

Royal Grammar School Guildford

Sixth Form Curriculum Guide 2022



RGS
GUILDFORD

CONTENTS

Introduction

RGS School Values	2
Educational Philosophy	3
Learning Habits	4
The Aims of the Sixth Form	5
Sixth Form Entry	6
Syllabus Structure and Assessment	7
Tutor Groups	8
Facilities	8

Academic Subjects

Fine Art	9
Biology	10
Chemistry	11
Classical Subjects	
Latin and Classical Greek	13
Ancient History	14
Design and Technology	16
Drama and Theatre Studies	17
Economics	18
Electronics	19
English Literature	20
Geography	21
Government and Politics	22
History	24
Mathematics	26
Modern Foreign Languages	
French, German and Spanish	28
Music	29
Physics	30
Physical Education	32
Religious Studies	34

Sixth Form Curriculum

Games	35
Religious Education	35

Careers and Higher Education

36

INTRODUCTION TO THE SIXTH FORM

RGS School Values

Inclusivity

We educate local boys regardless of their social, cultural, religious and financial background in a welcoming, tolerant community where each individual is valued and enjoys a deep sense of belonging.

Scholarship

We encourage the growth of intellectual curiosity, independence, creativity, innovation and habits of learning within a scholarly community through inspirational subject specialists who provoke and stretch the students' minds and inculcate a lifelong love of learning.

Integrity

We promote the development of self-discipline and responsibility, spiritual values and a personal moral code, and cultivate an ethos where we approach school life with humour and perspective in a community where traditional qualities of decency, politeness and humility are celebrated.

Respect

We nurture an atmosphere of mutual respect between all members of our community, and foster self-respect and self-esteem in terms of physical health, emotional maturity and personal well-being, while establishing lasting friendships in a positive, happy environment.

Courage

We develop leadership, teamwork, resilience and life skills through a diverse range of activities where all students, regardless of their talents and attributes, are encouraged to challenge themselves, take appropriate risks and work hard to fulfil their potential.

Collaboration

We work closely with others for mutual enrichment, and encourage a spirit of generosity and service, a sense of perspective, and a firm belief that we can work in partnership with others, locally and internationally, to make a difference and have a positive impact on society.

Educational Philosophy

The RGS is a selective school and we are proud that all our students are able, gifted and talented in at least one area of educational endeavour. Academic excellence is at the heart of our philosophy; we believe that the potential of all students is realised by nurturing a love of learning, by cultivating in each individual the School's bespoke set of Learning Habits and by fostering a scholarly mindset; this includes:

- being fiercely curious and intellectually inquisitive;
- looking for opportunities beyond the curriculum and making connections between individual subjects;
- encouraging creativity and a free-thinking approach which is willing to challenge conventional opinion;
- providing opportunities for research and presentation skills;
- mental resilience and flexibility to identify and offer creative solutions to challenges and not be daunted by initial failure and setback, rather seeing it as a constructive and necessary part of development;
- being ambassadors of excellence;
- engaging fully – and often independently – with the opportunities afforded;
- being young men of integrity;
- celebrating aspiration and achievement while always remaining humble;
- enriching and benefiting others within the School and those in the community;
- developing a lifelong love of learning and a lasting thirst for knowledge and self-improvement.

These qualities are not just reserved for academic scholars, but rather are a description of the culture at the RGS and what characterises the ethos of the School. They are the qualities to which every student should aspire and, as such, regular opportunities are provided which are open to all students for enrichment, stretch and challenge as part of the scholarship programme.

Sixth Form Educational Philosophy

The Sixth Form curriculum offers a robust set of traditional subjects which allow students, with the support of a talented and committed staff of subject specialists, to apply with confidence for the most competitive and highly regarded universities. The Sixth Form experience continues to adhere to the School's educational philosophy while increasingly nurturing independence, resilience and innovation so that our students have the firm foundations, both conceptually and in terms of their skill set, to flourish at university and beyond in the work-place.

Learning Habits

The RGS Learning Habits are a bespoke set of skills that we believe are fundamental attributes for our students to develop during their time at the School. The Learning Habits are interweaved throughout each student's curricular and co-curricular experience at the RGS to nurture those vital inter-personal skills which will allow them to flourish at school, university and beyond.

Organisation

As an RGS learner, I am punctual and well prepared so that I can make the most out of every opportunity. I manage time effectively and meet deadlines. My work is clearly and systematically ordered.

Engagement

As an RGS learner, I work in partnership with others, test their ideas, demonstrate empathy and look towards their wellbeing. I am an active listener who is well engaged in learning; I notice and learn from what others do well. I fulfil my role within a team or group to the best of my ability.

Imagination

As an RGS learner, I combine my existing knowledge and skills with intellectual curiosity and creativity to successfully plan and achieve things in unfamiliar situations, which I am proud of.

Perseverance

As an RGS learner, I am tenacious when facing adversity or suffering setbacks. I will understand and learn from both my mistakes and those of others and resolve to try again.

Aspiration

As an RGS learner, I aim to go beyond my current successes. I enjoy making the most of the opportunities presented to me, both inside and outside of the classroom, irrespective of the outcome.

Reflection

As an RGS learner, I recognise and celebrate my achievements and those of others. I look back at the progress I have made and seek feedback so that I can refine and improve targets for my future development. I have a sense of perspective, rationally test claims of truth and take responsibility for my own well-being.

The Aims of the Sixth Form

The Sixth Form is a significant and distinctive phase of each student's development as the School prepares each individual for the rigours and independence of life after the RGS. In this light, the aims of the Sixth Form at the RGS are:

Transitional phase

To provide a truly transitional phase where the students nurture greater independence and more effective study skills and broaden themselves beyond the confines of the classroom.

Academic fulfilment

To inspire the students and instil in them the love of learning, inquiry and knowledge allowing them, through support and stretch, to fulfil their academic potential and to make considered, informed decisions about their university or further education options.

Responsibility

To strengthen cohesion and identity. Sixth Form students take greater responsibility and generate greater drive, initiative and dynamism as is fitting for the senior level, and develop leadership skills and teamwork through the prefect and mentor roles.

Pride

For students to be ambassadors of the School who take a pride in their appearance, their public speaking, their environment and their personal development.

Pastoral care

To provide pastoral care that nurtures physical and mental health, emotional maturity and spiritual richness and to encourage intellectual and cultural diversity and develop the students' sense of responsibility for the wider community.

Development

For the Sixth Form to be a positive, vibrant phase where students feel they have fulfilled their potential, made a significant contribution to the running of the school, bridged the gap between school and university, and are proud of both their individual and collective achievements.

As students progress through the Sixth Form, each individual takes increasing responsibility for his academic development and becomes increasingly critical of his progress. Students are expected to take responsibility for time management; for meeting deadlines; for consolidating the work covered in class; for reading round the subject; for developing their knowledge and interest beyond the confines of each syllabus. Self-assessment forms provide an opportunity for each student to reflect on his performance and to assess the progress made with each subject teacher. The aim is to develop more self-critical learners and to focus attention on evaluating the level of progress and to help to identify those areas where each student's focus and energy needs to be turned to allow their potential to be fulfilled.

Academic work needs to be the first priority; however, the Sixth Form provides the culmination to the students' time at school by broadening and developing the students in a vast number of ways. The senior societies provide challenging and cross-curricular stimulation, as do the many trips and conferences attended both nationally and internationally. Students are encouraged to enter national and university essays competitions to develop the interests in subjects beyond the curriculum. The General Studies programme, the Young Enterprise programme, Model United Nations, debating,



the editorial opportunities of the Guildfordian all provide rich and diverse opportunities to broaden perspective and experience. Students have the chance to take a leading role in societies, games and Period 8 activities and, as the senior year groups in the School, leadership and teamwork become increasingly important. Students have the opportunity to become School Prefects, Form Prefects or Mentors, to work as part of the House Duty team each week which takes responsibility for the smooth running of the School or to be a member of the Sixth Form Council. Ultimately, the Sixth Form gives each individual greater responsibility: personal responsibility for academic development, responsibility for others in the community, responsibility for broad and varied extra-curricular involvement.

Sixth Form Entry

Offers of places are conditional upon specified grades to be achieved at GCSE. Candidates are expected to gain a strong list of GCSE grades, including English and Mathematics, with at least six passes at grades 7 – 9. Students also need to have demonstrated to their teachers that they are capable conceptually of studying the subject at an advanced level and that they have the appropriate work ethic to be able to work independently, consistently and industriously at a demanding academic level, as well as contributing fully to the School's co-curricular programme.

Syllabus Structure and Assessment

Many students already find it very difficult to narrow down their options at sixteen and the added consideration of potential degree choices and associated university entrance requirements can make this even more daunting. As a school we believe strongly in retaining breadth of opportunity and experience and in ensuring that students make informed choices when it comes to making critical decisions. For this reason, all students will study four A Level or Pre-U subjects in the Lower Sixth. The decision of whether to continue to study all four subjects through to formal examinations at the end of the Upper Sixth or to drop one subject and continue with three subjects is made prior to internal examinations which take place at the start of the summer term in the Lower Sixth. Those students choosing to study Mathematics and Further Mathematics are required to continue with their other two subjects in the Upper Sixth and will therefore take four subjects through to completion.

Retaining four subjects in the Lower Sixth ensures that every student can keep open a broad range of university opportunities. Experience also shows that many students' plans change during the course of the Lower Sixth and that the subject initially selected as the one they were most likely to drop at the end of the Lower Sixth becomes a preferred subject and can be the subject they actually go on to study after leaving the RGS. A further advantage is that it allows a student to choose a new subject at A Level without being committed to having to follow it through for two years. There is also much to be gained from studying a fourth subject for one year. For example, university science departments frequently lament that students have no essay writing skills so continuing an essay subject for a year could be useful; a student studying History could benefit from studying Politics or Economics for a year to help place actions in context; further study of a language provides invaluable life-skills.

In common with the majority of schools, the RGS has taken the decision to follow a fully linear approach in the Sixth Form which means that students are not entered for AS examinations at the end of the Lower Sixth. We pride ourselves in being able to offer the students an all-round educational experience that will best equip them for life beyond the RGS and one of the strongest benefits that the move to full linearity supports is that it will provide students with the freedom to involve themselves fully in the broader opportunities that the school offers without always being concerned about the pressure of imminent public examinations. It will also allow staff and students to explore ideas that lie beyond the curriculum and give more opportunity, where necessary, for students to prepare carefully for the admissions tests that are required by a growing number of universities.

The School offers its own opportunity for extended research via the Independent Learning Assignment which is completed in the summer term in the Lower Sixth. This gives all students the opportunity to engage with some original research or to delve deeper into a topic in which they have a particular interest. It is overseen by a member of staff and the best submissions are presented annually to the School Governors and are published in our Academic Journal. This scheme replicates many of the skills developed by the EPQ (for which we do not enter students).

Tutor Groups

In the Sixth Form, each student is placed in a tutor group of approximately twelve students for the two-year period. As the students take increasing responsibility for their own development, so the tutor plays a vital role in supporting, advising and ensuring that each tutee makes the most of every opportunity afforded by the Sixth Form at the RGS and that each tutee fulfils his potential. In essence, the tutor's main role is firstly to ensure a smooth transition into the Sixth Form and then to encourage the academic progress and wider development of the students in their charge.

Facilities

The Sixth Form Centre provides a purpose-built facility for all members of the Sixth Form. The Centre is open from early in the morning to late in the afternoon and the students have a locker area, a work area, a computer room and a relaxing common room with daily newspapers and magazines. Students also have access to a range of facilities throughout the School for use during the School day; these include the Careers Library, the Computer Rooms, the Study Area and the Language Laboratory.

Students also have access to the Mallison Library. Apart from an extensive physical book stock, the Library subscribes to a wide range of electronic databases, including JSTOR, Cambridge Companions, Very Short Introductions and MASSOLIT, ensuring that boys in the Sixth Form have the opportunity to become familiar with scholarly resources to support their school studies and ease their transition to university.

FINE ART

Board: OCR

The A Level course presupposes a level of competence in practical skills gained during the GCSE course and is designed to be a seamless continuation of it but with a much greater emphasis on working independently and producing art of a more personal nature. In recognition of this, a separate studio is set aside exclusively for Sixth Form students who each have their own area in which to work undisturbed. The study of Art at this level requires a high degree of motivation and genuine commitment. A student must be prepared to devote considerable out-of-school time to his art.

Although a course of study will be designed to reflect the individual student's strengths, the range of work studied will be similar to that of an art school foundation course encompassing drawing, painting, printmaking, sculpture and digital art. There will be no formal assessment at the end of the first year.

The following two components will be internally assessed and externally moderated at the end of the two-year course:

Personal Investigation (60%). This consists of two elements:

1. **Practical Portfolio:** a sustained project, theme or course of study.
2. **Related Study:** an illustrated essay, digital presentation/blog, illustrated study sheets or written report.

Externally Set Task (40%). Students select one starting point from a question paper released from 1 February. The candidates plan, develop and prepare and are given 15 hours of supervised studio time to complete a finished piece of work.



BIOLOGY

Board: AQA

Biology is a stimulating and relatively difficult A Level and is a sound preparation for the study of any subject at a top university. Biology at A Level involves studying some of the most recent and exciting advances in the subject, such as the regulation of gene expression, genetic engineering, immunology, stem cell research and neuroscience, as well as a more detailed study of the core biological principles and processes introduced at IGCSE.

The AQA A Level course consists of eight topics. The first four (Biological Molecules, Cells, Exchange and Genetics) are taught in the Lower Sixth Form. The second four (Energy Transfer, Response, Evolution and Gene Expression) are covered in the Upper Sixth Form and are examined, along with the first four topics, in three A Level papers sat at the end of the Upper Sixth.

Practical work is a strong feature of A Level Biology. A diverse range of investigations are carried out including: genetically engineering fluorescent bacteria, DNA fingerprinting, extracting giant chromosomes from maggots and dissecting locusts, fish and rats. There is no assessed coursework component to the A Level course. Instead, students must carry out twelve practical investigations over the two-year course, a requirement far exceeded by our own course. A Level fieldwork is carried out during a residential four-day course at the Dale Fort Field Centre in Pembrokeshire, Wales. Here the diverse marine and terrestrial ecosystems offer the perfect opportunity to explore how populations are affected by the environment and each other.

The course is enriched by activities run by the Department (trips to lectures, invited speakers), by the Medical Society and the Senior Scientific Society. A Level students extend their subject knowledge by regularly presenting 'ten-minute talks' to their classes on a topic of their choice. Every year we enter students into the British Biology Olympiad, and we offer extra support to those interested in studying Biological Science, Medicine, Veterinary Science and Dentistry at university.

Biology can be taken with any other subject, but students with an interest in studying any sort of Biological Science at university are advised to take Biology along with Mathematics and either Physics or Chemistry. For those scientists and engineers planning to take Physics, Mathematics and Further Mathematics A Level, Biology makes an excellent fourth subject choice, particularly given the opportunities in the growing fields of medical physics, biochemical engineering, biotechnology and genetic engineering. Biology is an obvious choice for students interested in Medicine, Veterinary Science or Dentistry, but there are also a multitude of Biological Science courses to suit every interest. Courses may be general (Natural Sciences) or specific (Biochemistry) and may include a year in industry or abroad. Biology graduates have a huge range of career opportunities open to them. Many will work in jobs directly related to the subject (medicine, genomics, biotechnology, conservation, scientific journalism) but the intellectual and personal skills developed whilst studying biological sciences can lead to careers as diverse as finance, management and law.

CHEMISTRY

Board: Edexcel

Chemistry at A Level builds on the knowledge and understanding developed in the previous years. It can be taken with a wide range of subjects with Mathematics, Physics or Biology being the most common. It is not unusual to study A Level Chemistry as a contrasting subject together with the humanities, arts or languages.

Course

Chemistry at A Level is far more exciting than at IGCSE! With eight periods a week, there is a lot more time for in-depth discussions and practical work. You should always challenge yourself (or your teachers) with the question “why?” and accepting something without justification should be a very rare event indeed. Practical work is a key part of the course and experiments are normally done on an individual basis. Our laboratories are very well equipped, and we have our own IR Spectrometer and rotary evaporator. ICT is becoming ever more important in the teaching of Chemistry and we use a variety of software including chemical modelling programs such as Odyssey and Spartan. We have several class sets of dataloggers which are used for the rapid collection and analysis of temperature and pH data.

Aims:

- To stimulate enthusiasm and enjoyment for Chemistry and to encourage further scientific studies
- To develop a secure knowledge and understanding of the subject and be able to apply chemical theories in different situations
- To develop safe and efficient practical skills
- To be able to communicate chemical ideas and results clearly and be able to use appropriate scientific language and mathematical conventions
- To develop an understanding of the importance of Chemistry in industry and technology and appreciate its relevance in society and the environment.

Why study Chemistry at A Level?

Chemistry is known as the central science because so many areas of Biology and Physics require an understanding of Chemistry. A Level Chemistry is essential for the study of Medicine, Dentistry, Veterinary Science, Pharmacy, Material Science and some biological or technological courses.

The study of Chemistry requires imagination, accurate observations, the ability to explain, to predict and the desire to improve on current processes. These qualities are as important to a scientist, as they are to a manager, a farmer, a doctor or even a politician. Hence Chemistry graduates are employed in a wide range of occupations using the transferable skills they have developed during the study of Chemistry.

Lower Sixth Syllabus

Physical Chemistry

- Atomic structure
- Structure and Bonding
- Shapes of molecules
- Intermolecular forces
- Intermediate bonding and bond polarity
- Born Haber cycle
- Kinetics
- Equilibria I

Organic Chemistry

- Hydrocarbons, alcohols, haloalkanes
- Organic Chemistry mechanisms
- Mass spectrometry, IR and nuclear magnetic resonance
- Organic synthesis using Quickfit

Inorganic Chemistry

- Moles and Titrations
- Redox I
- Inorganic Chemistry and the Periodic Table

Upper Sixth Syllabus

Paper 1: Advanced Inorganic and Physical Chemistry

- Entropy (Disorder) and Free Energy
- Equilibria II
- Acid / base calculations
- Energetics II
- Redox II
- Transition metals
- Electrochemistry

Paper 2: Advanced Organic and Physical Chemistry

- Organic chemistry II: Chirality (left- and right-handed molecules), carbonyl compounds, carboxylic acids and their derivatives
- Organic chemistry III: Benzene chemistry, nitrogen compounds and synthesis
- Modern Analytical Techniques
- Kinetics II

Paper 3: General and Practical Principles in Chemistry

- Synoptic questions covering all the topics in the AS and A2 course
- Questions on Experimental methods

Assessment of Practical Skills

This is done during the year and is reported as Pass/Fail. It does not contribute to the A Level grade.

Enrichment opportunities

RGS boys have achieved distinction in a number of Chemistry competitions. In one year alone, we took six of the top eight places in the world for the Cambridge Chemistry Challenge.

CLASSICAL SUBJECTS

LATIN AND CLASSICAL GREEK

Board: OCR

Classical Greek and Latin are traditional subjects that stretch students intellectually and produce enquiring, analytical minds. Students increase their linguistic ability considerably, enabling them to read confidently and react perceptively to some of the world's greatest literature in its original language and context. Students develop independence of thought, a perceptive approach to critical analysis and confidence in communicating ideas lucidly and coherently, both orally and on paper.

The literary element allows students to study Greek or Roman texts which have significant value in themselves and have greatly influenced many later writers. In studying the literature, students will be immersed in the cultural, historical, sociological breadth and wealth of the ancient world and will gain a unique insight into the modern world by understanding the values, aspirations and roots of the western language, culture and civilisation.

Latin can be studied in combination with Greek to form part of a traditional Classics course, or with Ancient History, but many students take it in combination with French and German, English and History, or other subjects. Such a combination does not prevent them from going on to read Classics at university, where it is now quite common for non-Graecists to take up Greek. It is also possible to take single Honours courses in Latin or Joint Honours courses in, for example, Latin and English.

Classical disciplines are proven to develop a range of key skills:

- the ability to absorb a vast amount of data and recognise the most salient points of a task;
- the ability to deal with very complex subject matter;
- the ability to analyse language, both to find the explicit meaning and to discover what is lurking beneath the surface;
- the ability to study and investigate new areas and still produce a persuasive, successful argument;
- a logical mind, capable of drawing information from a range of areas, questioning established opinions, before reaching a considered conclusion;
- intellectual rigour and a desire for academic excellence;
- the ability to communicate in a lucid, coherent, concise manner;
- the ability to construct logical and sound arguments, combining a strong reliance on evidence with convincing rhetoric;
- the ability to consider and understand the motivations of people in a culture that is both similar and strikingly alien to our own.

A Level Latin and Greek consists of four examination papers:

Paper 1: Language 1. Unseen translation: students translate one passage of unseen Latin or Greek prose and one passage of unseen Latin or Greek verse.

Paper 2: Language 2. Prose composition: students translate a passage of Latin or Greek into English.

Paper 3: Prose Literature: students study two Latin or Greek prose authors. The Prose Literature paper includes a translation of a passage from the text, comprehension questions requiring literary criticism and appreciation, and an essay requiring over-arching analysis of the whole text.

Paper 4: Verse Literature: students study two Latin or Greek verse authors. The Verse Literature paper includes a translation of a passage from the text, comprehension questions requiring literary criticism and appreciation, and an essay requiring over-arching analysis of the whole text.

ANCIENT HISTORY

Board: OCR

A Level Ancient History involves the study of Greek and Roman history, including fascinating periods that shaped the development of the world as we know it today. The study of Ancient History encourages independence of thought, precision, use of evidence and sources and the ability to analyse and communicate effectively.

No prior knowledge is required, but the course will prove stimulating to any student who has an interest in the ancient world in particular or History in general, whether or not he has taken a Classical subject to GCSE. Ancient History can prove a useful addition to the study of Latin at A Level, but equally is a valuable A Level in its own right. Ancient History can, and often is, studied alongside History.

A Level Ancient History will enable students to:

- develop an extensive interest in the military, political, religious, social and cultural history of the ancient world.
- understand Greek and Roman history in the context of their neighbouring civilisations.
- explore and evaluate the significance of events, individuals, issues and societies in the history of the ancient world.
- understand the nature of historical evidence from the ancient world.
- develop an awareness and understanding of relevant historical debates and how these can be investigated.



A Level Ancient History consists of two examination papers:

Greek history paper

Greek study period: this topic focuses on the unfolding narrative of the relations between Greek city-states, particularly Athens and Sparta, and between Greek city-states and the Persian empire during the period 492 – 404 BC. Areas of study include the Persian Wars, the Delian League and the Peloponnesian War.

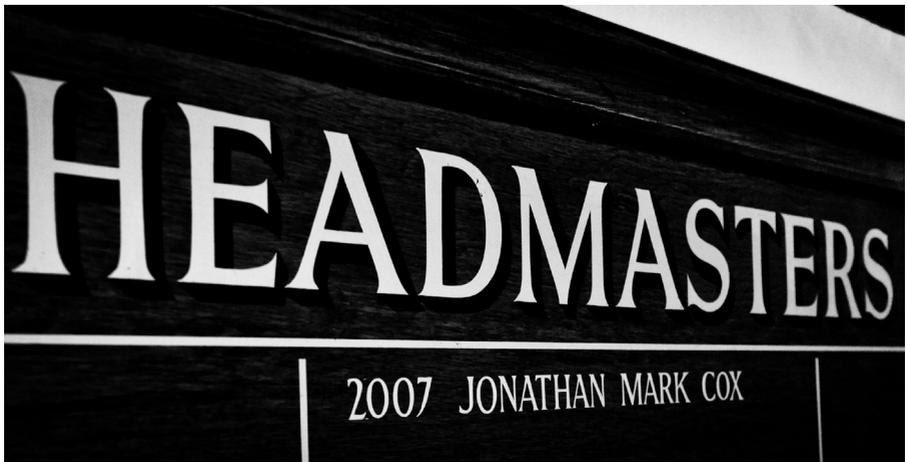
Greek depth study: The culture and politics of Athens. This topic focuses on the political, social, economic, cultural and religious factors that led to this period being remembered as the Golden Age of Athens. There is a focus on the development of the ideas which led to the cultural activity during this period, in particular, looking at the concept of democracy and the freedom of speech and debate which were prized in Athens

Roman history paper

Roman study period: The Julio-Claudian Emperors, 31 BC – AD 68. This period of study focuses on the establishment and development of the reign of Augustus, Tiberius, Gaius (also known as Caligula), Claudius and Nero. There will be a particular focus on military, social, religious and political issues and developments of the emperors in Rome and the Empire and their treatment by the ancient sources.

Roman depth study: The Flavians, AD 68-96. This topic focuses on the political, military, social, economic and religious factors that affected the reigns of the Flavian emperors resulting in a different type of rule to that of the preceding Julio-Claudian dynasty. This is one of the most fascinating and exciting periods in Roman history.

Students of Ancient History, like all arts students, can be found in a wide variety of occupations and professions, including teaching, law, accountancy, the civil and diplomatic services, banking, and computing.



DESIGN AND TECHNOLOGY:

PRODUCT DESIGN

Board: AQA

This creative and thought-provoking qualification gives students the practical skills, theoretical knowledge and confidence to succeed in a number of careers, especially those in the creative industries. They will investigate historical, social, cultural, environmental and economic influences on design and technology, whilst enjoying opportunities to put their learning into practice by producing products of their choice.

Product Design encourages students to design and make original products using a variety of techniques and materials such as paper/card, plastics, electronics, timber-based materials, and ferrous and non-ferrous metals. The subject prepares students for individualised learning and problem solving, which is essential in business and industry. Time management is a key factor to candidates' success within the coursework elements of the qualification.

Students have to use different types of computer software including computer-aided design and manufacture, spreadsheets and presentation software. Outputs from such work are often sent to CNC machines for manufacture. This specification is designed to encourage candidates to develop design and technology skills and knowledge whilst at the same time being able to demonstrate mathematical and science skills.

Design Technology in the Sixth Form is a suitable subject to study alongside others as an entry route into a wide range of degree courses. Students are able to select their own projects to work on and many choose a project connected with the degree course they wish to go on to study. A past example of this was a project to design an artificial human heart, worked on by a boy who went on to study medicine at university.

DRAMA AND THEATRE STUDIES

Board: AQA

At RGS, Drama at A Level is offered not because we expect boys to become actors but because of the inherent valuable transferrable skills the qualification develops for both Sixth Form and post Sixth Form study. Top universities and employers demand more than just subject specific knowledge; they seek young people who are self-motivated, confident and independent learners, those who communicate well, have advanced social skills, think creatively and have the ability to improvise in a fast-changing world.

Drama is particularly valuable for boys who may wish to pursue a future career in the creative industries, medicine, law, media and communications, marketing and any area that deals with the public. The qualification is recognised by universities as a valid and rigorous academic qualification and will not prejudice entry to top institutions. Boys need not have studied Drama at GCSE in order to take A Level.

The course works synoptically by developing understanding and appreciation of the medium through practical exploration and written analysis. Students will study two plays in detail using practical methods to unlock meaning and learn how to express ideas through theatrical means. They will answer questions in a written examination on these set texts. A minimum of three theatre visits take place funded by the Department as the written examination also demands an analysis of live performance seen.

The practical components consist of choosing key extracts from a further three plays (chosen by the teacher), performing these and producing a portfolio of coursework that evidences the process and exploration that developed into the performances. Students also apply the theories of an important theatre practitioner to their work. This component is marked by a visiting examiner.

Students also devise and perform an original piece of theatre using a second practitioner to inform the work. They also produce an extended piece of coursework from this process.

Students are introduced to a wide range of texts, genres, playwrights and practitioners as part of the course and are encouraged to attend additional theatre visits organised by the Department to deepen and further their understanding, appreciation and enjoyment of the subject. They are not under any obligation to perform in extra-curricular events, although this activity can enhance learning and application of knowledge.

The study of drama uniquely develops personal skills: self-confidence, leadership, collaborative endeavour and flexibility in problem-solving. It engenders imagination, empathy, courage and originality as well as fostering independent thought, critical awareness and cultural growth. Drama is a valid and complementary option for those boys seeking balance across the four options in the Lower Sixth and as such happily sits with most subject combinations.

ECONOMICS

Board: Edexcel

Economics is an extremely dynamic subject, and its study will equip students with the ability to view the world with a critical eye. Students will learn how to propose solutions to some of the world's most challenging problems and to evaluate those policies for their strengths and weakness.

The subject encapsulates a range of skills needed by the modern professional including the ability to analyse complex scenarios, decision-making and communication skills through extensive classroom discussions. It is important to realise that the subject is taught in the context of current events taking place at the time, and therefore economists at the RGS are expected to be curious, keeping up-to-date with these events and reading around economic issues in more detail.

The skills developed through the study of Economics are highly sought after and is consequently considered to be a highly respected subject by university admissions tutors. It pairs very well with Mathematics and the sciences, offering the opportunity for the student to demonstrate real-world application of knowledge. For a student interested in the arts or humanities it offers the opportunity to show academic rigour and logic. To that extent, Economics is often considered to be a bridging subject between the arts and the sciences, having sociological, behavioural and mathematical aspects.

Economics is assessed on a linear basis and its specification has been extended in recent years to include a number of key developments in the field, including the introduction of behavioural economics, economic thought and financial markets. These will help the student to understand, in particular, the recent financial crisis and to propose solutions for its avoidance in future.

The Lower Sixth economist will study microeconomics, where students learn how markets work, why they fail and how they can be improved in order to tackle real-world problems and will also study macroeconomics where students focus on the key forces driving the UK economy and develop policies to improve key indicators such as unemployment, growth and inflation.

In the Upper Sixth students build on their microeconomic knowledge to analyse the role of economics in business, considering issues such as competitive forces, business motivation and economic efficiency. Students continue with their macroeconomic studies by extending their analysis to the global economy, looking at the forces of globalisation and development across a range of different countries.

Whilst examination success is of critical importance, Economics at the RGS is also taught through an exceptional co-curricular programme designed to appeal to our students throughout the Sixth Form. Team activities like Chance to be Chancellor offer the opportunity to develop invaluable career skills in a fun, competitive environment; EcoSoc is a student-led society that allows students to explore the subject beyond the syllabus. There are also many opportunities for students to prove themselves individually with a range of challenges including the Royal Economic Society, Locke, Marshall Society and Corpus Christi essay competitions - ideal preparation for the potential Oxbridge candidate.

The Economics Department also provides an extensive external lecture programme, providing students with the opportunity to broaden their education through attending events at Cambridge University, Eton and the London School of Economics. The Economics Department also provides domestic trips allowing students to apply their learning to a real-life context; this is augmented with international trips - in the past we have been to New York/Washington, Beijing/Shanghai and most recently to Geneva.

ELECTRONICS

Board: WJEC

Aims of the course:

- to develop essential scientific knowledge and conceptual understanding of the behaviour of electrical/electronic circuits
- to develop and demonstrate a deep understanding of the nature, processes and methods of electronics as an engineering discipline
- to develop competence and confidence in a variety of practical, mathematical and problem-solving skills
- to develop and learn how to apply observational, practical and problem-solving skills in the identification of needs in the world around them and the testing of proposed electronic solutions
- to develop and learn how to apply creative and evaluative skills in the development and assessment of electronic systems to solve problems
- to develop their interest in electronics, including developing an interest in further study and careers associated with electronics.

The Lower Sixth course consists of:

- System synthesis
- DC Electrical circuits
- Input and output sub-systems
- Energy and power
- Semiconductor components
- Logic systems
- Operational amplifiers
- Timing circuits
- Sequential logic systems
- Microcontrollers
- Mains power supply systems

The Upper Sixth course adds some more theory topics:

- Signal conversion
- AC circuits and passive filters
- Communications systems
- Wireless transmission
- Instrumentation systems
- Digital communications
- Optical communications
- High power switching systems
- Audio systems

It is assessed with two written examinations (80%) and two more ambitious practical projects (20%).

The course is extremely hands-on and well equipped. Most of our students go on to study related subjects like Electronic Engineering or Computer Science at University. There is also the opportunity of taking part in the Student Robotics competition, a national competition run by Southampton University.

ENGLISH LITERATURE

Board: OCR

'When I look back, I am so impressed again with the life-giving power of literature. If I were a young person today, trying to gain a sense of myself in the world, I would do that again by reading, just as I did when I was young.' (Maya Angelou)

English Literature appeals, above all, to those who find others' behaviour interesting and gain a sense of who they are through studying it; Literature is fundamentally about social observation. How much of our behaviour is influenced by the environment in which we live? How far are people prepared to go to conceal the truth? How important is our duty to those around us? Do we have one? These are the kinds of questions that Literature asks and they are at the core of the Sixth Form programme. Another key aspect of that programme is a consideration of how these ideas are communicated through language.

In the Lower Sixth, students will study four texts: Shakespeare, Pre-1900 Poetry, Modern Drama, and Modern Prose. In the Upper Sixth, students will study a Pre-1900 Drama text, Modern Prose, and Modern Poetry. Some of these texts will form part of a Genre Study, into an area such as The Gothic, Dystopian Literature or American Literature 1880-1940. Others will form part of the coursework, which comprises an analytical or 're-creative' piece (i.e. a piece of writing in the style of the author being studied) and a comparative essay. The choice of coursework texts, tasks and genre will be discussed with students before being decided upon. Across the two years, students will study some of the following texts:

Shakespeare, *Hamlet*

Shakespeare, *Measure for Measure*

Milton, *Paradise Lost Books IX and X*

Coleridge, *Selected Poems*

Tennessee Williams, *A Streetcar Named Desire*

Jez Butterworth, *Jerusalem*

Harold Pinter, *The Homecoming*

F Scott Fitzgerald, *The Great Gatsby*

Angela Carter, *The Bloody Chamber*

George Orwell, *Nineteen Eighty-Four*

Mohsin Hamid, *The Reluctant Fundamentalist*

Webster, *The Duchess of Malfi*

Ibsen, *A Doll's House*

Chaucer, *The Merchant's Prologue and Tale*

Bram Stoker, *Dracula*

Irvine Welsh, *Trainspotting*

W. H. Auden, *Selected Poems*

Each student is taught by two members of the Department who, principally, chair discussion. This study is complemented by lectures and conferences in London, by regular trips to the theatre and by a short residential trip to, for example, Stratford or Dublin. In addition, the Department ensures that library facilities are extensive and up-to-date and subscribes to a range of journals.

Most A Level English students go on to university to take arts, humanities, business or social science courses. Graduates have a wide range of professions open to them, apart from the specifically 'cultural' or 'expressive' ones, such as the media, law, administration and management.

For the committed English specialist interested in, among other areas, history and culture, the subject is best studied with History, Politics, Religious Studies and Classical or Modern Languages. It is, however, increasingly being chosen as a fourth option to complement the work of those whose main interests are the Sciences and Mathematics.

GEOGRAPHY

Board: Edexcel

The new Edexcel qualification provides an issues-based approach to the subject which explores contemporary issues such as the consequences of globalisation, the rise of new superpowers, tectonic hazards, water and energy insecurity and climate change. By the end of the course, students will have an in-depth understanding of physical and human geography, how people and environment interact and should have become critical, reflective and independent learners.

Geography A Level consists of four equally-weighted areas of study, assessed through three externally examined papers and one piece of coursework. If you only study Geography in Lower Sixth, you will not complete the coursework or the issue analysis paper.

Fieldwork remains an essential part of the A Level Geography course. In the first year of study boys will go on a day trip to London to look at regeneration in Docklands and the Olympic Park, and a weekend away in Dorset where the boys get the chance to study the wide variety of coastal features as well as looking at rural and urban regeneration. At the end of the first year the boys will have time to complete their coursework investigation. In the second year of study the boys will participate in an overseas residential trip which incorporates many elements of the whole A Level course. This is currently in the planning stages and trips in the past have visited Tenerife.

Subject content:

Paper 1: (30%)

- Tectonic processes and hazards
- Coastal landscapes and change
- The water cycle and water insecurity
- The carbon cycle and energy

Paper 2: (30%)

- Globalisation
- Regenerating places
- Superpowers
- Migration, identity and sovereignty

Paper 3: (20%)

An externally assessed examination based on a geographical issue. Students will receive a resources booklet with information in advance of the examination. The examination will have short open, open response and resource linked questions.

Paper 4: Independent investigation (20%)

This is an internally assessed and externally moderated piece of work. Students will complete their own piece of fieldwork, culminating in a 3000-4000-word report. It must be based on primary data that the student has collected himself.

GOVERNMENT AND POLITICS

Board: Edexcel

At a fundamental level, Politics is about the study of power. Who holds it? How did they acquire it? How is it legitimised and held accountable? What principles guide those who wield it? These are some of the key questions that we will consider when studying the A Level Government and Politics course.

We are very keen to make the Government and Politics a coherent two-year course, containing a range of approaches that will give any student a fantastic grounding for undergraduate study in a variety of political courses.

There are three papers to be sat for A Level Government and Politics, all of which will be sat at the end of Upper Sixth:

- Component 1: UK Politics and Core Political Ideas
- Component 2: UK Government and Non-core Political Ideas
- Component 3: Comparative Politics (Option 3A: USA)

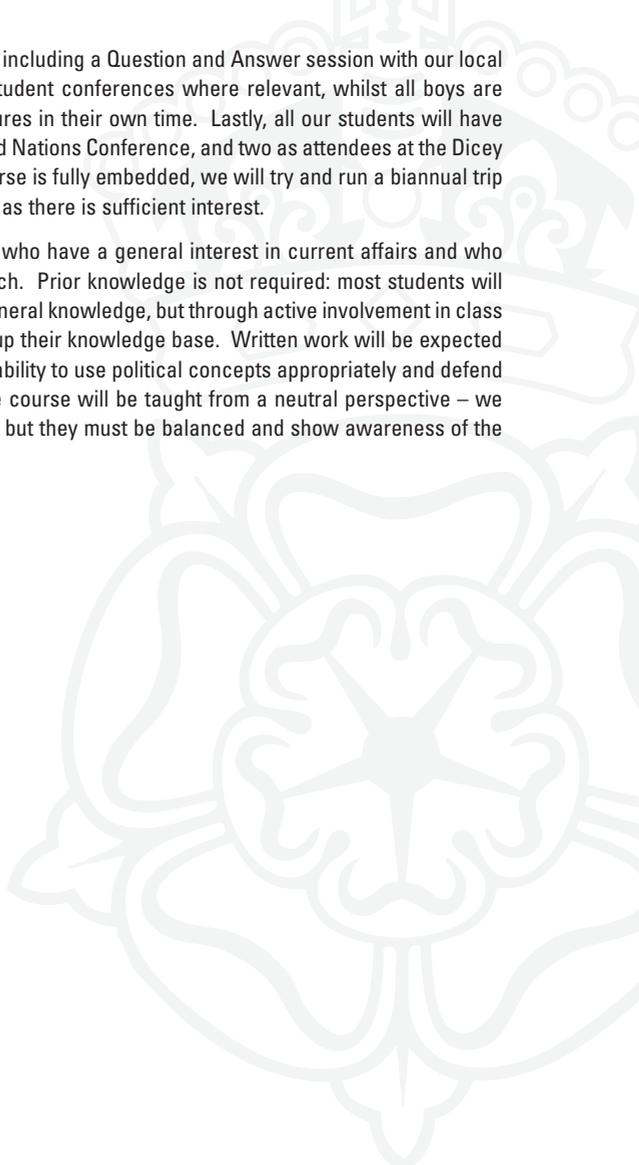
In the Lower Sixth, the focus will be three-fold. First, there will be a broad historical and conceptual introduction to Government and Politics, particularly of the western democratic tradition. Second, we will then closely investigate how both government and politics operate in the United Kingdom. This will involve looking at various areas like elections, parties, pressure group activity, the constitution, the legislature, the judiciary, and so on. Third, we will explore the ideas of three Core ideologies (liberalism, conservatism and socialism) and also one Non-core ideology (anarchism) through the thoughts and theories of their key thinkers.



Therefore, in the Upper Sixth, we will turn our attention to the USA – to investigate, in many similar ways to the UK, their constitution, their legislature, their judiciary, their elections and parties, and so on. Importantly, we will have to reflect on how the UK and US systems compare, as this is a new element in the examinations. By the time we start this comparative exercise, it will be time to start preparing for the actual exams, and this affords us the chance to return to the UK material covered in the Lower Sixth.

Each year we organise a visit to Parliament, including a Question and Answer session with our local MP; we also attend outside lectures and student conferences where relevant, whilst all boys are encouraged to attend beyond-syllabus lectures in their own time. Lastly, all our students will have the opportunity to participate in Model United Nations Conference, and two as attendees at the Dicey Conference at Oxford. Now that the US course is fully embedded, we will try and run a biannual trip to Washington DC and Philadelphia, as long as there is sufficient interest.

This A Level course will appeal to students who have a general interest in current affairs and who will respond to a broad questioning approach. Prior knowledge is not required: most students will start with little appreciation beyond some general knowledge, but through active involvement in class discussion and wider reading quickly build up their knowledge base. Written work will be expected throughout the course and will develop the ability to use political concepts appropriately and defend arguments logically and clearly. Finally, the course will be taught from a neutral perspective – we hope students will develop their own views, but they must be balanced and show awareness of the merits of alternative viewpoints.



HISTORY

Board: AQA

'Balanced people used to working on practical problems' (G. R. Elton on historians)

Both in its content and the skills it seeks to impart, A Level History is a weighty academic subject that has a proven track record in training the mind and in preparing for adult life. It is not usually a vocational subject but there are good reasons why universities and employers are keen to recruit from amongst those who have had a historical training. They value what this produces: independence of mind, an eye for the salient, incisiveness in critical analysis and the ability to communicate effectively one's ideas both orally and on paper.

It is not a requirement to have done IGCSE History in order to take the A Level course in the subject but most students will, in all likelihood, have done so. They will find that the skills and culture of historical thinking they have acquired will form a very effective foundation for A Level and beyond. If you have enjoyed History at IGCSE (especially in terms of the debate, discussions and investigative aspects: in other words, the act of hunting out answers), then you will enjoy it in the Sixth Form.

The course will appeal to students who:

- have an interest in the world around them and want to know more about the formative influences of the past (or, put simply, enjoy History!);
- have an interest in people; how they act and why they do what they do;
- have an interest in ideas and their influence and wish to develop a philosophical and political perspective on the world;
- enjoy investigation and discovery;
- enjoy debating (or even constructively arguing with the teacher) and want to develop further the ability to put forward a well-argued case both on paper and 'on their feet';
- are willing to be stretched and want to improve their analytical skills; especially in learning to sift through material and quickly and accurately select the salient and necessary;
- want to study a subject which encourages them to consider evidence and make up their own minds;
- want to sharpen their judgement of issues and arguments and learn to distinguish between explanation and simply opinion, or even prejudice;
- value the temperament of tolerance; the appreciation of rival lines of thought and how far they should be reconciled; the ability to see, appreciate and critique different points of view.

By the end of the course you will have learned how to evaluate and analyse information; to form complex judgements; how to do justice to complex arguments, yet convey these simply and effectively, and to understand people. These skills are recognised and valued by employers, universities and colleges. Historians often make good problem solvers and good managers and our Sixth Form students invariably move on to a wide range of degree courses in addition to History itself. Apart from scientists and linguists (sometimes in a combined degree course) who find its skills and knowledge useful, History provides a good basis for degree courses in Law, Politics, Philosophy, the Social Sciences, Accountancy, Business Management and Literary Studies.

You will gain much more than the acquisition of certain skills (important and readily transferable though these are). During the course you will learn:

- About the significance of events, individuals, issues and societies in history and how and why societies have changed over time.
- About the theories of historians and the philosophy which underpins the subject.
- To understand the nature of historical evidence and the methods used in its analysis and evaluation.
- To develop an understanding of how the past has been interpreted, represented and abused (and how it continues to be so).
- To form, develop and express your own historical ideas confidently and effectively

Our Sixth Form History course is currently based around the Middle Ages and Modern periods. Many students value IGCSE modern world history for its self-evident importance and relevance, and this is accommodated at A Level through a study of Modern Britain between 1951-2007. However, entering the Sixth Form you will also be ready for something new and a different academic challenge. Our study of The Crusades between 1071 and 1204 is valuable in broadening horizons and introducing students to wider aspects of the past, and to demonstrate the value and relevance of a deeper sense of historical perspective, by studying and contrasting periods of history quite different from our own. It is this perspective that students often find of greatest educational value to them later in life.

Studying two very different periods of History gives us a unique sense of judgement. It allows us, through studying people very different in their values and aspirations (moral, political, social) from ourselves, to know and judge ourselves better.

- It allows us to better understand the process of change in society and observe the transition in thought and action from the Middle Ages to the modern era.
- It allows us to develop clear ideas about causation; how attitudes, outlook, ideas and the role of individuals interacted with political, religious and economic forces
- It allows us, through a comparative study of English and European history, to discern some of the deep-seated similarities and differences between ourselves and our continental neighbours that living on an island (compared with a country with long and vulnerable land frontiers) has generated.
- It allows us to examine power structures and the basis of political obligation and dissent, for example, through a study of rebellions and revolutions in that period.

We are following the AQA A Level History syllabus, offering The Making of Modern Britain, 1951-2007 as well as The Age of the Crusades, 1071-1204. Students will be treated very much as being prepared for the autonomy of study and independence of work methods at university and beyond. We aim for an atmosphere within the Sixth Form that is purposeful but relaxed. Effective learning is only guaranteed when each individual is confident that any contribution will be well-regarded and appreciated. Emphasis is placed on discussion in seminar groups and essay work remains an important part of the approach. It has been said that the good history essay is a product of 'industry, intelligence, wit and bluff': not a bad training for life! We will also cover broader aspects of general history and historiography than the A Level syllabus provides. This open-ended discussion of general historical, political and philosophical issues for their own sake as an extension and enrichment programme that is hugely beneficial as part of a well-rounded Sixth Form education.

MATHEMATICS

Board: Edexcel

Mathematics has an important role to play in many different areas and disciplines, including the sciences (physical, biological and computing), all forms of engineering, the social sciences and technology as well as being a very important subject in its own right. An A Level in Mathematics is recognised as being a useful and valuable qualification by many employers and universities, in that it reflects the ability to think logically and analyse problems in a clear and concise way.

To achieve success in Mathematics at A Level requires considerable commitment and a willingness to work hard, besides a recognisable ability in the subject, and we usually insist on at least a grade 7 at IGCSE (although an 8 or 9 indicates a stronger likelihood of being able to access the top grades).

Content

Both the Mathematics and Further Mathematics A Level courses are made up of different topics which cover a range of broad overarching categories:

Core Pure Mathematics

This extends GCSE knowledge of areas like algebra, trigonometry and geometry and introduces new topics such as logarithms and calculus. Problem solving and analytical skills are developed through understanding and applying the techniques taught.

Further Pure Mathematics

As well as extending ideas of algebra, calculus and geometry a number of new topics are introduced which take Mathematics to a more abstract, yet also useful, level. This includes complex numbers, matrices, hyperbolic functions, polar coordinates and differential equations.

Mechanics

This involves the study of concepts such as velocity, acceleration, forces and moments, impulse, work, energy and power. It requires applications of techniques from Pure Mathematics to models of real-world situations and an understanding of their limitations.

Statistics

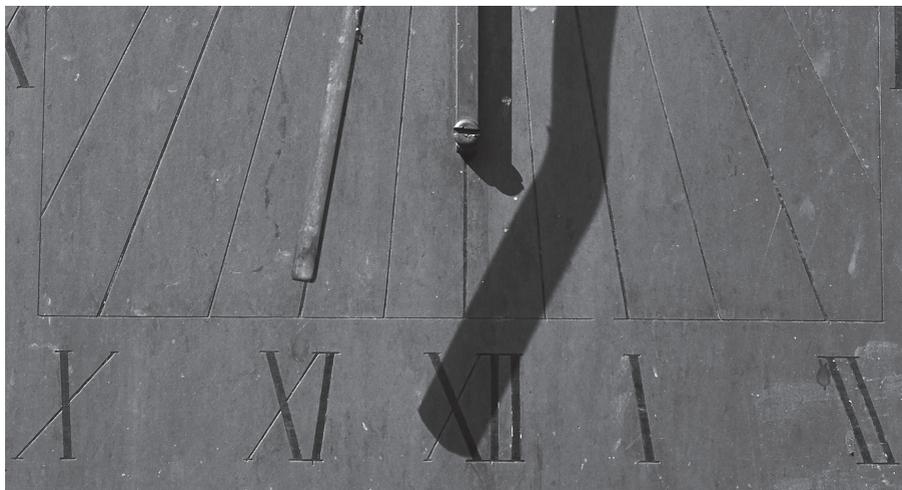
As well as analysis and presentation of data, here topics such as probability are extended to include random variables and distributions. Ideas of correlation and regression are formally given a mathematical foundation and statistical models are introduced which allow hypothesis tests to be studied.

A Level Mathematics (Single Mathematics)

The course is divided as two-thirds Pure Mathematics and one-third Applied Mathematics. Topics are taught in a sequential fashion and in some depth so that difficult material is covered in both years. Each week a student has four Pure Mathematics lessons with one teacher and four lessons of Mechanics and Statistics (and a little Pure) with another teacher.

As both Mechanics and Statistics are covered, the course complements Physics, Electronics, Technology, etc. as well as subjects such as Economics, Geography, Biology, etc. but Mathematics is also suitable for study alongside any other subjects.

Students are examined at the end of the Upper Sixth Year through three two-hour papers (two Pure Mathematics, one Applied). There is no coursework component.



A Level Mathematics and Further Mathematics (Double Mathematics)

The majority of those choosing this option will have been in a top set in the Fourth and Fifth Form and have done well in their Further Mathematics examination. Boys entering the RGS into the Sixth Form must provide evidence that they would cope with the algebraic demands of this course. Although the course is taught consecutively, with the Single Mathematics A Level content followed by Further Mathematics, both examinations are taken at the end of the Upper Sixth Year. It is expected that most boys choosing this option will take four A Levels at the end of the Sixth Form.

The Further Mathematics Course is split evenly between Pure and Applied Mathematics and there is an element of choice in the Upper Sixth as boys can opt to specialise in topics from Further Pure, Further Mechanics or Further Statistics.

Each student will have 16 taught lessons per week: eight lessons with one teacher for the Pure topics and eight lessons with another teacher for the Applied (Mechanics and Statistics).

Any boy considering reading Mathematics, Computer Science, Natural Sciences, Engineering or Economics at Oxbridge or other top universities should, if they are able, very seriously consider Double Mathematics.

MODERN FOREIGN LANGUAGES: FRENCH, GERMAN AND SPANISH

Board: AQA

It is widely recognised that the ability to speak at least one other foreign language not only provides the opportunity to understand and engage with other cultures but also is a highly valued asset in the increasingly globalised business world. The current A Level specification is very much centred on the practical use of languages and it allows students to not only develop a range of linguistic skills but also to study a range of topic areas in order to learn about the life and culture of the countries where the foreign language is spoken.

A Level

At A Level, students develop their linguistic ability in greater detail and are able to translate and summarise authentic foreign texts, understand the spoken word with relative ease and conduct a mature, fluent conversation on a range of issues. The A Level course is taught by two teachers and the lessons are divided between the topic areas; grammar; listening practice in the language laboratory and preparation for the oral examination. There is also a weekly conversation class with the foreign language assistant. The topic areas covered are current social trends, the political life of the foreign country and modern world issues. The course also includes the study of a film as well as the study of a text which can be a play or a short novel.

The examination is composed of three papers. The first is the oral, in which students discuss a short text and picture of the examiner's choice and this will be followed by a discussion of a topic of the candidate's choice which will have been prepared in advance. The second is the listening and reading paper, in which comprehension skills are tested, as well as the ability to translate from the foreign language into English and vice versa. The last paper is the writing paper; candidates will write two essays from a choice of questions, one will be based on the text of study and the other will be an essay on the film studied in class.

There are also trips available for all three languages studied in the Sixth Form which provide highly valuable experience of the culture and life of the country first-hand. They also contribute hugely to developing self-confidence when speaking in the foreign language and are a very good preparation for the oral examination.

A Level language students may choose to carry on their languages in a range of formats at university. Double linguists can continue to study their A Level languages or can continue with one language but take a new language ab initio in the first year of university. It is also increasingly common for students to take joint honours degrees in which languages are combined with another subject, such as law or management. Linguists are highly employable, not only for the more obvious careers in translating, interpreting and teaching, but in a wide range of sectors including banking, accountancy, law, management consultancy and international intelligence.

MUSIC

Board: Edexcel (Pearson)

The following units are studied as part of the full two-year A Level and will be examined at the end of the second year of study:

Component 1 – Performance (9MU01)

Students perform a recital lasting a minimum of 8 minutes on their chosen instrument(s) (including voice) as a soloist or as part of a small ensemble. To achieve the optimum mark, students should perform to a standard equivalent to Grade 7 or above. The performances are recorded after 1 March in the year of examination and submitted as coursework (30%) for external marking.

Component 2 – Composing (9MU02)

Candidates complete a total of two compositions over the duration of the course. One composition must be from either a list of briefs related to the areas of study, or a free composition, carrying 40 marks for this component. This composition must be at least 4 minutes in duration. The second composition must be from a list of briefs assessing compositional technique (e.g. four-part counterpoint). This composition must be at least 1 minute in duration, unless the brief specifies a longer minimum duration. The total time across both submissions must be a minimum of 6 minutes.

Component 3 – Appraising (9MU03)

This is the examined component of the course in which students are tested on their knowledge of 12 set works from 6 different areas of study. These areas of study are:

- Vocal Music
- Instrumental Music
- Music for Film
- Popular Music and Jazz
- Musical Fusions
- New Directions

Students then apply their knowledge and understanding of the set works to analyse music that is unfamiliar to them in an exam lasting 2 hours 10 minutes. Candidates will be expected to answer a series of listening questions on the works that they have studied in class and unfamiliar music in addition to a melodic/rhythmic dictation exercise. They will then be required to write two essays; essay one asks students to draw links from their study of the set works to the music heard as an unfamiliar extract. Essay two gives a choice of four questions that ask students to evaluate the musical elements, context and language of one set work. Each option will be from a different area of study.

PHYSICS

Board: OCR

Why Study Physics in the Sixth Form?

Physics is the study of how our universe works from large-scale ideas about the cosmos to the fundamental particles of matter and everything in between. A big part of the course is sharing a sense of curiosity and wonder about how the universe works. But Physics is not just about abstract theories – practical work plays a great part as well as studying about the applications of the subject e.g. in engineering, materials and communications. Students should appreciate the profound impact, intellectual and practical, of physics and engineering on all our lives.

Physics gives you excellent preparation for university study (in Mathematics and the sciences or in other less-related disciplines). You will gain experience in the mathematical modelling and of real-world situations, a transferable skill that makes physicists valuable employees in many different fields. You will also develop the skills of critical thinking and problem solving, both individually and as members of a team, and become familiar with modern equipment and the use of ICT in physics and engineering. Simply put, Sixth Form Physics at the RGS is interesting, challenging and rewarding; it gives you excellent skills for university and employment in a wide range of disciplines.

Course Content

The OCR specification has been selected as most appropriate to the abilities and needs of our students and most in keeping with the teaching philosophy of the Department. It provides excellent opportunities to develop problem-solving skills and to apply understanding in a wide range of applications and contexts. All material is tested by external written examination alongside the ongoing practical assessment (this does not carry any marks for the final grade but must be completed and is reported separately on the exam certificate).

Lower Sixth

- Students will develop their understanding of topics familiar from GCSE such as forces & motion and electricity, learning to apply these ideas in more complex situations with a wide range of everyday applications.
- The physics of materials is introduced as a hugely important topic to our modern world for everything from construction to technology.
- In theoretical physics we consider the fundamental nature of matter, introducing ideas of quantum & particle physics, the dual wave-particle nature of everything in our universe, and special relativity.
- Practical skills are developed on both sides of the course by small practical tasks throughout, some of which are assessed as part of the practical skills assessment for the course.
- The use of computational models and algorithmic thinking is introduced as a means of using simple ideas to solve complex problems.

Upper Sixth

- A wide range of more complex situations is studied, e.g. oscillations, capacitor circuits and nuclear decay. These are treated both mathematically and computationally, to highlight the mathematical similarity between many different branches of physics.
- The mathematical concept of a “field” is introduced to describe gravity, electrostatics and electromagnetism in a more in-depth way than GCSE.
- The importance of statistical thinking is introduced in both nuclear decay and thermodynamics.
- We look out into space to study the physics of the whole cosmos on the largest scale.
- Practical assessment continues, with a focus on developing more extended investigation skills.

Teaching and Learning

All teaching groups (typically around 10-12 students) are shared by two teachers giving students a chance to experience variety in style and approach. Theory and practical work are completely integrated within the teaching scheme and students will be actively involved with experimentation in the majority of lessons.

In addition to the course textbooks the Department has developed a substantial body of digital resources available to the students via SharePoint. The course has been designed to facilitate use of student devices in class.

Students regularly stretch themselves beyond the requirements of the syllabus both with additional material in class and independent study outside. From January of the Lower Sixth the department runs a thriving “Further Physics” course for those wanting to go beyond the syllabus, perhaps with the aim of applying for competitive Physics or Engineering courses at university. In addition, there are a number of enrichment opportunities available with the support of the department such as the British Physics Olympiad, Go4SET Engineering team, and Student Robotics. Students are also encouraged to undertake their own enrichment work, e.g. by tackling problems on the IsaacPhysics website.

Entrance Requirements

Students considering studying Physics at A Level should be expected to demonstrate a strong ability through performance in Physics IGCSE and Mathematics. Physics becomes increasingly mathematical; students who wish to keep open the option of reading Engineering or Physics at university must combine A Level Mathematics and Physics. Those knowing they would like to study Physics or Engineering at university (especially Oxbridge) are strongly encouraged to read Further Mathematics – whilst not an essential entry requirement it will allow students to develop a deeper appreciation of Physics ideas and access more of our extension material. Other students of A Level Physics are very strongly advised to take Mathematics at least in the Lower Sixth. Any student not intending to take Mathematics should consult the Head of Physics before making a final decision.

PHYSICAL EDUCATION

Board: AQA (specification number 7582)

Studying an A Level in Physical Education will afford students the opportunity to explore the reasons for participation in physical activity and sport, and also those factors affecting optimal performance. Throughout the course, students will scrutinise principles and theories from across the sporting world. This will enable them to not only develop their knowledge of theoretical physical education, but to also cultivate an interest in how that theory is applied in a broader sporting context. Career opportunities for those wishing to further their studies in physical education include employment in the fields of, but not limiting to; sports nutrition, physiotherapy, sports psychology, biomechanics, sports medicine and pedagogy.

Theoretical assessment:

Paper 1 - Factors affecting participation in physical activity and sport.

Section A – Applied anatomy and physiology (35 marks)

Section B – Skill acquisition (35 marks)

Section C – Sport and society (35 marks)

This is a 2-hour examination. It is worth 105 marks and equates to 35% of the A Level.

Paper 2 - Factors affecting optimal performance in physical activity and sport.

Section A – Exercise physiology and biomechanics (35 marks)

Section B – Sports psychology (35 marks)

Section C – Sport and society and technology in sport (35 marks)

This is a 2-hour examination. It is worth 105 marks and equates to 35% of the A Level.

Non-examined assessment:

Students are firstly assessed on their practical/coaching performance in one physical activity (approved by AQA). They are judged on their ability to perform/coach prescribed skills in attacking and defending and their awareness and implementation of appropriate tactics and strategies within a competitive situation.

Students will then be expected to analyse and evaluate their own or a peers' performance in a chosen activity. They will explore weaknesses within the performance and following this create an action plan that stipulates how performance is to be improved.

Subject Content:

- **Applied anatomy and physiology** (Paper 1 Section A)
 - Cardiovascular system
 - Respiratory system
 - Neuromuscular system
 - Musculo-skeletal system and analysis of movement in physical activities.
 - Energy systems

- **Skill acquisition** (Paper 1 Section B)
 - *Skill continuums and transfer of skills*
 - *Impact of skill classification*
 - *Principles and theories of learning and performance*
 - *Use of guidance and feedback*
 - *Memory models*
- **Sport and society** (Paper 1 Section C)
 - *Emergence of globalisation of sport in the 21st century society*
 - *The impact of sport on society*
- **Exercise physiology** (Paper 2 Section A)
 - *Diet and nutrition*
 - *Preparation and training methods in relation to maintaining physical activity and performance*
 - *Injury prevention and the rehabilitation of injury*
- **Biomechanical movement** (Paper 2 Section A)
 - *Biomechanical principles*
 - *Levers*
 - *Linear motion*
 - *Angular motion*
 - *Projectile motion*
 - *Fluid mechanics*
- **Sport psychology** (Paper 2 Section B)
 - *Psychological factors that can influence an individual in physical activities including motivation, arousal, anxiety and attitudes.*
- **Sport and society and the role of technology in physical activity and sport** (Paper 2 Section C)
 - *Concepts of physical activity in sport*
 - *Development of elite performers in sport*
 - *Ethics in sport*
 - *Violence in sport*
 - *Drugs in sport*
 - *Sport and the law*
 - *The impact of commercialisation on physical activity and sport and the relationship between sport and the media.*
 - *The role of technology in physical activity and sport*

Entrance Requirements:

Students considering studying Physical Education at A Level should be expected to demonstrate a strong grade in GCSE Physical Education. Students who have not studied Physical Education at GCSE should have performed strongly in GCSE Biology.

RELIGIOUS STUDIES

Board: OCR

The Sixth Form course offered by the Department is the OCR course in Religious Studies. The aim of the course is to ensure that there is genuine moral, philosophical and theological discussion and debate within the classroom based on reading and research independently undertaken by the student, supported by his teachers. In this way it provides a solid foundation for success in any university degree course.

There are three examinations, of equal value, covering three different aspects of Philosophy and Theology. The first paper introduces the key concepts in Philosophy of Religion, the second is an examination of ethical theory and moral issues, the third covers theological topics and issues in religious interaction with society.

In line with national trends, Religious Studies at the RGS is a very popular Sixth Form subject. In recent years Religious Studies has been successfully combined not only with subjects such as English and History, but with Modern Languages, Mathematics and Science as well. Our students have gone on to top universities to study a range of subjects in Humanities, Sciences and Social Sciences.

The approach to studying this subject at A Level is entirely academic, and religious faith is neither necessary nor particularly advantageous. You do not need to have done Religious Studies GCSE but we would expect candidates to have done well across a broad range of subjects, and to have an interest in philosophical, ethical and religious issues.

SIXTH FORM CURRICULUM

GAMES

While at the RGS, each boy takes part in a full and active programme of Games. This consists of a Games afternoon (three periods) per week and a variety of activities which take place during the lunch time and after school. There is also the option to study Physical Education to A Level which investigates aspects of sport both scientifically and sociologically.

Rugby and hockey are the major sports of the Michaelmas and Lent Terms while cricket is played in the Trinity Term. Sixth Form students who are not required for major games can opt for a number of different sports. Successful teams run in athletics, golf, football, cross-country, tennis, badminton, sailing and squash. There are four senior rugby and hockey teams per age group and three in the cricket season. Representative sides in the major games play on Saturdays and minor games tend to be played after school, during the week. If a boy shows exceptional sporting talent, then he is encouraged to gain representative honours at county, regional and national level.

The House competitions ensure that most boys have a chance of competing against their peers in events such as rugby, hockey, cricket, cross-country, tennis and basketball, to mention but a few. This is particularly the case during events such as Sports Day and the swimming gala.

In order for the RGS to maintain its strong sporting reputation, we expect boys to represent the School when invited to do so.

RELIGIOUS EDUCATION

In the Upper Sixth Form, for those students not studying four subjects, there is one period a week of Religious Education which encourages the students to undertake a rational and careful study of a range of personal, social and moral issues that are directly relevant to Sixth Form students preparing themselves to leave school and to enter a wider society.

Each student is encouraged to look critically at contemporary standards and values as well as to consider rigorously his own presuppositions so that he is able to construct his own world view and personal moral code.



CAREERS AND HIGHER EDUCATION

The School provides structured support to guide each student through the university application process, as outlined below:

Lower Sixth

September	Discussions about changes to options
November	Lower Sixth Higher Education Evening
January	Careers Convention
February	Oxbridge Seminar
March	Launch of the Independent Learning Assignment which provides the basis for the academic component of many personal statements
June	Higher Education Conference Discussion and decisions about university choices Initial draft of Personal Statements Students register with UCAS Apply
July/August	UCAS Application

Upper Sixth

September	Parents' Evening to outline UCAS application process UCAS applications (Oxbridge and Medics priority)
October	UCAS applications Oxbridge practice interviews begin Preparation for interviews seminar University offers made (until March)
November	UCAS applications Oxbridge practice interviews continue
December	Oxbridge interviews
January	Oxford and Cambridge offers confirmed
March	Assembly covering finance and making final offer decisions
March - May	Students confirm university choices
June	Testimonials completed
August	A Level results published University places confirmed

Mr Dunscombe, Director of Higher Education, is always available to meet with students and parents to discuss any aspect of the Higher Education application process. The School continues to provide comprehensive support for those making post-A Level applications to university.



Some boys may wish to consider applications to universities overseas, and to the USA in particular. This is a longer process and those contemplating this route should advise Mr Dunscombe at an early stage in the Lower Sixth and no later than the end of the Lent Term.

Boys may also wish to consider alternative routes after leaving the Sixth Form and, in particular, to make applications for Degree Apprenticeship programmes. These applications are supported alongside the university preparation programme.

For those boys who elect to make post A Level applications to university, the School will continue to fully support them in the same way as they would have done had the application been made in the Upper Sixth.

Students and parents are kept updated on all issues relating to Careers and Higher Education via a fortnightly briefing sheet.

Royal Grammar School
High Street, Guildford GU1 3BB
Telephone: 01483 880600