

GCSE OPTIONS



GCSE

THE *Leys*
CAMBRIDGE

A message from the Headmaster

When you move into Year 10 you will be embarking on an exciting and important phase of your academic career.

Your performance at GCSEs could have a significant impact on your future: experience tells us that universities play close attention to the outcomes of GCSEs in making decisions about offers of university places, especially at the most competitive institutions and for the most highly sought-after courses. Major changes at A Level (specifically, the reintroduction of linear A Levels) mean that your GCSEs are likely to be even more scrutinised by university admissions departments than they have in the past. Thus, the decisions you make are very important and may have far-reaching implications. It is therefore essential that you choose subjects that interest you, which match any long-term ambitions you might have and which will give you the best chance of examination success at the end of Year 11.

We have produced this booklet to help you make these choices. In it you will find details concerning the 'core' and various additional options open to you. I hope you will find it useful and informative.



We have made it our policy broadly to follow the National Curriculum, while offering a flexibility of choice, and much that goes beyond the National Curriculum. We believe that a curriculum should be broad in the subjects on offer, and balanced in the subjects it prescribes. In particular, by the age of sixteen, you should have achieved a good grounding in the Sciences and the Humanities, as well as sound levels in literacy and numeracy. These are the principles that have guided our choice of core subjects and options.

I wish you every success in your GCSE courses and I look forward to encouraging your progress in the coming terms.

A handwritten signature in black ink that reads "Martin Priestley". The signature is written in a cursive style with a long, sweeping underline.

Martin Priestley, Headmaster

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CORE SUBJECTS

English Language

Head of Department, Miss A Garrett

Introduction

The English Language course is designed to prepare pupils' reading, writing and critical thinking skills in order to enable them to communicate and succeed in class and beyond the syllabus according to what is required at A Level, in the workplace or elsewhere. The course is comprised of a range of texts, both fiction and non-fiction, poetry and prose; pupils will be introduced to material from different cultures and time periods, and they will be encouraged to consider the different ways of reading a text. The English Language course offers a variety of writing opportunities and pupils will learn the basics of accurate written communication as well as exploring more creative avenues which will allow them to experiment with voice, technique and style.

Course Structure

The teaching of the Language and Literature IGCSEs are integrated, and pupils will often spend a portion of a term on one qualification before moving onto a module within the other as the skills in each complement both qualifications.

The exam board publishes an anthology of text extracts which are used for both the Language and Literature

IGCSEs; all pupils will be issued with the anthology and will use it throughout the two years. Pupils will begin Year 10 with the Creative Writing coursework. In the Easter term they will be taught the articles that may appear in the exam, and they will conclude the term with the Poetry and Prose coursework. In Year 11 pupils will continue to revise and practise their writing and reading skills in accordance with the exam tasks.

Assessment Structure

The Language IGCSE contains two coursework (worth 40% of the qualification) which are written in Year 10:

- Poetry and Prose - a 20% coursework in which pupils compare two texts selected from an anthology published by the exam board.
- Creative writing - a 20% coursework in which pupils produce a creative piece in accordance with a theme chosen by their teacher.

The English Language exam (60%) is a 2hr 15 paper and is split into a Reading section worth 45 marks, and a Writing section worth 45 marks. Pupils are taught ten non-fiction articles from the anthology and will compare one pre-taught text to one unseen text through a series of comprehension questions. They will also have to produce a piece of transactional writing in the style of a letter/speech/article/review for the writing unit.

English Literature

Head of Department, Miss A Garrett

Introduction

The English Literature IGCSE introduces pupils to poetry, prose and drama, both traditional and contemporary, from a diverse range of cultures and time periods. Pupils will be encouraged to consider themes of identity, community, power and relationships and how the texts they read resonate with their own experiences. They will encounter literature that is interesting but demanding and will be encouraged to develop their own personal perspectives on the material. Consequently, pupils will gain a sophisticated sense of how writers use words and language effectively and be inspired to express themselves more imaginatively.

Course Structure

The teaching of the Language and Literature GCSEs are integrated, and pupils will often spend a portion of a term on one qualification before moving onto a module within the other as the skills in each complement both qualifications.

The exam board publishes an anthology of text extracts which are used for both the Language and Literature IGCSEs; all pupils will be issued with the anthology and will use it throughout the two years. In the Autumn term pupils will study a Modern text for their first coursework unit. In the Spring term pupils will study a Modern Prose text for their examination and in Year 11 they will be taught poetry from the anthology for their examination and complete a final coursework on a Literary Heritage text.

Assessment Structure

The Literature IGCSE contains two coursework (worth 40% of the qualification). One is written in Year 10 and one is written in Year 11.

- Modern Drama - a 20% coursework on a Modern Drama text
- Literary Heritage - a 20% coursework on a Shakespeare text

The English Literature exam is a 2hr paper with three components. The first section is an analysis of an unseen poem; the second section involves a comparison between two poems that have been pre taught; the third section is an essay question on the Modern Prose text.

“

I really love the Poetry section of English Literature, discovering the meanings behind poems and annotation techniques.

”

Mathematics

Head of Department, Mrs E F Prosser

Introduction

The broad aims of this linear IGCSE course emphasises and encourages:

- sound understanding of concepts
- fluency in procedural skill
- competency to apply mathematical skills in a range of contexts
- confidence in mathematical problem solving

In addition, candidates will aim to:

- develop fluent knowledge, skills and understanding of mathematical methods and concepts
- acquire, select and apply mathematical techniques to solve problems
- reason mathematically, make deductions and inferences and draw conclusions
- comprehend, interpret and communicate mathematical information in a variety of forms appropriate to the information and context

Course Structure

The syllabus conforms to the National Curriculum and is assessed under three headings, as follows.

- Demonstrate knowledge, understanding and skills in number and algebra. (AO1)
- Demonstrate knowledge, understanding and skills in shape, space and measure. (AO2)
- Demonstrate knowledge, understanding and skills in handling data. (AO3)

For the most able there is an opportunity to take the OCR Free Standing Mathematics Qualification (FSMQ) in Additional Mathematics. This course provides pupils with an introduction to the mathematics studied post-16, and is an ideal preparation for A Level Mathematics and Further Mathematics. It also requires much independent learning and determination. The topics covered are:

- Algebra
- Enumeration
- Coordinate geometry
- Pythagoras and trigonometry
- Calculus
- Numerical methods
- Exponentials and logarithms

Those pupils who intend to go on to an A Level course in Mathematics ought to be capable of obtaining at least grade 7 at IGCSE. The algebra content in the Higher Tier is particularly important as without a secure handling of algebra, A Level will be found to be very demanding indeed.

Assessment Structure

IGCSE Mathematics is assessed by two written exam papers of equal weight, each of 2 hours duration, both taken in the May/June of Year 11 (both allow use of calculators and are of mixed content).

FMSQ Additional Mathematics is assessed by one written exam of 2 hours duration. This is taken in May/June of Year 11 and allows use of a scientific calculator.

MODERN FOREIGN LANGUAGES

French
German
Spanish

French

Head of Department, Mr S Leader

Introduction

The French IGCSE course has as its broadest aim the desire to provide all pupils with a sound practical knowledge of French. Within this framework, able linguists are stretched well beyond basic competence and weaker linguists are encouraged to acquire the basic communication skills required for success at IGCSE. We assume that those pupils selecting French have followed an introductory course, although we are aware that individual pupils backgrounds in the language differ and we aim to cater for all cases. However, it is not usually possible to enter the IGCSE course as a complete beginner.

Course Structure

The Edexcel International GCSE course is topic-based, concentrating largely on the areas prescribed by the National Curriculum. Language is practised through studying topics such as Home, Family and Relationships, Free Time and Local Area. Wherever possible, French is the language of communication in the classroom for both teacher and pupil. Those pupils with aspirations beyond IGCSE are encouraged to move beyond the specific requirements of the IGCSE examination in order to help bridge the inevitable gap between GCSE style work and the more rigorous demands of A Level. International GCSE now specifically involves a cultural awareness of the country whose language is being learnt. GCSE pupils also have the opportunity to practise their spoken French with our Language Assistant.

Assessment Structure

Assessment in International GCSE is carried out in the four core skill areas - Listening, Reading, Speaking and Writing - and each is worth 25%. In the Listening and Reading papers, candidates will be required to give some answers in the target language. For the Speaking assessment, candidates choose a photo to talk about and are then required to answer questions about two further topics from the syllabus. The Writing assessment is based on one short and one longer writing task. These tasks can be in the form of essays, articles, letters or emails and are closely related to the topics from the syllabus. Dictionaries are not permitted in any part of the exam.



German

Head of Department, Mrs M Wyatt

Introduction

The German IGCSE course has as its broadest aim the desire to provide all pupils with a sound practical knowledge of German. Within this framework, able linguists are stretched well beyond basic competence and weaker linguists are encouraged to acquire the basic communication skills required for success at IGCSE. We assume that those pupils selecting German have followed either a one-year course in Year 9 or a two-year course in Years 8 and 9. We can also cater for those with a wider background in the language.

Course Structure

The Edexcel International GCSE course is topic-based, concentrating largely on the areas prescribed by the National Curriculum. Language is practised through studying topics such as Home, Family and Relationships, Free Time and Local Area. Wherever possible, German is the language of communication in the classroom for both teacher and pupil. Those pupils with aspirations beyond IGCSE are encouraged to move beyond the specific requirements of the IGCSE examination in order to help bridge the inevitable gap between GCSE-style work and the more rigorous demands of A Level. International GCSE now specifically involves a cultural awareness of the country whose language is being learnt. Therefore, every year we organise the well-established German Exchange with the Karlsgymnasium in Stuttgart. Our pupils spend a week in Germany during the Easter holidays and the German pupils come to England for a week at the end of the Summer Term. We encourage all our German GCSE pupils in Year 10 and Year 11 to participate. IGCSE pupils also have the opportunity to practise their spoken German with our Language Assistant.

Assessment Structure

Assessment in International GCSE is carried out in the four core skill areas - Listening, Reading, Speaking and Writing - and each is worth 25%. In the Listening and Reading papers, candidates will be required to give some answers in the target language. For the Speaking assessment candidates have to describe the content of a picture, referring to past, present and future events and are then required to answer questions about two further topics from the syllabus. The Writing assessment is based on one short and one longer writing task. These tasks can be in the form of essays, articles, letters or emails and are closely related to the topics from the syllabus. Dictionaries are not permitted in any part of the exam.

“ I enjoy the challenge of learning a foreign language and believe that, through such learning, one can gain a greater understanding of the culture. ”

Spanish

Head of Department, Mrs L Reyes

Introduction

The Spanish IGCSE course aims to provide all pupils with a sound practical knowledge of Spanish and an understanding of Spanish culture. Able linguists are stretched well beyond basic competence in the language and weaker linguists are encouraged to acquire the basic communication skills required for success at IGCSE. Spanish at IGCSE is equally appropriate as an option for pupils who started Spanish in Year 9, as for those who have studied the language for longer. The background to the language at this stage is less important than a real motivation and willingness to learn a language. Many of our top grades are gained by pupils who started Spanish in Year 9.

Course Structure

The Edexcel International GCSE course is topic-based, concentrating largely on the areas prescribed by the National Curriculum. Language is practised through studying topics such as Home, Education, Family, The Modern World and Social Activities. Wherever possible, Spanish is the language of communication in the classroom for both teacher and pupil. Those pupils with aspirations beyond IGCSE are encouraged to move beyond the specific requirements of the IGCSE examination in order to help bridge the inevitable gap between GCSE style work and the more rigorous demands of A Level. International GCSE now specifically involves a cultural awareness of the country whose language is being learnt. GCSE pupils also have a weekly opportunity to practise their spoken Spanish with our Language Assistant.

Assessment Structure

Assessment at International GCSE is carried out in the four core skill areas - Listening, Reading, Speaking and Writing - and each is worth 25%. In the Listening and Reading papers, candidates will be required to give some answers in the target language. For the Speaking assessment, candidates choose a photo to talk about and are then required to answer questions about two further topics from the syllabus. The Writing assessment is based on one short and one longer writing task. These tasks can be in the form of essays, articles, letters or emails and are closely related to the topics from the syllabus. Dictionaries are not permitted in any part of the exam.

SCIENCE

Biology

Chemistry

Physics

Combined Science

Biology

Head of Department,
Mr P M Davies

Introduction

Biology is a window into the fascinating world of animals, plants, fungi, bacteria and protoctists. Biologists can be found working in police forensic departments, hospitals, law firms and as managers of multinational companies. The Biology department is staffed by particularly experienced teachers all of whom continue to be immensely passionate and excited by Biology. The Biology department also leads a biannual expedition to Zimbabwe, Botswana and Zambia.

Course Structure

Year 9

- Cell Biology
- Tissues, Organs and Systems
- Communicable Diseases
- Classification
- Ecology 1 - Adaptations and Ecosystems

Year 10

- Photosynthesis
- Respiration
- Homeostasis
- Nervous Communication
- Hormonal Communication
- Ecology II – Cycles, Human Impact and Food production

Year 11

- Plant Hormones and Diseases
- Cell Division
- Reproduction
- Genetics
- Evolution
- Genomics

Assessment Structure

Paper 1

Topics 1-4 Assessed: Cell Biology, Infection and Response, Organisation and Bioenergetics. Multiple Choice, structured, closed short answer and open response questions.

1 hour 45 minutes, 100 marks, 50% weighting.

Paper 2

Topics 5-7 Assessed: Homeostasis and Response, Inheritance, Variation and Evolution, Ecology.

Multiple Choice, structured, closed short answer and open response questions. 1 hour 45 minutes, 100 marks, 50% weighting.

GCSE Biology Practical Endorsement

10 Required Experiments

Chemistry

Head of Department, Mr M Newman

Introduction

The AQA GCSE Chemistry course offers an insight into an incredibly fascinating field of study. Because it is so fundamental to our world, Chemistry plays a role in everyone's lives and touches almost every aspect of our existence in some way. Chemistry is essential for meeting our basic needs of food, clothing, shelter, health, energy, and clean air, water, and soil. Chemical technologies enrich our quality of life in numerous ways by providing new solutions to problems in health, materials, and energy usage. Thus, studying chemistry is useful in preparing us for the real world.

Chemistry is often referred to as the central science because it joins together the other fields of science. Knowledge of the nature of chemicals and chemical processes therefore provides insights into a variety of physical and biological phenomena. Knowing something about chemistry is worthwhile because it provides an excellent basis for understanding the physical universe we live in. For better or for worse, everything is chemical!

Course Structure

Pupils study the academic content as shown below and develop their practical skills over the course of Eight Exam board required practicals.

Year 9

- Unit 1 – Fundamental ideas in Chemistry
- Unit 2 – The Atom and the Periodic Table
- Unit 3 – Mixtures
- Unit 4 – Chemical Bonds
- Unit 5 – Structure and properties

Year 10

- Unit 6 – Equations and particle theory
- Unit 7 – Quantitative Chemistry
- Unit 8 – Acids, bases and salts
- Unit 9 – Metals
- Unit 10 – Electrolysis
- Unit 11 – Energy changes

Year 11

- Unit 12 – Rates of Reaction
- Unit 13 – Equilibrium and the Haber Process
- Unit 14 – Crude oil and Hydrocarbons
- Unit 15 – Alkenes, alcohols and carboxylic acids
- Unit 16 – Polymers and DNA
- Unit 17 – Chemical Analysis
- Unit 18 – The Atmosphere
- Unit 19 – Earth's resources

Assessment Structure

Paper 1:

What's assessed

Units 1 - 11: Atomic structure and the periodic table; Bonding, structure, and the properties of matter; Quantitative chemistry, Chemical changes; and Energy changes.

How it's assessed

- Written exam: 1 hour 45 minutes
- Foundation and Higher Tier
- 100 marks
- 50% of GCSE

Questions

Multiple choice, structured, closed short answer and open response.

Paper 2:

What's assessed

Units 12 – 19: The rate and extent of chemical change; Organic chemistry; Chemical analysis, Chemistry of the atmosphere; and Using resources.

Questions in Paper 2 may draw on fundamental concepts and principles from the Paper 1 Units.

How it's assessed

- Written exam: 1 hour 45 minutes
- Foundation and Higher Tier
- 100 marks
- 50% of GCSE

Questions

Multiple choice, structured, closed short answer and open response.



Physics

Head of Department,
Mr A P Harmsworth FRAS

Introduction

Physics is the most fundamental of the Sciences, as it reaches deep down into the heart of the atom and far out into the furthest reaches of the universe visible to our current technologies. It influences the design and operation of all modern devices, from the latest foldable mobile phones, satellite internet connectivity, heart pacemakers and more recently into essential modelling of the airborne infection routes provided to the SARS-CoV-2 virus that caused the pandemic. Modern physicists find themselves working alongside biologists in developing the exciting new field of Quantum Biology; with chemists, they are developing revolutionary new battery technologies to power our cars and homes of the near future.

The GCSE course covers a traditional set of content that nonetheless gives all pupils more than a tantalising glimpse of the power of the Sciences to change lives for the better and enable humanity to take on and solve the very biggest challenges our species faces. It also provides them with the knowledge, understanding and skills to become a more analytical person, attentive to finer details (especially the power of numbers). Pupils will also be far more aware of the behaviour of everything in the universe, including the universe itself!

The subject's mathematical demands are higher than the other two Sciences: 40% of marks across the question papers will assess mathematical skills at higher tier GCSE level. This compares to 20% for Chemistry and 10% for Biology. Consequently, pupils who have, or develop, particularly strong mathematical skills at GCSE will find some of the biggest challenges more manageable. Given their work in Maths lessons, most of our pupils have more than adequate numerical skills to do very well with the subject.



Course Structure

The course content is spread over three years and usually follows the order indicated below, with some minor alterations from time to time.

- Energy
- Electricity
- Particle Model of Matter
- Atomic Structure
- Forces
- Waves
- Magnetism & Electromagnetism
- Space Physics



Assessment Structure

Paper 1

What's assessed

Topics 1-4: Energy; Electricity; Particle model of matter; and Atomic structure.

How it's assessed

- Written exam: 1 hour 45 minutes
- Foundation and Higher Tier
- 100 marks
- 50% of GCSE

Questions

Multiple choice, structured, closed short answer and open response.

Paper 2

What's assessed

Topics 5-8: Forces; Waves; Magnetism and electromagnetism; and Space physics.

Questions in paper 2 may draw on an understanding of material from paper 1, including: energy changes and transfers due to heating, mechanical and electrical work and the concept of energy conservation from Energy and Electricity.

How it's assessed

- Written exam: 1 hour 45 minutes
- Foundation and Higher Tier
- 100 marks
- 50% of GCSE

Questions

Multiple choice, structured, closed short answer and open response.

Combined Science Trilogy

Head of Department, Mr O E Peck

Introduction

Science is a core subject and as such is studied by everyone through to GCSE. For most Leysians this will mean studying the three separate sciences (3 separate GCSE grades) as outlined in this booklet. However, at the start of Year 11, based on the recommendations of their teachers, some pupils may move to study Combined Science (2 GCSE grades).

The Year 11 programme of study, builds on the work covered in Years 9 and 10. It encourages students to explore, explain, theorise and model in science and develops a critical approach to scientific evidence. GCSE Combined Science gives a good grounding in Science, and can provide access to A level Science courses.

Course Structure

GCSE Combined Science (Trilogy) is taught as 3 subjects by specialist teachers.

Upon completion of the course pupils will have studied the following content, which is shared with the separate sciences, although reduced in size.

Biology

- Cell Biology
- Organisation
- Infection and Response
- Bioenergetics
- Homeostasis and Response
- Inheritance, Variation and Evolution
- Ecology

Whilst studying the above, pupils will also carry out 7 required practicals on Cells, Osmosis, Biochemical Tests, Enzymes, Photosynthesis, Reaction Times and Ecology.

Chemistry

- Atomic Structure and the Periodic Table
- Bonding, Structure, and the Properties of Matter
- Quantitative Chemistry
- Chemical Changes
- Energy Changes
- The Rate and Extent of Chemical Change
- Organic Chemistry
- Chemistry of the Atmosphere
- Organic Chemistry
- Using Resources

Physics

- Energy
- Electricity
- Particle Model of Matter
- Atomic Structure
- Forces
- Waves
- Magnetism & Electromagnetism

Whilst studying the above, pupils will also carry out 7 required practical's from the Electricity, Matter, Forces and Waves topics.

Assessment Structure

At the end of Year 11, there are two exams on each subject of Biology, Chemistry and Physics, making up the Combined Science GCSE. Each paper is 1 hour 15 minutes long and is worth 16.7% of the final grade.

A total of 21 required practicals covered from the start of the respective science courses in Year 9. Questions relating to these experimental investigations will be included in the written exam papers.



OPTION SUBJECTS

Ancient History

Head of Department, Mr A J Welby

Introduction

Ancient History provides the exciting opportunity to immerse yourself in the society, culture and politics of the ancient world without the requirements of learning a language as well. The variety and diversity of topics on offer provides an exciting insight into the early history of countries such as modern day Iran (ancient Persia), Iraq (ancient Babylon), Israel and Egypt as well as Greece and Italy. Studying the interactions between these countries gives us an amazing perspective on the impact of the past on modern life. We offer modules in Greece and Persia, which incorporates famous episodes from the Persian Wars such as Pheidippides running 26 miles from the battlefield of Marathon to Athens to declare victory over the Persians, giving us the term ‘marathon’ for long distance running today; Pericles and the Age of Athens, wherein the Athenian statesman comes up against obstacles such as a plague; the Early Kings of Rome, which brings us from Romulus and Remus being abandoned in the rushes only to be raised by a wolf all the way to Tarquinius Superbus being driven from Rome by an angry mob; and finally Cleopatra, whose alluring beauty and intense intelligence made her one of the most influential and powerful leaders of the ancient world. Within each module there are historical and literary texts to be studied in English translation alongside visual images and material culture, so there really is something for everyone!

Course Structure

We structure the modules chronologically to build up the best understanding of the historical events of the different time periods. In Year 10 we begin with the compulsory period study of the Persian Empire for half the year, then progressing to the depth study about Pericles, where we learn about the origins of democracy, the influence of powerful women like Aspasia and the construction of some of the most recognisable buildings in the ancient world, like the Parthenon. In Year 11, we start with the second compulsory period study on the early kings of Rome which is deeply rooted in mythology and finish with the depth study on the politically fascinating story of Cleopatra, looking at her relationships with Julius Caesar and Mark Antony and studying how she became such an iconic figure. We practise short factual examination questions right from the start and interweave longer written responses periodically, both for prep and in timed conditions in class.

Assessment Structure

There are two examinations at the end of the two year course:

- J198/01 Greece and Persia - 1 hr 45 mins comprising questions on the Persian Empire period study and Athens in the Age of Pericles depth study.
- J198/02 Rome and its neighbours - 1 hr 45 mins comprising questions on the Early Kings of Rome period study and Cleopatra depth study.

Each examination is worth 50% of the course and has a variety of short, single mark factual questions, 10 and 15 mark source-based questions and 25 mark synoptic essay questions.

Art and Design

Head of Department, Ms J Hebden

Introduction

The need to communicate through visual means is ancient and arguably imperative. Learning how to draw, paint, print or sculpt to communicate original ideas, will require independent, creative and curious pupils who enjoy a challenge.

Pupils will explore four main areas, the first is the contextual visual world around them, this may well be from an artistic, sociological or historical point of view. They will then source their own ideas observations and insights pertinent to their theme and then launch into a series of creative experiments with techniques and materials. This is then resolved in ambitious fashion.

Over the course of the GCSE they will explore how to be adaptable communicators with the ability to manage a self-propelled project and the confidence to present it. They could well become painters, architects, curators, animators, graphic designers, fashion designers, sculptors, cinematographers, web designers or the countless other exciting professions that a creative pathway leads to.

Course Structure

Over the two years, pupils will cover two units of portfolio based explorations. The coursework is a long running project that allows pupils to delve into their themes in real depth. The final examination is an early release paper allowing the pupils to have plenty of time to develop extensive preparatory work before the timed examination session of ten hours, which is spread across 2 days.

Within this structure the two assessed units are:

Unit 1: Art and Design portfolio [coursework] 60%.

Unit 2: Art and Design externally set task [examination] 40%.

Assessment Structure

Each unit of work is assessed within the following areas:

Develop: Investigation, research, and analysis of contextual sources.

Refine: Experimentation and use of a wide range of media and techniques.

Record: Observational drawing and recording photographically

Present: To bring together AO1, AO2 and AO3 into a resolved finished piece.

Working from a single starting point, pupils develop their own direction of study with increasing freedom and variety, resulting in an impressive body of work displayed in an ambitious exhibition at the end of the course.

“

Art allows a form expression which cannot be found anywhere else.

”

Computer Science

Head of Department, Mr T Fung

Introduction

The Edexcel GCSE in Computer Science enables pupils to understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logic, algorithms and data representation. Pupils will learn to analyse problems in computational terms through practical experience of solving problems, including designing, writing and debugging programs. The course will teach pupils to think creatively, innovatively, analytically, logically and critically, and how to apply mathematical skills relevant to Computer Science.

Course Structure

- Understanding of what algorithms are, what they are used for and how they work; ability to follow, amend and write algorithms; ability to construct truth tables.
- Understanding of binary representation, data representation, data storage and compression.
- Understanding of hardware and software components of computer systems and characteristics of programming languages.
- Understanding of components of computer systems; ability to construct truth tables, produce logic statements and read and interpret pseudocode.
- Understanding computer networks and network security.
- Awareness of emerging trends in computing technologies, the impact of computing on individuals, society and the environment, including ethical, legal and ownership issues.
- Understanding how to decompose and analyse problems.
- Ability to read, write, refine and evaluate programs.

Assessment Structure

Assessment comprises two externally assessed papers, one of which is a practical assessment carried out on a computer system using the Python programming language.

Paper 1: Principles of Computer Science (50%)

- 1 Hour and 30 Minutes - Paper examination

Paper 2: Application of Computational Thinking (50%)

- 2 Hours - Practical onscreen examination

Please note that it is not possible to take both Computer Science and ICT

Design Technology

Head of Department, Mr C Battle

Introduction

The Product Design GCSE course offers a broad and flexible investigation of material science and the man-made world. Those studying this subject will gain an understanding of the methods used by Product Designers, Architects and Engineers. Skills learnt include traditional and modern technologies (CAD/CAM).

Candidates 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. Candidates are encouraged to use a wide range of graphical techniques including isometric and orthographic drawing as well as Desktop Publishing, Computer Aided Design and other ICT skills.

Pupils will gain a real understanding of what it means to be a designer, alongside the knowledge and skills sought by higher education and employers. Product Design is a popular choice, pursued by many to A Level. It offers candidates the chance to get a top GCSE grade through activities they enjoy.

Course Structure

Theory content is delivered in weekly lessons over the two year period of Year 10 and Year 11. This covers the core knowledge which is assessed in the written exam under the following headings:

- Core Technical Principals
- Core Designing and Making Principals
- Specialist technical principles

The remainder of Year 10 is spent exploring the work of a designer and students will undertake a range of projects created to expand their knowledge and to prepare them for the structure of the Non-Examined Assessment that they will commence during the Summer term of Year 10.



Assessment Structure

Non-examined assessment (NEA).

In the NEA the candidate will select, under guidance, his/her own design task. This project will be undertaken mainly in the second year of the course during class time, supplemented by private study. A detailed design folder of 20 A3 pages will accompany the candidate's product.

Written paper - 50% of the total marks - 2 Hours

Controlled Assessment (NEA) - 50% of the total marks
- 40 Hours

Divinity

Head of Department, Rev. C I A Fraser

Introduction

Religious Studies, or Divinity as we call it at The Leys, is an exploration into one of the most powerful influences on human thought and behaviour. In an increasingly secular Western world it is often imagined that the influence of religion is in decline. Globally, this is not true. Christianity and Islam, which are the two religions we study, are both increasing both in numbers of followers and in their political importance. It is not possible to understand adequately politics and international relations without a rigorous theological understanding of these two great faiths. We aim to develop knowledge and understanding of religious and non-religious beliefs, such as atheism and humanism as well as an ability to construct well-argued, well-informed, balanced and structured written arguments, demonstrating depth and breadth of understanding of the subject. We engage with questions of belief, value, meaning, epistemology, purpose, truth, and their influence on human life with the intention that our pupils will reflect on and develop their own values, beliefs and attitudes in the light of what they have learnt and will contribute to their preparation for adult life in a pluralistic society and global community. Religious Studies will partner well with any Humanities subject but will also appeal to those thinking of studying medicine and other scientific disciplines where ethics and morality are important considerations. The analytical skills that you will learn in this subject are highly prized in the legal profession and amongst journalists. It is, of course, an excellent preparation for those who might wish to read Philosophy, Theology or a Social Science at university as well as those considering Politics and International Relations.

Course Structure

- Religion and Ethics (Christianity)
- Belief in God; Marriage and the Family; Living the Christian Life; Matters of Life and Death
- Religion, Peace and Conflict (Islam)
- Belief in God; Crime and Punishment; Living the Muslim Life; Peace and Conflict

Assessment Structure

2 written papers of 1hr 45 mins each worth 50% of the grade. Each paper consists of 4 questions broken down into 4 parts.

Drama

Head of Department, Mr J S Johnson

Introduction

GCSE Drama offers pupils who are interested in performance and design the opportunity to pursue the path that suits their passion. They will devise their own performance as an actor or designer, perform or design for a play text and study a set text which they will answer questions on in a written exam. For the written exam pupils will also see a live theatre performance and offer their own analysis and evaluation of different aspects of the performance.

Pupils can choose to be assessed as a performer or as a designer for the first two components (Set, Costume, Lighting, Sound, Stage Make-up/Mask).

This course is designed to help develop self-confidence as well as providing an opportunity for pupils to build on experience and skills they may have already gained in the performing arts. There is a written aspect to the course, however, the focus is on practical responses and performance /design skills.

Pupils will work independently as well as working alongside others, so group work and team building skills will be a large part of the course.

Course Structure

Year 10

Autumn Term:

Devised Skills, Set Text Performance and Directing Exploration, Live Theatre Evaluation, Design Skills, Performance/Design of a Monologue

Spring Term:

Set Text Design Exploration and Devised Performance/Design Preparation

Summer Term:

Performance/Design of Devised Work

Year 11

Autumn Term:

Preparation for Performance/Design of a Text

Spring Term:

Performance from a Text and Written Exam Prep

Summer Term:

Final Preparation for written exam.

Assessment Structure

Component 1

Devising Coursework Unit

Internally Assessed, 40%, (Performer or Designer)

Component 2

Performance from a Play Text, Practical Exam

Externally Assessed, 20%, (Performer or Designer)

Component 3

Study of a play text / Live Theatre Evaluation

Written Exam, Externally Assessed, 40%, (Write as a Performer, Director and Designer)



Geography

Head of Department, Mr P Hicks

Introduction

Through Geography GCSE pupils develop the knowledge, skills and confidence to engage with the challenges shaping the world in the 21st century, from changing climate and water scarcity, through to population growth and resource shortages. Pupils will travel the globe from the classroom using augmented and virtual reality to explore a wide range of case studies from across the world. They will also gain firsthand fieldwork experience as they investigate Felixstowe's changing coastline and the regeneration of Stratford and Olympic Park in London.

Course Structure

Starting after Christmas in Year 9, six core topics are covered spanning the breadth of human and physical Geography:

- The challenge of natural hazards
- Physical landscapes of the UK
- The living world
- Urban challenges
- The changing economic world
- The challenge of resource management

The course culminates with pupils drawing on their understanding of each topic and using critical thinking and problem-solving to address contemporary geographical issues.

Assessment Structure

There are three written exams requiring pupils to demonstrate a range of skills from interpreting data and graphs to forming arguments and giving substantiated opinions.

- Paper 1: Living with the Physical Environment (1 hour 30 minutes)
- Paper 2: Challenges in the Human Environment (1 hour 30 minutes)
- Paper 3: Geographical Applications (1 hour 15 minutes)
- Fieldwork skills are assessed through Paper 3. There is no coursework or controlled assessment.



Gratin (Greek and Latin combined)

Head of Department, Mr A J Welby

Introduction

Gratin gives the strongest linguists and most passionate classicists the opportunity to study the language, literature and cultures of the Romans and the Greeks. Combining study of both key societies of the ancient Mediterranean affords pupils a rounded and deep understanding and experience of the classical world, wherein they can observe the significant overlap and intriguing divergences between the two languages and cultures (and examination structures!).

Studying for two full GCSEs in one timetable requires passion and self-motivation, as well as the ability to manage time outside of lessons to ensure that the vocabulary and grammar learning is progressing. There are enormous benefits to studying Latin and Greek in combination, not least that pupils' familiarity and comfort with Latin will inform and enhance their Greek learning. Particularly ambitious pupils will relish the opportunity to push themselves with this enjoyable and academically challenging option.

Course Structure

In Year 11, we read the second set text and undertake the literary criticism of the Latin and Greek set texts and finish the language requirements for the Greek alongside revising the linguistic content for Latin. We are likely to offer the following set texts for Greek in 2025: selections from *Tales from Herodotus* – stories from early Greek history and mythology; and selections from Homer's *Iliad* 6 for the verse in which Hector says goodbye to his wife and son and then sets off with Paris for battle against the Greeks. Details of the Latin set texts can be found in the description for Latin.

Assessment Structure

There are three examinations in each language at the end of the two year course:

J282/01 and J292/01 Language - 1 hr 30 mins each

Section A - comprehension questions based on a Latin/Greek passage

Section B - grammar questions or English-Latin/English-Greek sentences

Section C - unseen translation and further comprehension questions

J282/03 and J292/02 Prose Literature - 1 hr each

Comprehension and translation questions on selected passages from the prose set text (likely to be *Messalnia* and *avunculus meus* and selections from *Tales from Herodotus*). A variety of longer answer questions based on literary appreciation, including an 8 mark commentary and 10 mark synoptic essay. All questions to be answered in English based on Latin/Greek stimulus passages.

J282/06 and J292/05 Verse Literature

Exactly the same structure as the prose literature paper but based on the verse set text (likely to be Virgil's *Aeneid* 6 and Homer's *Odyssey* 7).

History

Head of Department, Mr N R Born

Introduction

History at GCSE is a way to sharpen the mind, to learn invaluable skills of analysis and to enrich the way we understand our present world. There are two aspects we study in GCSE History: 'Understanding the Modern World' and 'Shaping the Nation'. Whatever history pupils have studied before, this is a course that is both accessible and academic.

Course structure

We study three main subjects at GCSE History

- 1. Britain, Power and the People** - A broad thematic sweep through British History, charting the journey from feudalism to democracy: from Magna Carta to Peasants Revolt, English Civil War and Commonwealth, to Hanoverian monarchy and the extension of parliamentary reform, Suffragettes and Civil Rights right up to the present day.
- 2. Russia 1894-1945, Tsardom and Communism** - The coming of the Russian Revolution - the Tsar's disastrous last days, defeat in the First World War, Lenin's rule, Stalin's takeover and the decade of transformation and terror he unleashed in the Soviet Union.
- 3. The Cold War 1945-72** - Not a war but a period of fast-moving international events in which the USA and USSR very nearly blew up the world: Berlin, Eastern Europe, Mao in China, the nuclear arms race, the space race, the Cuban missile crisis, Kennedy, Vietnam, and Détente.

Assessment Structure

There are two written papers, both one and three-quarters of an hour long and worth 50% of the marks each. The written work is focused on short-form responses to source material and broader questions: there are no long essays and there is no coursework or controlled assessment.



ICT

Head of Department, Mr T Fung

Introduction

The Edexcel International GCSE in ICT enables pupils to explore how digital technology impacts on the lives of individuals, organisations and society. Pupils will learn about current and emerging digital technologies and the issues raised by their use by individuals and organisations in a range of contexts. They will develop their awareness of the risks that are inherent in using ICT and the features of safe, secure and responsible practice, and will broaden and enhance their ICT skills and capability by working with a range of digital tools and techniques to produce effective ICT solutions.

Course Structure

- Topic 1: Digital Devices - types of device, features of devices, software used in digital devices, peripheral devices for input, output and storage, memory and processors.
- Topic 2: Connectivity - types of digital communications, factors influencing the choice of digital communication in a network, requirements for connecting to a network, benefits of using a LAN, securing data on a network.
- Topic 3: Operating Online - potential risks to data and personal information when information is transmitted and stored digitally, use of online communities, impact of the internet on organisations and society, implications of the use of digital technologies, the use of online information.
- Topic 4: Online Goods and Services - types of services, impact of online services, online software.
- Topic 5: Applying Information and Communication Technology - using software applications, data and information, reviewing outcomes
- Topic 6: Software Skills - word processing, database management, spreadsheet modelling, web authoring, presentation software, graphics manipulation, file management.

Assessment Structure

Assessment is comprised of two externally assessed papers, one of which is a practical assessment carried out on a computer system.

Paper 1: Written Paper (50%) - 1 Hour and 30 Minutes

- Paper examination - Topic 1 - 4

Paper 2: Practical Paper (50%) - 3 Hours

- Practical examination - Topic 1-6

Please note that it is not possible to take both ICT and Computer Science

Latin

Head of Department, Mr A J Welby

Introduction

The language of the Romans and the parent language of so many modern European languages, Latin is not only a highly useful facilitating subject, but broad-ranging in its subject matter and fascinating in its own right. With both language and literature components, there are multiple different skills to learn and enjoy. Through reading Latin stories, working up to texts written by authors 2000 years ago, we build up grammatical and literary appreciation skills in tandem alongside gaining an insight into the culture and society of Roman life.

There are plenty of opportunities to test your linguistic mettle as well in preparing for the translation and comprehension components. Vocabulary and grammar games and quizzes help to cement the words and word endings, as well as the option of translating English into Latin. There is a Defined Vocabulary List and prescribed constructions set by the exam board for pupils to learn and the literary texts are all studied in advance, both of which are handy when it comes to examinations. The combination of language and literature study also makes Latin the perfect choice for those who love the story element of Latin and want to continue challenging themselves with the language.

Course structure

We build on the skills, language and vocabulary pupils have already studied lower down the school in Years 7-9, making the transition to GCSE study very natural and familiar. In Year 10, we focus on the language and grammar needed for GCSE, concentrating on gaining confidence with the necessary word endings and items on the Defined Vocabulary List. We also aim to have read one of the set texts (prose or verse) in its entirety by the end of Year 10.

In Year 11, we read the second set text and undertake the literary criticism of both set texts, which helps to solidify understanding of the texts. We are likely to offer the following set texts for examination in 2025: Messalina and avunculus meus for the prose - the adultery and execution of the Emperor Claudius' wife Messalina and a day in the life of Pliny the Elder; and a selection from Virgil's Aeneid 1 for the verse - the angry goddess Juno raises a storm in her efforts to shipwreck Aeneas. We also continue to revise and consolidate the grammar and vocabulary acquired with practice sentences and translation passages. There is plenty of time for revision and examination practice!

Assessment Structure

There are three examinations at the end of the two year course:

J282/01 Language - 1 hr 30 mins

- Section A - comprehension questions based on a Latin passage
- Section B - grammar questions or English-Latin sentences
- Section C - unseen translation and further comprehension questions

J282/03 Prose Literature - 1 hr

Comprehension and translation questions on selected passages from the prose set text (likely to be Messalina and avunculus meus and selections from Tales from Herodotus). A variety of longer answer questions based on literary appreciation, including an 8 mark commentary and 10 mark synoptic essay. All questions to be answered in English based on Latin stimulus passages.

J282/06 Verse Literature - 1 hr

Exactly the same structure as the prose literature paper but based on the verse set text (likely to be Virgil's Aeneid 1).

Music

Head of Department, Mr M Kenworthy

Introduction

At GCSE pupils **perform, compose** and **analyse** a wide variety of pieces and musical styles. The course is very wide-ranging and provides something for everybody's musical taste. A GCSE in Music is an excellent grounding for A Level Music and provides a wide platform on which to base a CV or University application due to the wide range of skills required.

The aims of the course are to give pupils of all musical abilities opportunities to:

1. Foster their musical sensitivity, creativity, and aural perceptions through the acquisition of knowledge, understanding, skills and the exercise of imagination.
2. Promote their cultural development and involvement in music as performers.
3. Support their personal and social development through creating and performing music with others.
4. Develop a holistic understanding of music enabling further progression to study at A Level.

Course Structure

The performance and composition coursework parts of the course are adaptable to the needs of individuals and can be tailored to match their strengths. Expertise on an instrument (or in singing) is essential but a modest grade standard (c. Grade 4 at the start of Year 10) can be enough to obtain a good final grade. No previous experience of composing is required: compositions are notated using Sibelius software, an elementary understanding of musical notation is essential. The performing coursework submitted is entirely the choice of the pupil; furthermore, multiple attempts to record performance work are permitted. Composition coursework includes one piece written in response to a given stimulus with a second, free composition.

In addition to Performance and Composition coursework, pupils study short pieces from the GCSE Anthology of Music, which is set out in the following Areas of Study:

1. Instrumental Music 1700-1820: works by Bach and Beethoven
2. Vocal Music: works by Purcell and Queen
3. Music for Stage and Screen: music from 'Wicked' and Star Wars
4. Fusions: Afro Celt Sound System (Release) and Esperanza Spalding (Samba em prelude)

Assessment Structure

- **Component 1 Performing** - one solo and one ensemble performance 30% (total duration 4 minutes minimum)
- **Component 2 Composing** - two compositions 30% (total duration 3 minutes minimum)
- **Component 3 Appraising** - 40% (one written exam 1 hour 45 minutes)

Section A: Written listening paper based on the above Areas of Study, including dictation and a question based on an unfamiliar piece of music; Section B: An essay question based on a comparison between a set work and one unfamiliar piece.

Prospective candidates should see the Director of Music and discuss the requirements of the course relevant to each individual.



Sport Science

Head of Department, Mr B C Elston

Introduction

Sport Science is an exciting subject in which pupils will develop theoretical knowledge and an understanding of the factors that underpin physical activity, sport and social issues. They will explore how physiological changes and psychological states affect performance. Pupils will also use their performance skills and talents to their advantage, as they will need to be assessed in three different sports as an integral aspect of their overall grade. The GCSE provides a good foundation for pupils wishing to study A Level Sport Science, related degree courses and pursue a career in the ever expanding sport science industry.

Course Structure

Theoretical content is taught both in the classroom and in a practical setting. Areas covered include; anatomy and physiology of the major body systems, movement analysis, effects of exercise on the body, components of fitness, principles and methods of training, prevention of injury, participation trends in the UK, commercialisation of sport, ethics, drugs and violence in sport, sports psychology, health, fitness and well-being.

Practical Performance is assessed in three sports; one individual, one team, plus one other.

Pupils must aim to perform effectively in different physical activities, by developing their skills and techniques and selecting and using tactics, strategies and/or compositional ideas. They will develop their ability to analyse and evaluate performances in order to make improvements. Assessment will take place in full competitive/ performance situations, and pupils will need to log their involvement in these sports as evidence.

Assessment Structure

Assessment takes the form of two written exam papers taken at the end of Year 11; written coursework and practical assessments are undertaken throughout Years 10 and 11.

Paper 1: “Physical factors affecting performance” 30% of final mark. 1 hour paper

Paper 2: “Socio-cultural issues and sports psychology” 30% of final mark. 1 hour paper

Practical performance: three sports equating to 10% each.

Written coursework: “Analysing and Evaluating Performance” 10%.



Boarding Houses

A	North A	Boys' Boarding House
B	Barker	Co-educational Day House
B	Barrett	Co-educational Day House
B	Bisseker	Co-educational Day House
D	Dale	Girls' Boarding House
E	East	Sixth Form Boys' House
F	Fen	Girls' Boarding House
G	Granta	Sixth Form Girls' House
M	Moulton	Junior House
S	School	Boys' Boarding House
W	West	Boys' Boarding House



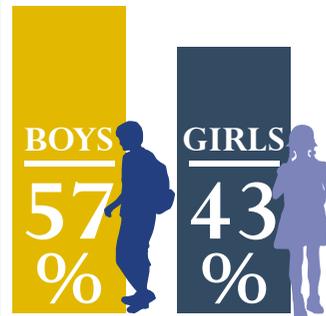
Teaching Areas



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- 1 **Clapham Building**
Greek, Latin and Classical Civilisation (ground floor, left)
Theology (ground floor, right)
History (first floor)
Geography (second floor)
- 2 **Great Hall**
Drama
Science
- 3 **Kelvin Building**
Business Studies and Economics (first floor)
ESOL and LS department (top floor)
- 4 **King's Building**
Mathematics Room K3
- 5 **Music School**
Music
- 6 **Queen's Building**
English (first floor)
- 7 **Rugg Centre**
Design Technology (ground floor)
Ceramics (ground floor)
Computing (first floor)
Art (top floor)
- 8 **Science Department**
Biology (ground floor)
Physics (first floor)
Chemistry (second floor)
- 9 **Sports Hall**
Physical Education (ground floor)
- 10 **Stamp Building**
Modern Languages | French | German | Spanish
- 11 **Swimming Pool**
- 12 **Dining Room**
- 13 **Common Room/ Old Gym**

Average
Class Size
of 16



100
PUPILS
PER YEAR GROUP

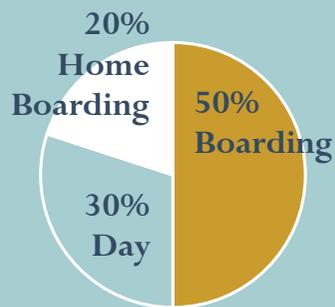


100%
PROGRESS
TO
A LEVELS

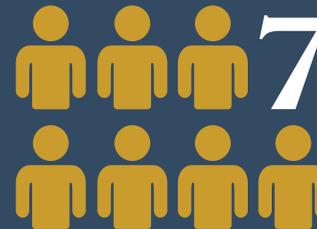
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GCSE
SUBJECTS
OFFERED

5
BOARDING
HOUSES

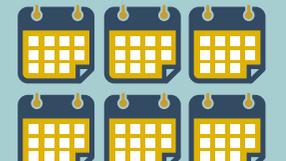
3
DAY HOUSES



7
AVERAGE
TUTOR
GROUP



100+
WEEKLY
ACTIVITIES



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