned and conducted independently.

- Component 1: Physical Geography (Glacial Systems and Landscapes/Hazards)
- Component 2: Human Geography (Changing Places/Global Systems and Global Governance)
- Component 3: Independent Geographical Investigation (Completion)

Economics

Economics is a social science. It is a study of human behaviour, looking at the production and consumption of scarce resources in national and international economies. Human nature is difficult to predict and notoriously capable of change and this makes Economics a particularly fascinating subject. Economists develop theories to understand how consumers, firms and governments are likely to behave in everyday life. Students cover a wide variety of topics, including, but not limited to:

- Is the UK budget deficit worth the continuation of austerity?
- Is the government right to cut working tax credits for people on low incomes?
- Should benefits to the unemployed be cut?
- What is the impact of a volatile pound and how does this volatility affect the UK?
- What is unemployment, and what can we do about it?

Religious Studies

Students follow the OCR Religious Studies syllabus.

This has three components:

- Philosophy of Religion – e.g. philosophical language and thought, the problem of evil and soul, mind and body
- Religion and Ethics – e.g. ethical theories such as Natural Law & Situation Ethics, applied ethics such as Euthanasia and Business ethics, and topics such as conscience and meta-ethics.
- Developments in Christian thought – e.g. Christian moral principles and action, gender, pluralism and the challenges of secularism.

Business Studies

Year 12 - AQA A Level Business

In September 2018 students will study the new AQA A Level Business course. The course is an exciting and dynamic subject that reflects the ever-changing nature of the business world. Students will study a wide range of business concepts and theories; from human resources, finance and marketing to business strategy, all of which will give them a winning edge in the employment market. The course aims to introduce students to the principles of business and how to set up a business, including researching the market and employing people. The course also aims to focus on the strategic management of larger organisations and exploring how businesses manage change. Assessment will be by examination at the end of the two year course.

Year 13 – AQA Level 3 Applied General: Extended Certificate in Applied Business

The qualification will give learners the opportunity to learn and understand a broad range of business and entrepreneurial knowledge and skills associated with working within a business enterprise. The learner will understand the way in which any venture in business (big or small) is a function of the relationship between its people, its marketing, its finance and its ability to deliver operationally upon its commitments. Students will undertake three units of work in Year 13. Two of the three units are coursework based e.g. producing a business plan and a writing a marketing communications report. Students will also study theoretical concepts related to managing and leading people this unit will assessed through an examination.

Modern Foreign Languages

Students follow the AQA specification and will develop confident, effective communication skills in French and a thorough understanding of the culture of countries and communities where French/Spanish/German is spoken. It develops an interest in, and enthusiasm for, language learning and encourages students to consider their study of the language in a broader context.

This four-unit specification requires students to develop their ability to write and speak in French/Spanish/German with accurate grammar and syntax for a range of purposes and to understand written or spoken French in a variety of contexts and genres.

French

Current trends

- The changing nature of family
- The 'cyber-society'
- The place of voluntary work

Artistic culture

- A culture proud of its heritage
- Contemporary francophone music
- Cinema: the 7th art form

Current issues

- Positive features of a diverse society
- Life for the marginalised
- How criminals are treated

Political life

- Teenagers, the right to vote and political commitment
- Demonstrations, strikes – who holds the power?
- Politics and immigration

Works studied:

- Film : un long dimanche de fiançailles
- Book : Un sac de billes by Joseph Joffo

Spanish

Hispanic society

- Modern and traditional values
- Cyberspace
- Equal rights

Artistic culture

- Modern day idols
- Region identity
- Cultural heritage

Multiculturalism

- Immigration
- Racism
- Integration

Political life

- Today's youth, tomorrow's citizens
- Monarchies and dictatorships
- Popular movements

Works studied:

- Film : el Laberinto del Fauno
- Book : la casa de Bernarda Alba by Federico García Lorca

German

Aspects of German-Speaking society

- The changing state of the family
- The digital world
- Youth culture

Artistic culture

- Festivals and traditions
- Art and architecture
- Cultural life in Berlin-past and present

Multiculturalism

- Immigration
- Integration
- Racism

Political life

- Germany and the European Union
- Politics and Youth
- German re-unification and its consequences

Works studied:

- Film : Das Leben der Anderen
- Book : Andorra by Max Frisch

English Language

Students explore introductory units on written and spoken language, developing their understanding of grammatical structures and analysis of language, aiming to become used to A-Level standards of analysis and terminology.

They study a range of different topics across the two years, exploring the effect and impact on language of social groups, power relationships, ethnicity, gender, and regions, studying both spoken and written language. A further topic is language change since 1700, and how social, technological, political and cultural factors have sparked these changes.

During the two years, they produce a coursework portfolio including an investigation into an aspect of language they choose, and a piece of creative writing with accompanying commentary on their process.

PHSCE

Where appropriate students attend sessions during morning tutor time or during the school day to discuss and listen to talks on issues appropriate to Year 12 and 13. In recent years this has involved sessions on topics such as safe driving, festival safety and healthy bodies – healthy minds.

English Literature

Across the two years, students will study a range of literary texts over time, including 19th century poetry and drama, a Shakespeare play, and a conceptually-linked unit. This unit

involves comparison of two novels, currently dystopian fiction, and exploring their place in a wider understanding of this genre over time.

Students also produce a coursework portfolio. This includes a comparative essay on two texts, and a further piece based on a third text. This piece can either be a close analysis, or a recreative piece writing in the author's style. The three texts cover all three genres – prose, poetry, and drama – and include at least one post-2000 text. The specific text choices vary from year to year, drawing on student and teacher interest and knowledge, which also offers flexibility for exceptional students to select their own, in negotiation with their teacher.

Music (taught in collaboration with Ermysted's Grammar school)

- In year 12 Students follow the AQA A Level Music course. They develop Aural awareness and dictation skills as well as continuing to build on performing and composing skills acquired at GCSE level. In addition to this they analyse music from a range of styles and genres including popular music, western classical music and Jazz.
- In Year 13 Students are following the final year of Edexcel A Level course, they study Set works from the areas of study Instrumental music and Applied music. They learn about context audience and purpose in addition to performing music for an extended period and composing to a brief.

PE

A Level PE is taught at Ermysteds Grammar School. The OCR syllabus is followed and there are elements of both theory and practical assessments on the course. Students will focus on their one main practical sport of which they will be assessed in worth 30%, however the majority of the weighting is in the theoretical element where 70% of the qualification is covered in areas including 'Physical factors effecting performance' and 'Psychological and socio-cultural themes in PE'.

Psychology

The Psychology course focuses on many different perspectives that have been taken to the study of human behaviour, each of which offers a unique approach. We explore the six key approaches in psychology: biological psychology, behaviourism, social learning theory, cognitive psychology, psychodynamic and humanistic perspectives. There is also a strong emphasis on the growing field of biopsychology and the influence that our genetics, neurology and physiology has on thinking and behaviour.

The first year on the course aims to offer an introduction to the study of memory and forgetting, social influence, psychopathology and child development.

In the second year of study the field of enquiry broadens to give a deeper understanding of the ways in which psychological theory and research has been applied. Here, we have the opportunity to choose from such topics as: cognition and development, gender, relationships, schizophrenia, eating behaviour, stress, aggression, forensic psychology and addiction.

Alongside this, we will continue to address some of the wider debates and issues in psychology such as the gender and cultural bias that resides in psychological theory and the ethical issues concerning research. We also engage with the big philosophical questions regarding human behaviour: is behaviour inherited or learnt? Is freewill an illusion?

Underpinning all modern psychological theory is a firm foundation of rigorous research. Throughout the study of A-level Psychology, students will develop research skills and knowledge of the methodologies available for the investigation of human behaviour. These are as varied as the topics studied and range from the laboratory experiments devised by the early behavioural and cognitive psychologists to the in-depth case studies conducted by Sigmund Freud in his development of psychoanalytical theory. There is also a strong focus on the use of both quantitative and qualitative data and the implementation of descriptive and inferential statistics.

Design Engineering

The content of this title is focused towards engineered and electronic products and systems; the analysis of these in respect of function, operation, components and materials, in order to understand their application and uses in engineered products/systems that have commercial viability. The course is broken down into 50% Exam and 50% Coursework. The examined weighting consists of 2 exams.

The skills and knowledge that students will learn are:

- identifying requirements
- learning from existing products and practice
- implications of wider issues
- design thinking and communication
- material considerations
- technical understanding
- manufacturing processes and techniques
- viability of design solutions
- health and safety

Art and Design

YEAR 12 ART AND DESIGN

Exam board AQA: Art, Craft and Design. 7201/C Component 1 portfolio 60% of marks.

UNIT 1 YORKSHIRE GRIT Timescale: SUMMER PROJECT TRANSITION WORK + AUTUMN TERM

Lessons will begin in a workshop style with students learning skills in new media and working on a larger scale. Their work will be informed by a trip to Brimham Rocks and an artist's studio workshop where they will gather visual stimulus, sketches and photography to inspire their work in the classroom. They will cover the 4 assessment objectives through researching and analysing the work of artists, designers and craftspeople AO1, exploring and developing their ideas through working with a variety of media and processes AO2, recording ideas through their analysis, annotation, drawing, painting and photography AO3 and then presenting a final outcome in the form of a painting, sculpture, mixed media piece, series of prints, film or installation. Students will work in sketchbooks and on sheets as required.

UNIT 2 CITIES Timescale: SPRING TERM

Students will work on a Unit of work inspired by the built environment. There is a 4 day trip planned to Venice in February. This trip will inform and support the work for this unit and eventually form part of the coursework portfolio. Students will exhibit their work in July in an exhibition in the studio which is open to the public.

UNIT 3 PERSONAL INVESTIGATION Timescale: SUMMER TERM + AUTUMN TERM of Year 13

Students will select their own area for investigation. They will develop ideas through researching and exploring the work of artists and practitioners, AO1. They will refine their work by exploring and developing ideas through selecting and experimenting with appropriate media and resources, AO2. They will record their ideas, observations and insights, AO3 and finally present a personal and meaningful response that brings together their ideas and demonstrates skill and visual understanding, AO4. This body of work forms the major part of the portfolio element of the A level course which equates to 60% of marks overall.

YEAR 13 ART AND DESIGN

Autumn Term

Students will continue to develop their work on their PERSONAL INVESTIGATION for Component 1 begun in Year 12. They will write an essay as an extended investigation of their chosen theme of between 1000 and 3000 words. Students will produce a final outcome for AO4 which will be an ambitious and highly resolved piece showcasing their skill and ability to progress an idea through examining all of the assessment objectives in detail. Work for Component 1 is assigned 60% of marks overall.

Spring and beginning of Summer Term

Component 2: Externally set assignment – 40% of marks overall

Students will select a theme from an exam paper which they receive at the beginning of February. They will prepare work covering the first 3 assessment objectives which investigate this theme using a range of carefully selected media and techniques. This body of work culminates in the production of a final outcome completed under supervised exam conditions over 15 hours.

Computing

The OCR A Level Computer Science Qualification is taught in Year 12 and 12 should the students opt for the A Level Computer Science option.

The aims of this qualification are to enable learners to develop:

- an understanding of and ability to apply the fundamental principles and concepts of computer science including; abstraction, decomposition, logic, algorithms and data representation
- the ability to analyse problems in computational terms through practical experience of solving such problems including writing programs to do so
- the capacity for thinking creatively, innovatively, analytically, logically and critically
- the capacity to see relationships between different aspects of computer scienc
- mathematical skills
- the ability to articulate the individual (moral), social (ethical), legal and cultural opportunities and risks of digital technology

The course is made up of three main elements:

Paper 1 – Computer Systems (40%)

Paper 2 – Algorithms and Programming (40%)

Programming Project (20%)

Computer Systems – Paper 1

- The characteristics of contemporary processors, input, output, and storage devices
- Software and software development
- Exchanging data
- Data types, data structures and algorithms
- Legal, moral, cultural and ethical issues

Algorithms and Programming – Paper 2

- Elements of computational thinking
- Problem solving and programming
- Algorithms to solve problems and standard algorithms

Programming project

The students choose a computing problem to work through according to the guidance in the specification.

- Analysis of the problem
- Design of the solution
- Developing and evaluating the solution

Science

Biology

In Biology students study AQA which is divided into 8 units. In year 12 they recap and build on their GCSE knowledge of Cells and cell structure (Unit2), Biological molecules(Unit 1), genetic diversity and DNA (Unit 4) and Exchange Unit (3). In year 13 they expand on the year 12 content, often making synoptic links between units and study units 5-8 including, in depth knowledge of Photosynthesis and Respiration, genetics/inheritance and gene technology, response, homeostasis and coordination and sampling and succession. Paper 3 exam will also require them to complete a Biology essay on a broad topic of Biology. Throughout the course students are assessed on practical skills, such as using a range of lab equipment correctly, and competencies, such as referencing & reporting, by completing a minimum of 12 required practicals. Successful demonstration of the skills & competencies results in practical verification being awarded. There are three final exam papers on which course is graded.

Chemistry

In Chemistry students study AQA Chemistry which in divided into physical, inorganic & organic chemistry. In year 12 they recap and build on their GCSE knowledge of atomic structure, quantitative chemistry, structure and bonding and organic chemistry in the first term. They then further develop their understanding of energetics, equilibria, organic chemistry looking at the reactions of the; alkenes, halogenoalkanes and alcohols and inorganic chemistry by looking at the reactions of groups 2 & 7.

In year 13 all three areas of chemistry are developed with an emphasis on how the ideas studied are relevant to the real world when studying topics such as drug manufacture and electrochemical cells. Throughout the course students are assessed on practical skills, such as using a range of lab equipment correctly, and competencies, such as referencing & reporting, by completing a minimum of 12 required practicals. Successful demonstration of the skills & competencies results in practical verification being awarded. There are three final exam papers on which course is graded .

Physics

For A-Level Physics, students cover the following core topics:

- 1 Measurements and their errors
- 2 Particles and radiation
- 3 Waves
- 4 Mechanics and materials
- 5 Electricity
- 6 Further mechanics and thermal physics
- 7 Fields and their consequences
- 8 Nuclear physics

The first topic is covered throughout the whole course. In Year 12 we focus on topics 2-5. Then in Year 13 we focus on topics 6-8 but incorporate Year 12 content into these new topics. Students will also complete a module looking at key turning points in Physics: crucial experiments or theories in the past that radically altered the direction of Physics. Throughout the course, students will carry out a number of required practicals that will enable them to become confident and independent investigators of scientific questions. They will sit 3 papers at the end of Year 13.

Maths

Students will be taught a linear programme covering pure maths, mechanics and statistics with a deeper emphasis on developing and assessing reasoning, problem-solving skills and modelling. There is also a new focus on the use of technology in teaching and learning and students will have to analyse data using Excel and other programmes. The content is covered over the two years in this way:

Pure Maths – Proof, algebra and functions, coordinate geometry, sequences and series, trigonometry, exponentials and logarithms, differentiation, integration, numerical solutions to equations and vectors.

Statistics – Sampling, data presentation and interpretation, probability, statistical distributions and statistical hypothesis testing.

Mechanics - Vectors, kinematics, forces and Newton's Laws, moments.

Further Maths

Students will be taught a linear programme with the same emphases as in Maths A Level. We will complete their knowledge of the number system to include complex numbers and explore how these can be used to solve many otherwise impossible problems. We will also further their studies in statistics and mechanics, as well as introducing students to numerical methods of solving problems where algebraic and analytical methods do not hold.

Level 3 AQA Mathematical Studies (Core Maths)

Students will study a one-year programme of real-life applications of Maths within and beyond the GCSE curriculum. It will also be very useful for those students studying any of the Sciences, Geography, Psychology or Business Studies without Mathematics A Level. This will include financial mathematics, Fermi estimations, making and using numerical assumptions, representing and interpreting data, critical analysis of everyday statistics, correlation of two data sets and the normal distribution.

Extended Project Qualification

All Year 12 students are given the opportunity to complete an EPQ on a topic of their choice. A mentor is provided to guide them through the process.