



HARROW
SCHOOL



SHELL CURRICULUM

2021–2022



INTRODUCTION

The Shell year provides the foundation for a Harrow education, introducing boys to a broad range of disciplines. In some compulsory subjects, such as Mathematics and the sciences, your son will begin his (I)GCSE courses on his first day of lessons. In others, he will follow introductory courses, after which he can opt to continue to (I)GCSE in the Remove and Fifth Form. The subjects studied in the Shell year are: Art, Biology, Chemistry, Physics, Computing, Design & Technology, Drama, English, History, Geography, Latin with elements of Ancient History, Mathematics, Music, and Philosophy and Applied Ethics, together with two languages chosen from Classical Greek, French, German, Italian, Japanese, Mandarin, Russian and Spanish.

In addition to their weekly periods in Drama, Music, Art, Design & Technology and Computing, boys will rotate through a carousel in those five subjects. Boys will therefore not only steadily acquire knowledge and skills over the course of the year in those subject areas but will also have a chance for immersion in them over several weeks, during which they will be able to develop some of their own ideas and creative enthusiasms.

At Harrow, we seek to prepare boys for an ever-evolving world. To that end, we have increased by more than half the amount of time dedicated to teaching boys in the Shell how to code, and we have embedded a cohesive digital literacy strategy into schemes of work across all teaching departments. Boys will also experience three interdisciplinary conferences which focus on problem solving, collaboration and presentation.

During the first term at Harrow, every boy will take a series of tests to assess his ability and his learning needs more accurately than the admission process permits. We will also assess every boy to identify any special educational needs and, if there is a concern about your son, we will contact you to discuss it and perhaps to suggest that he has an opportunity for further assessment and help from our Learning Skills Department. Any boy who does

not have English as his first language will be given a test of his competence in English. Harrow is able to provide specialist EAL tuition if we think that a boy will benefit from it.

Your son will be asked to make his (I)GCSE choices in March, towards the end of his second term at Harrow. His curriculum from the Remove year will focus on ten subjects. Before these choices are made, you and your son will receive a curriculum brochure shortly before the February half-term, which will provide a summary of every course offered at Harrow. You will also be able to meet your son's division Masters at the Shell parents' meeting on Friday 4 March 2022.

Your son is about to join one of the world's great schools. He will come into contact with over 100 teaching staff, 35 music teachers and about 500 other adults who help in the running of the School. To make the transition as easy as possible, we organise induction courses for every aspect of life at Harrow. If you have any concerns about your son's wellbeing or his academic work, during his first year or later in his School career, you should contact his House Master in the first instance. If you have any broader concerns about his Shell form or divisions, or any aspect of the Harrow curriculum in the Shell year and beyond, please do not hesitate to contact me at mepg@harrowsschool.org.uk.

Thank you for your confidence in the School in entrusting your son's education to us. I hope that your son will greatly enjoy and benefit from his time at Harrow.

Michael Gray
Director of Studies
March 2021

*An IGCSE is an International version of the GCSE. The two are very similar and often offered by the same examination board. The main reason we offer IGCSEs in many subjects (including English, Mathematics and the sciences) is that these courses are slightly more rigorous and offer a more

thorough syllabus. The result is that boys have a better education in the subject and are also better prepared for the Sixth Form. There are sometimes other advantages, such as less coursework and the absence of controlled assessment.

ART

Think Oscar-winning film directors, internationally acclaimed and successful fashion designers, award-winning architects and some of the best creative minds on the planet: all these movers and shakers began with regular art lessons at school. This is why we want Shell Art at Harrow to be a dynamic, imaginative and thorough course in which boys work in a range of media including painting, drawing, printmaking, sculpture, ceramics, photography and digital media. Boys are given a solid grounding in observational drawing, which provides the academic scaffold for everything they experience in the subject. We aim to foster a lifelong love of art through animated discussion, debate, experimentation and exploration. All Art beaks realise it is important that boys create their own narrative in the subject through the excitement of discovery, underpinned by an excellent grounding in the history of art. Boys who study GCSE Art and then opt for the A level, will find themselves equipped not only with the ability to work creatively, laterally and imaginatively, but there is also research that demonstrates how art enhances cognitive function and facilitates approaches to an array of subjects including mathematics and science; after all, it worked for Leonardo!

There is a strong emphasis on foundation skills such as understanding formal elements of colour, form, texture, composition, line and tone. There is an annual Shell trip to a London gallery or museum, as well as a yearly exhibition that includes at least one piece of work from every Shell boy. Boys studying Art at Harrow also have a strong track record of gaining places at Oxford and Cambridge to study subjects including Architecture, English, History of Art, PPE and Fine Art.

BIOLOGY

Boys start the IGCSE course at the beginning of the Shell year. They cover many of the fundamentals of the subject such as cell structure, biological molecules and respiration, but they also study some of the major systems of the human body. These topics provide ample opportunity for investigative work on a range of different scales from chemical reactions and microscopy through to whole organ dissection. As well as developing practical skills and teamwork, boys learn about the scientific method through carrying out these experiments. There is lively discussion to be had when tackling issues such as stem cell therapy and malnutrition. Boys are encouraged to pursue their interests further through following scientific developments in the news and engaging with the many activities and events run by the Biology, Medical and Natural History Societies.

CHEMISTRY

Scientific skills are incredibly versatile, preparing students very well for life beyond school. Numerically literate, chemists prove themselves capable of handling complex information. They can problem solve, making reasoned judgements from a range of data sources and communicating their findings and reasons succinctly. The Shell year is an important time to establish core principles, terminology and notation of the IGCSE course through a broad range of key areas including natural resources, atomic structure and bonding, states of matter, rates of reaction, acids and bases, and metal reactivity. To ensure the theory is grounded in application, the boys spend as much time as possible in the laboratory to gain hands-on experience developing a range of techniques through experimentation and investigation.

CHINESE (MANDARIN)

The Shell Chinese course starts with character learning from day one. Learning Chinese is a different experience from the familiar French, Spanish or other European languages to which boys may have been exposed at their previous schools. It is a tonal language, one communicated in writing strictly in Chinese characters, with much easier grammatical concepts than its European counterparts. The course is taught mainly through oral, in-class activities (50% of the first year is taught in the target language) with character writing reinforced as prep. We also touch on the basics of Chinese culture, history, literature, the arts and politics. There are trips into London to see shows and exhibitions of interest, usually followed by a meal in Chinatown. Every other year, there is a trip to China, often arranged with our sister school in Beijing.

Mandarin Chinese is one of the language options available to Shell boys, both on and off the timetable. Why study it?

More than one billion people speak Mandarin Chinese in China and elsewhere. As China's influence in the world expands, many more will want to learn Chinese. It is a language that gives access to an enormous market and a fascinating country. Learning the Chinese language and understanding Chinese culture will place learners in a strong position to face the challenges and growing competition of employment.

Chinese is not as difficult as it is reputed to be. It has no tenses, cases or gender, and very few plural forms. More challenging, but also very interesting, are Chinese characters, which have over 4,000 years of history, with origins as pictographs engraved on oracle bones. Once you know the first 100 characters, there is a logical process for learning the rest.

CLASSICAL GREEK

Boys who have a keen interest in the ancient world will derive great enjoyment and benefit from studying Classical Greek. This is a fascinating though demanding subject, whose rewards are immense. An understanding of Classical Greek opens the doors to a civilisation whose origins lie at the heart of much of the literature, art and science that define Western culture. After just one year of study, boys will have enhanced and enriched their vocabulary and, in particular, they will have gained familiarity with sophisticated and technical words, an understanding of which can be valuable to students of both the humanities and the sciences. The flexible structure of the course allows us to cater for beginners as well as for scholars who have studied Classical Greek before. Those with aptitude and more experienced linguists move fairly quickly on to more advanced aspects of the language. The course includes study of the Persian Wars, Alexander the Great and an introduction to the Western philosophical tradition via Plato's *Apology*.

Classical Greek is one of the language options available to Shell boys. Why study it?

An understanding of Greek can open doors to many different worlds. Boys will not only learn a language, but they will learn something of the cultural richness of Ancient Greece – its art, history, mythology and philosophy. Boys who study Classical Greek read Greek myths, stories about Alexander the Great, and the beginnings of the Western philosophical tradition with Socrates and Plato.

The study of Classical Greek will appeal to boys with analytical minds as well as those who enjoy literature and art, which abound in allusions to the world of Classical Greece. Many of our ideas in the realms of politics and statecraft, ethics and aesthetics come from Greece, and when boys study Greek they gain another set of eyes that allows them to develop a different way of seeing the world, with different categories of thought that run deeper than mere changes in vocabulary.

Most boys who opt for Greek continue to GCSE and have the opportunity to read Homer's *Iliad*, as well as one other author in the original language. There is nothing that can compare with reading words, first spoken over 2,700 years ago, that have retained their hold on the modern mind, not only because they tell powerful and moving stories but also because of their exquisite beauty and sophistication.

Numbers studying Greek at Harrow have tended to be small and boys receive close individual attention. There are many opportunities to develop an interest in the ancient world by going on trips abroad, attending lectures and taking part in the annual Oxenham Reading Competition. Most years, some boys go on to study Classics at Oxford or Cambridge, and Greek is a decided advantage when applying for any degree course.

COMPUTER SCIENCE

The introduction to Computer Science covers a broad range of future-proof topics in the Shell year. Essential cyber safety and digital-hygiene considerations are

instilled before boys are introduced to programming in both Small Basic and Python. Practical work covers scientific data analysis, the design of interactive games, and the creation of graphical applications to illustrate the creative science of programming and development.

We focus on fundamental programming concepts in addition to the syntax of specific languages – later in the year these skills are applied to the design and construction of intelligent robots programmed to perform automated tasks. Boys also work on their touch-typing skills using an award-winning online platform, and develop their productivity using their Surface computers in addition to the many online platforms available to them at Harrow.

In addition to their academic study, many Shells join the Computer Science Society, which builds and customises PCs, develops virtual reality applications, invites world-renowned speakers to deliver inspiring lectures, and encourages boys to compete in national competitions and challenges using our cutting-edge facilities.

DESIGN & TECHNOLOGY

The course is tailored to encourage boys' flair and creativity while they gain core practical skills through working with a variety of materials in the workshop. Boys undertake several projects throughout the year that prepare them for IGCSE topics such as Product Design, Mechanisms, Electronics and Structures. Shell boys all gain experience with computer-aided design and manufacturing techniques such as 3D printing and laser cutting. We develop their graphical skills through a variety of media and explore relevant topics such as robotics and programming within their projects. We aim to nurture boys' understanding of good design and engineering while encouraging them to think empathetically about the products and systems they produce. Lessons are supplemented by the various societies and long opening times of the department in the afternoons. This enables boys to extend and push their knowledge and skills into more personalised projects with one-to-one advice. Many Shell boys become actively involved in the Drone Society and the Motoring Society.

DRAMA

Across the Shell year, boys will be introduced to Drama opportunities at Harrow, and develop skills relating to the department's core values: discipline, ensemble, empathy and expression. Practical, group-focused weekly lessons allow boys to develop confidence, work collaboratively, and have fun. Whether it's learning the fundamentals of comic improvisation, responding critically to theatre and film, scriptwriting, or performing, boys are encouraged to work as practitioners and to develop their own creative voice. Harrow has a track record of boys going on to work professionally in the theatre, film and performing arts industries, some of whom had no idea of their passion when first arriving on the Hill. Boys opting to study Drama at GCSE and A level will receive a grounding in foundation skills required during the year. For others, Shell Drama lessons will develop teamwork skills, allow creative expression, and build confidence in speaking, presenting and performing.

ENGLISH

The aim of the first year in English is to consolidate and extend boys' knowledge about language, to develop and refine their literacy skills and to introduce them to a variety of literary texts. They develop accuracy in spelling, punctuation and grammar through vocabulary tests and formal grammar exercises. They practise speaking and listening skills in a variety of ways, such as debating, small group discussions and drama activities in lessons. Reading involves the study of texts by the division as a whole – plays, poems, novels and short stories – as well as through boys' individual choices. All boys study a Shakespeare play and will have opportunities to see it in performance.

Boys are encouraged to write creatively and to widen their vocabulary. There are a number of creative-writing competitions in which Shell boys are able to take part. These include short stories, poetry and opinion articles. They are taught how to write in a range of styles and for a variety of purposes, from persuasive to analytical writing. Termly reading weeks provide opportunities for boys to develop their reading, read books by diverse writers, and present their reading interests to their peers.

FRENCH

The aim of the first year in French is to consolidate grammar and vocabulary, covering material in greater depth and introducing topics and linguistic features that boys may not have previously encountered. This is done through lively and carefully structured lessons in which all pupils aim to reach a similar level and become accustomed to the most effective styles of teaching and learning. The next two terms are spent gradually introducing new grammatical material and vocabulary so that boys are thoroughly prepared to tackle the GCSE course, which runs throughout the Remove and Fifth Form and includes topic-based examination preparation and practice in each of the four skill areas (speaking, listening, reading and writing) that are examined at GCSE.

The French Department promotes cultural knowledge through the reading of literary texts and the study of films. There are, in addition, study trips for Harrovians to increase their linguistic confidence and general enthusiasm for the subject. These trips involve attending lessons at a language academy and

participating in a variety of cultural and leisure activities. This invaluable learning opportunity enables boys to practise their comprehension and speaking skills, which inevitably helps to improve exam performance.

French is one of the language options available to Shell boys, both on and off the timetable. Why study it?

With approximately 100 million native speakers and 300 million secondary speakers, the significance of French as a world language is considerable. French is spoken in 55 countries and is the only language other than English to be spoken on five continents, making it truly global. Its influence on English over the years has been great; studying French involves many words that learners already recognise, but it also enriches their knowledge of English grammar and vocabulary. Whether learners choose to study French for cultural reasons (France has the world's largest number of Nobel Prize winners for literature), for travel (more tourists visit France than any other country in the world and French is a melodious and attractive language) or for a future career (French is the official language of the United Nations and the International Red Cross, and is widely used in the diplomatic world), the wealth of opportunities on offer is virtually unrivalled. The French economy is one of the strongest in the world and France is increasingly a leader in technological innovation.

GEOGRAPHY

The Shell Geography course begins with a focus on the key geographic skills of cartography, data analysis and place-based enquiry, framed by the study of our local area, the Borough of Harrow. Learning then progresses to the exciting study of natural hazards: their causes, impacts on people and the environment and the extent to which they can be managed. Boys will learn about an array of tectonic, weather and climatic hazards, applying their understanding to a variety of relevant and contemporary case studies in order to exemplify the core concepts and themes. Throughout the course, boys acquire and develop a wide range of skills, including those of selecting and extracting data from different sources, interpreting maps, photographs, satellite images and graphs, and using ICT.

There is often the opportunity to take part in geographical fieldtrips, including biennial trips to Iceland.



GERMAN

The main aim of this course is to provide boys with an enjoyable introduction to the German language – the most important foreign language for business in Europe. It is a course for beginners or those with a very limited knowledge of the language. By the end of the year, boys will have a sound basis in the four skills of reading, writing, listening and speaking and will be well prepared to continue their studies to GCSE and beyond. Beginners will see that they can progress with relative ease in a language that has many similarities to English, and numbers of boys taking German are consequently increasing throughout the School. We stress both communication skills and accuracy so that boys are made to feel confident in their use of the language.

German is one of the language options available to Shell boys, both on and off the timetable. Why study it?

German is the most commonly spoken first language in the EU (by over 90 million people). It is an official language in Germany, Austria, Switzerland, Luxembourg, Liechtenstein and even Namibia. German also plays an important role as a foreign language in many countries, particularly in Central and Eastern Europe, and is the second-most commonly used scientific language.

German culture is at the heart of Europe. It is the language of Goethe, Nietzsche, Kafka, Schiller, Mozart, Bach, Beethoven, Freud and Einstein, so knowledge of German and its culture will greatly enhance an understanding and appreciation of music, history and literature.

The usefulness of any foreign language is, however, not just based on the total number of speakers but the economic significance of the countries in which it is spoken relative to our own. Germany has the strongest economy in Europe and the fourth largest economy in the world. It is also the

world's second largest exporter and the UK's biggest trading partner. It was therefore no surprise to read this year that German has now overtaken French to become the most sought-after language by employers in the UK, in an annual analysis of job vacancies that require specific language skills. There are twice as many job vacancies seeking applicants with German-language skills than for Chinese or Spanish, for example.

In spite of these facts, there are fewer and fewer pupils leaving British schools with the ability to speak German. Fewer than 3,000 candidates took the A level examination in 2019 (a fall of 25% since 2015 and 50% since 2011). Around 600 students are likely to have started German degree courses this year, compared with over 2,000 a decade ago. The declining popularity of the language in an academic context away from the Hill makes it a relatively easy route into the country's best universities. Over the past four years, over 40% of all students who applied to read German at Oxford University have been successful in gaining a place, and the chances of being offered a place at Cambridge and other top universities are similarly high.

Moreover, learners of German will have a precious skill in a global economy that many other competitors do not have. After medicine, the employment prospects for graduates with German are among the highest of all degree disciplines and, perhaps surprisingly, relatively few German graduates go into the traditional linguists' careers of interpreting, translating or teaching. Employers look for engineers, bankers, accountants, lawyers and managers with a knowledge of German; many City banks advertise entry-level positions in which a knowledge of German is deemed 'a significant advantage'.

HISTORY

The point of studying History in the Shell year is primarily to experience the excitement that comes from exploring the past. Boys also learn about who we are and where we come from, and they acquire and practise the essential historical skills that will be needed to negotiate the IGCSE History course in the Remove and Fifth Form. The Shell syllabus covers a range of topics, with the focus in the first term and a half on equality, justice and liberation through time, with special concentration on the slave trade, the history of New Zealand and apartheid South Africa. In the second half of the year, boys devote their attention to the Great War. This serves as good background for the IGCSE History course, which begins in the Removes with a study of International Relations 1919–c.2000. To complement their studies, boys are encouraged to join the School trip to the First World War battlefields of the Somme and/or Ypres during Expeditions Week in the Summer term.

ITALIAN

The first year of this three-year course to GCSE assumes no knowledge of this increasingly popular language and covers all basic grammatical structures, together with the fundamental GCSE vocabulary. We also stress speaking, listening and accuracy so that boys gain confidence in their use and application of the Italian language. There is also emphasis on pronunciation and developing the ability to speak the language with native intonation. Additionally, we cover cultural aspects of Italy, looking at different cities and regions, Italian music and food.

Italian is one of the language options available to Shell boys, both on and off the timetable. Why study it?

Italian is one of the major languages of Europe and is spoken as a first language by around 60 million people across the world. Italy is and will forever remain one of the most popular holiday destinations for lovers of art, history, delicious food and sunshine, but it also has the eighth-largest economy in the world, making Italian an important language of business as well as pleasure. Many learners are keen to access Italy's rich cultural heritage in a more direct way: the country was the birthplace of many of the greatest names in music, painting, sculpture, architecture, fashion, literature, theatre and film.

Italian is a romance language derived from Latin, making it easily accessible to those with any experience of French, Spanish, Portuguese or, indeed, Romanian. Italian is also offered as a Sixth Form option at Harrow and it can often be combined with other subjects such as English, History, Classics, Philosophy and Economics as part of a joint honours course at degree level.

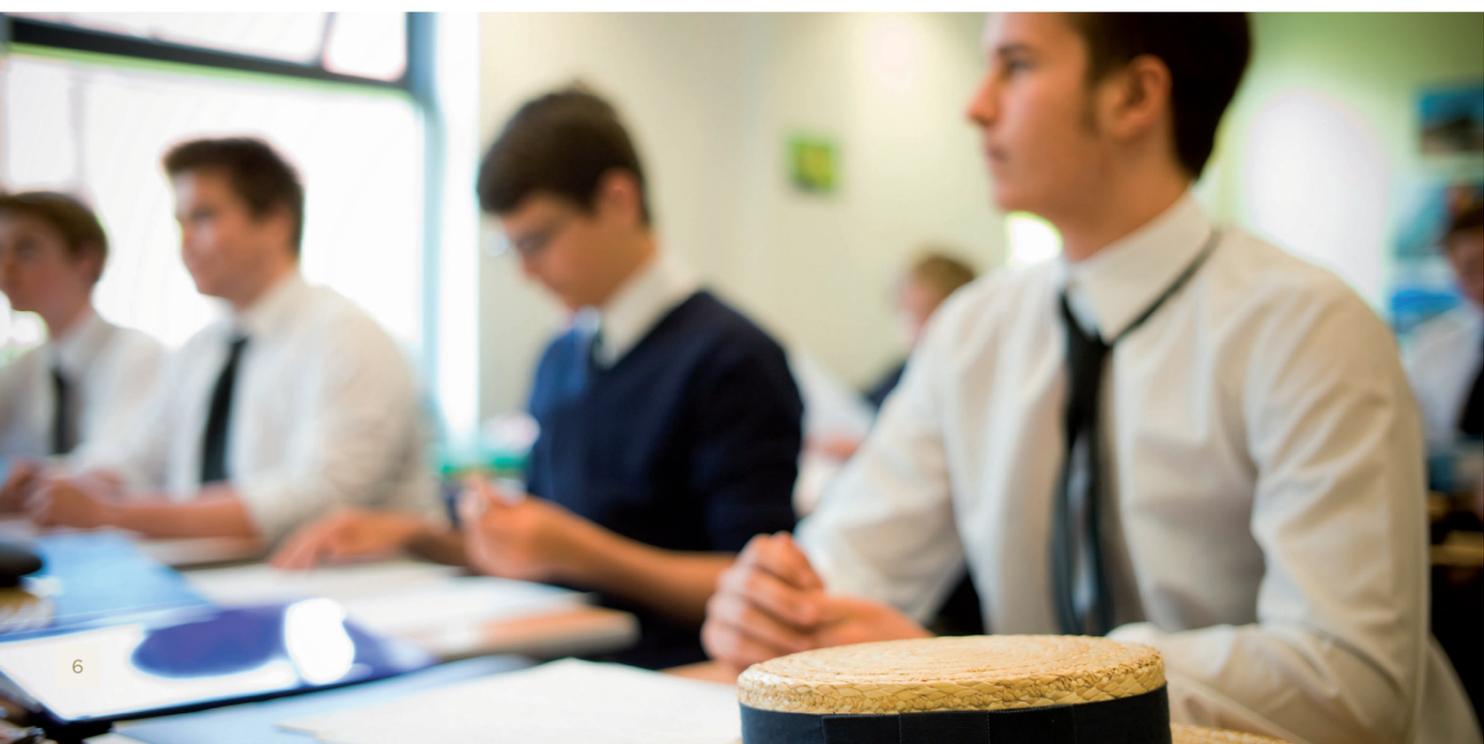
JAPANESE

Japanese teaching at Harrow focuses on all four language skills and encourages boys to use the language from the very beginning. Boys begin by learning the 46 characters of Hiragana, the phonetic native script, in the Autumn term. In the Spring term, we introduce the 46 characters of Katakana (for borrowed foreign words). By the Summer term, we begin to introduce Kanji and boys will be communicating in written form, purely in Japanese script. Ninety percent of the course is taught in the target language to encourage oral fluency. The Shell course focuses mainly on language skills but there is brief coverage of the basics of Japanese culture such as history, the arts, literature, martial arts, music, politics and religion. There are also trips to London to see Japanese exhibitions and shows that bring the boys' language-learning experience to life. Every other year, there is a trip scheduled to Japan, which includes a stay with a Japanese family and visits to famous cultural sites such as Kyoto, Tokyo and Nara.

Japanese is one of the language options available to Shell boys, both on and off the timetable. Why study it?

Japan is the world's third-largest economy and the world's biggest lender. It has the most diverse economy in Asia and is a leader in the field of business, manufacturing, research, economics and politics. It is said that one is never more than ten metres from a Japanese-manufactured item, be it a product from Sony, Toshiba, Sanyo, Casio, Canon, Minolta, Honda, Toyota, Mitsubishi, Nissan or Subaru. Japanese speakers are the third-largest language community on the internet, with 88 million users. Their culture is rich and infectious, with many recognisable words such as sushi, karaoke, manga, sudoku, origami, anime, bonsai and tamagochi. Japan has a rich history and the Japanese a unique temperament; patience and selflessness are still the ultimate virtues. Japanese is the principal second language for many Pacific Rim countries including Australia, but it is not a commonly taught language at secondary level in the UK. Learners destined for a career in research, business, manufacturing, economics, finance, politics or linguistics will find Japanese is a useful tool.

Japanese is not as difficult as is commonly perceived. Grammatically, it is a much easier language than many of its Western counterparts. There are very few verbal forms, no multiple conjugations dependent on singular/plural, gender or nominative case. There is no future tense and very little change to form the past tense. In writing, many students find the characters similar to pictures and find them therapeutic to practise and learn. Japanese is strongly recommended for boys coming from the Pacific Rim area who have no background in another European language.



LATIN

Latin is the bedrock of European thought and its languages. In their Shell year, boys will develop their understanding of the Latin language and broaden their knowledge and appreciation of the classical heritage of Rome. The Shell course is designed to improve overall literacy and build key linguistic skills that boys have started to acquire at their previous schools, but also offers an introduction to Roman society, history and literature.

Boys in the Shell year focus on learning Latin expression and sentence structure, and, through its study, acquire a better grasp of English grammar. Boys will also widen their vocabulary and have more confidence in expressing themselves clearly.

Boys with no previous experience of Latin are taken through a beginners' course that focuses on developing the fundamentals of the inflected language; boys who have studied Latin for some time and have shown good aptitude for the language press ahead to more challenging texts and are exposed to some Classical Greek.

The Latin course envelopes Classical Civilisation and Ancient History, which aims to expose the boys to the richness of classical art, history, politics and philosophy. The boys read stories on early Roman kings, Caesar, Cicero, the fall of the Roman Republic, portions of the *Aeneid*, and Rome's foundation myths.

All boys in the Shell year have the opportunity to complete an individual project essay (the Classics Affleck Prize) of about 1,500 words, which introduces them to the fundamentals of scholarly research and allows them to look in greater depth at an area of the classical world that interests them. The Oxenham Speech Day Prize for Latin Recitation gives boys an opportunity to see and hear Latin come alive.

Latin makes an excellent complement to both sciences and humanities subjects (like Ancient History, History, English, Art or a modern foreign language). By the end of the Shell year, most boys will be more than half way through the GCSE Latin course. Latin remains a popular choice and about half of the Shell year will continue with Latin to GCSE. For boys who enjoy the study of the Greek and Roman world in translation, there is the popular option of Ancient History at GCSE, which follows on naturally from the Shell Latin course.

MATHEMATICS

Mathematics in the Shell year starts with an extensive algebra course and subsequent test, which informs the initial setting arrangements. The Shell syllabus is split into three strands: number and algebra; shape, space and measures; and handling data. We take a selection of topics from each strand throughout the year. It includes solving equations and inequalities; percentage and ratio; Pythagoras's theorem; analysing data; indices and standard form; sequences; transformations; area; and volume.

Regular testing and revision of the setting arrangements occur throughout the year.

We study Edexcel IGCSE Mathematics, which is graded from 9 to 1. We provide the top divisions with many enrichment challenges in the hope that, by the end of the Fifth Form, many will be in a position to opt for Further Mathematics A level in the Sixth Form. These boys are encouraged to take part in mathematical competitions, particularly the Intermediate UK Challenge. Because of the difficulties in setting boys of differing abilities from a variety of backgrounds, there is significant movement between divisions throughout the Shell year, with many opportunities for boys to move to the division that is best suited to their ability.

MUSIC

This is a foundation course in Music that allows boys of all levels to be engaged and challenged by the creative process of musical composition. Listening and appraising skills are central to the scheme of work, but principally boys come to understand a wide variety of musical styles by working creatively within these idioms. Large parts of the course are focused on the use of music software (Garageband and Sibelius), which runs on a suite of 24 iMacs with music keyboards. Garageband is highly accessible but sophisticated software that does not require knowledge of music notation, while Sibelius introduces pupils to music notation, or deepens their understanding of it. It is intended that all boys should have experience of musical composition and, through it, some knowledge of a variety of musical styles including Western classical music, popular music and music for film. The course also allows boys to engage with ICT in a creative way and to develop transferrable skills in using technology. Sibelius is used by pupils studying GCSE and A level Music, while skills learned through Garageband are directly transferrable to Logic Pro X, one of the software platforms used for Music Technology A level.

PHYSICS

Physics is the study of the physical universe and the processes that shape it. We aim to convey to boys a vivid sense of the enormous scale and complexity of the subject, thus enabling them to appreciate just how amazing and fascinating Physics can be. We spend a good deal of time carrying out experiments during this first year and use these both to instil the basics of good laboratory practice and to enhance understanding of the underlying laws and principles. In working through such hands-on topics as electricity, mechanics, waves, astrophysics and nuclear physics, there is plenty of diverse and stimulating material with which to get to grips. While much cutting-edge physics such as the latest work in particle physics is often neglected at this age as it is felt to be too difficult, we appreciate that this is the very material that can be most stimulating to bright and inquisitive young minds. Boys take courses in these and other equally challenging topics that will, we hope, both stretch and excite them.

PSHE EDUCATION

Following a week of induction at the start of the academic year, Shell boys will follow a broad and balanced pastoral curriculum designed to support them as young people growing up in the 21st century. The programme of study is comprehensive, drawing upon themes that relate to health and wellbeing, families and relationships, as well as incorporating subject matter designed to support boys living in the wider world, such as financial literacy, enterprise and career education. As well as being didactic, the programme encourages boys to reflect upon the material being covered, talking about the surrounding issues in a small group context. In doing so, emphasis is placed upon the development of personal attributes and the skills of decision-making, in addition to the acquisition of relevant knowledge.

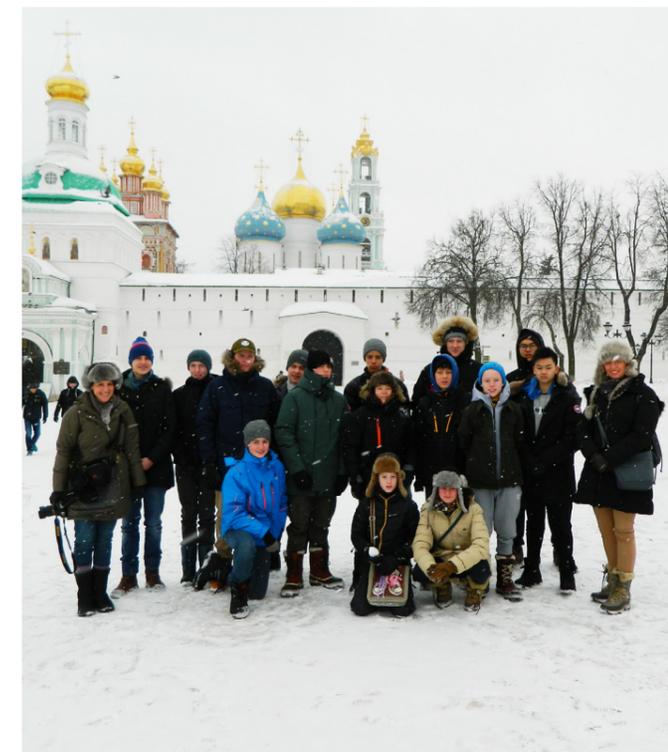
Tutors take the lead in the delivery of the programme, working directly with their tutees from within the boarding House with which they are associated. As a result, the programme is responsive to the individual needs of the boys, as well as being delivered in an age-appropriate manner. The taught element of the programme is supported by conference and workshop events, as well as by visiting guest speakers. In the Shell year, there is one conference at the start of the academic year that focuses on fostering positive relationships, and one at the end of the school year that aims to extend several elements of the taught curriculum.

RUSSIAN

This Russian course is intended for complete beginners or boys with very limited knowledge of the language (more advanced learners can sign up to study Russian off the timetable). In their first year, boys will master the printed and hand-written Cyrillic alphabet, learn key vocabulary from several different topic areas and gain a sound understanding of basic Russian grammar. This will be achieved through a range of listening, speaking, reading and writing tasks in the form room as well as a broad range of co-curricular activities such as Russian cultural evenings, theatre and restaurant trips, lectures and a biennial cultural trip to Moscow and St Petersburg.

Russian is one of the language options available to Shell boys, both on and off the timetable. Why study it?

As well as being a truly beautiful language to the ear, Russian is also very useful in today's global economy as Russia is by far the largest country in the world, spanning 11 time zones. As can be seen from our boys' excellent exam results, mastering the Cyrillic alphabet and Russian grammar and pronunciation is not as hard as often thought. Russian is used by approximately 260 million



people. It is the eighth-most-spoken language in the world by number of native speakers and the fifth-most-spoken language in the world by total number of speakers. It is also the most widespread language of Eurasia and the most widely spoken of the Slavic languages. Russian is one of the six official languages of the United Nations and the working language of the Commonwealth of Independent States (CIS) and the International Atomic Energy Agency (IAEA).

With enormous natural resources, Russia is currently rated as the eleventh-largest economy in the world by nominal GDP, and the sixth largest by purchasing power parity (2020). Russia has produced many world-famous scientists and inventors, and over a quarter of the world's scientific literature is published in Russian.

Knowledge of the Russian language and culture brings learners closer to the works of some of the world's greatest writers, including Pushkin, Lermontov, Tolstoy, Dostoyevsky, Gogol, Chekhov, Nabokov and Solzhenitsyn, as well as some of the world's best-known musicians such as Prokofiev, Tchaikovsky, Rachmaninoff, Rimsky-Korsakov and Shostakovich. The ability to speak Russian can significantly help those who have mastered it to gain entry to the best UK universities and will undoubtedly be a great asset in an increasingly competitive job market, with more and more European businesses expanding their operations eastwards. At degree level, Russian can be combined with subjects such as History, Politics, Business or another modern or ancient language. It will also be a powerful addition to an application to US universities, which hugely value the breadth of subjects studied by their applicants.

SPANISH

The first year of this three-year Spanish course to GCSE assumes no prior knowledge of the language. All basic grammatical structures (including present, future and past tenses), together with the fundamental vocabulary required for the main GCSE topics, are covered. The Shells focus on Castilian Spanish, spoken on the Iberian Peninsula, but much emphasis is put on the richness and importance of this global language. We cover the cultural aspects of Hispanic countries in the Americas, Africa and the Far East as part of this foundation year.

Every year, the Spanish Department organises a homestay study tour to the university city of Salamanca. These trips incorporate a diverse range of cultural excursions and activities as well as lessons to prepare for the oral component of examinations.

Spanish is one of the language options available to Shell boys both on and off the timetable. Why study it?

Firstly, the relative simplicity of the language: its pronunciation and spelling are straightforward and can be mastered after one lesson, as Spanish is totally phonetic. Many scientific studies have proved that dyslexic learners in particular have most success mastering this language. Spanish grammar is also relatively straightforward as it is, after all, an extremely simplified form of Latin with only two genders and no declensions for nouns.

Secondly, its invaluable use in our modern world: there are over 475 million native Spanish speakers, making Spanish the second-most important international language, and it is the official language of 21 countries. Latin American markets have opened up considerably in the last 20 years. As a means of communication in the 21st century, therefore, Spanish is clearly of importance, whether for business or pleasure.

A boy's interest in learning Spanish, however, should not be governed only by the language's relative simplicity or its practical use in helping him enjoy a holiday or find employment after university. The most exciting reason for learning Spanish is the cultural and geographical diversity of Spanish speakers in Spain, the Americas, Equatorial Guinea (Africa), in the Philippines (a Spanish colony until 1898), and among Sephardic Jews now living mainly in Israel.

Hispanic cultural heritage, therefore, is outstanding, whether one's interests lie in architecture (Gaudi and the Aztec and Inca empires), painting (Velázquez, Dalí, Picasso and Goya), or literature (Cervantes, Lorca and Gabriel García Márquez).

SPORT

The variety and number of sports available to Harrovians is remarkable. The main team games are rugby, soccer and cricket. Other major School sports are hockey, Harrow football, swimming, athletics, cross-country running, tennis, squash, rackets, fives and golf. New boys can learn many other sports such as archery, badminton, basketball, climbing, fencing, judo, karate, polo, water polo and Olympic weightlifting.

Opportunities exist for boys to participate in both recreational and competitive environments on an individual and team basis, and at inter-House and inter-school levels. Everyone is encouraged to find their niche and expected to participate throughout the year. In their first term, Shell boys play rugby on Saturdays and during the week, as well as House soccer on Sundays when many parents come to visit. Boys in the School rugby teams can also play one or more of the other sports available at non-rugby times. This model is replicated across the other two terms of the year to allow for a breadth of sporting experience. This is supported by our outstanding coaching provision. Every Harrovian has equal opportunity to access facilities and gain exposure to top-level coaching expertise, which allows boys continuously to develop their tactical, technical, mental and physical skills. Indeed, every boy at Harrow can enjoy the pursuit of fitness and wellbeing through their use of our gyms, where boys are monitored at all times by our fully qualified strength and conditioning coaches, following appropriate athletic development programmes.

THEOLOGY & PHILOSOPHY

During the three terms of the Shell year, boys study a foundation course in Philosophy and Theology. The first term introduces the boys to key ideas inspired by Socrates, Plato, Aristotle and Jesus that have influenced and shaped Western thought. The second term provides an opportunity for the boys to explore their own philosophical views on the existence of God through the study of Aquinas, Anselm, Dawkins, Feuerbach, Paley and Paschal; the relationship between science and religion; and the problem of evil and suffering. The final term is devoted to the study of the three monotheistic traditions of Christianity, Judaism and Islam, which provides a good foundation for the AQA GCSE Religious Studies course.

Over the course of the year, boys will also have a chance to develop a number of significant soft skills, namely the ability to listen actively, to offer constructive feedback, and considerable public-speaking skills. These skills are enhanced and broadened through the department's Philosophy for Children (P4C) programme. This has proven to be particularly popular with boys over the past few years and has encouraged many to study the subject at GCSE and beyond.

All boys are encouraged to read widely around the subject. This extended reading might include *Theology: The Basics* (A E McGrath), *Sophie's World* (Jostein Gaarder), *The Screwtape Letters* (C S Lewis), *The Case for Religion* (Keith Ward), *Ethics Matters* (Peter and Charlotte Vardy) and *The Puzzle of God* (Peter Vardy). Suggested super-curricular visits range from the Mosque in Regent's Park to the Jewish Museum in Camden or a cathedral such as St Paul's Cathedral, Westminster Cathedral or the Greek and Russian Orthodox cathedrals. On the Hill, boys have the opportunity to listen to a series of lectures throughout the year as part of the Junior Gore Society. Boys in the Shell year are also encouraged to contribute theological and philosophical articles to the department's School-wide magazine *The Scroll*.



HARROW SCHOOL

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