

Why study Fine Art or Graphic Art?

Art and design allows development of creativity and artistic expression, and is one of the only subjects to be almost entirely practical. Art and design is vital in today's ever-changing world, where aesthetics are equally as important as function. Indeed, art surrounds us in our everyday living environment; from the buildings we live in, mobile phones, and the clothes on the high street.

Students studying art will explore and develop their artistic skills in a variety of disciplines. Learners will also develop their ability to analyse artwork and think critically about the creative world and apply that knowledge to their projects. The course is designed with further education in mind, so that students who wish to pursue a career in art and design have the skills and knowledge required; many students do continue into highly successful careers in the widely increasing creative industries.

What do I need to know or be able to do before taking this course?

You need to have gained grade 7 or above in GCSE Art. You will be required to explore drawing using a variety of methods and media on a range of scales. Students will use sketchbooks/workbooks/journals to underpin their work. This course requires a significant amount of independent study.

Features of the course:

Students will produce practical and critical/contextual work in one or more areas including painting, drawing, mixed media, sculpture, installation, printmaking, film, animation, video, photography, lens-based and/or light-based media. Graphic art students will follow the same course but will produce their development and final pieces using the computer program Photoshop. Their outcomes will be of a graphic nature such as stamp presentation packs, posters or calendars.

Key information:

Topics for study:	<p>Fine Art: Students should produce practical and critical/contextual work in one or more areas including painting, drawing, mixed media, sculpture, land art, installation, printmaking, film, animation, television, video and photography: lens-based and/or light-based media.</p> <p>Graphic Art Students should produce practical and critical/contextual work in one or more areas including illustration, advertising, packaging design, design for print, communication graphics, computer graphics, multimedia, animation, web design, film, television and/or video.</p>
Assessment summary	<p>Unit 1 - Portfolio</p> <p>Unit 2 - Personal Study Project 1000-3000 words</p> <p>Unit 3 - Externally set assignment including a 15 hour examination</p>
Entry requirements	Grade 7 or above in GCSE Art
Exam Board	AQA
Subject lead contact details:	Mrs Sadowski, Head of Art; HSadowski@qegs.cumbria.sch.uk



Why study Drama and Theatre?

Students of AQA theatre studies develop skills that are applicable to a wide range of higher education subjects and in the workplace. This specification refines students' collaborative skills, their analytical thinking, their approach to research and ability to solve problems, meet deadlines and work independently. Students grow in confidence and maturity as they successfully realise their own ideas. They learn to evaluate objectively and develop a sound appreciation of the influences that cultural and social contexts can have on decision-making. Whatever the future holds, students of A-Level drama and theatre emerge with a toolkit of transferable skills preparing them for their next steps in life.

What do I need to know or be able to do before taking this course?

Students need to demonstrate that they have an interest in drama and the theatre and have creative ideas in either design or technical or performance. You need to be able to read widely and be able to reflect on the impact of theatre in different contexts. There will be opportunities for theatre visits, workshops and possible residential trips, for which there would be additional costs.

Features of the course:

This qualification emphasises practical creativity alongside research and theoretical understanding. Students learn through experience, seeing theatre and making theatre for themselves. Students are introduced to a wide range of theatrical styles and contexts as they explore plays practically and devise and work on performances. They explore two set texts, practically and theoretically, both of which are examined in the written paper. Students work as a group, to produce performances and can choose to develop as a performer, designer (lighting, sound, set, costume) or a combination of these.

Whichever option they choose, students will gain many invaluable skills, both theatrical and transferable, to expand their horizons.

Key information:

Topics for study:	Three components: <ul style="list-style-type: none">- Drama and theatre- Creating original drama- Making theatre In the practical components, students may specialise in performing, lighting, sound, set, costume, or directing.
Assessment summary	1 x 3 hour written examination (40%) 1 x Creating original drama practical, group assessment including working notebook (30%) 1 x Making theatre practical, individual or group assessment and reflective report (30%)
Entry requirements	Grade 6 in GCSE Drama or a Grade 6 in GCSE English plus an audition/interview
Exam Board	AQA
Subject lead contact details:	Miss Coates, Head of Drama; DCoates@qegs.cumbria.sch.uk



Why study English Language?

The skills required for English language can be applied in a range of contexts and future careers. The ability to analyse English language and construct a written argument is invaluable to communicate effectively and relate to others.

What do I need to know or be able to do before taking this course?

Students need to have a good understanding of the work covered at GCSE level in English language. They should have an interest in how language is constructed and a desire to learn more. As the subject is very current, an interest in how language operates in the world is essential and students who supplement their studies with wider reading are at a strong advantage.

Features of the course:

A Level English Language is in many ways quite different to GCSE. Although you still analyse non-literary texts (websites, leaflets, newspaper articles etc.), you learn to do this in a much more technical way, learning about grammar and the semantics. The spoken word is also studied. We study topics about how and why our language changes; how children learn to communicate; why there are regional and social differences in speech. Important issues are explored such as how language is important when considering gender, power and technology.

There is a creative writing element where you produce a text in a given format about a current topical issue in English Language, written in a lively journalistic style.

Finally, you will complete an independent study (coursework), investigating an area of language study that interests you.

Key information:

Topics for study:	Language Under the Microscope Topical language Issues Spoken Language Child's Language Acquisition The Language of power, gender and technology Language Change Independent Study and academic poster
Assessment summary	Paper 1 – Exploring Language - 2 hours 30 minutes – 40% Paper 2 – Dimensions of Linguistic Variations - 2 hours 30 minutes – 40% Independent Language Research – 20%
Entry requirements	Grade 6 in GCSE English Language
Exam Board	OCR
Subject lead contact details:	Mrs Cooke, Head of English; SCooke@qegs.cumbria.sch.uk

**Why study English Literature?**

English literature is an enjoyable and challenging subject for students who enjoy reading, talking and writing about a variety of texts, ranging from some of the earliest writers in the English canon, to contemporary texts written in the last few years. Teachers choose to teach poems, plays and novels that they are passionate about and there is also the opportunity for students to choose their own texts for independent study. The course will appeal to those who enjoy expressing their own opinions and developing independent ideas.

As well as for students who are already committed to the study of English at university, it is also an ideal choice for pupils who want to keep their options open for further study, being widely recognized as an academic and highly respected subject.

What do I need to know or be able to do before taking this course?

Students need to have a good understanding of the work covered at GCSE level in English literature. They should have an interest in analysing literature from a range of genres. Wider reading is essential for success on this course.

Features of the course:

Lessons tend to be largely discussion based, as this is a subject that thrives on lively debate and a willingness to defend and challenge ideas. Outside of lessons, work tends to focus on independent reading and essay writing. The English department organises frequent theatre trips to complement the works being studied.

The ability to read critically and discerningly, to produce accurate, persuasive writing and to have confidence in one's own judgements are clearly invaluable skills.

The drama texts will include one Shakespeare text and one other text (contemporary or pre 1900).

The two prose texts will be from a chosen theme such as science and society, the supernatural, crime and detection, childhood or colonisation and its aftermath.

A selection of post-2000 poetry and specified poetry from a literary period will be studied.

Key information:

Topics for study:	Component 1: Drama (30%) Component 2: Prose (20%) Component 3: Poetry (30%) Component 4: Coursework (20%)
Assessment summary	1. 1 x 2 hour 15 minutes open book examination (30%) 2. 1 x 1 hour 15 minutes open book examination (20%) 3. 1 x 2 hour 15 minutes open book examination (30%) 4. 1 x 2500 - 3500 words coursework (20%)
Entry requirements	Grade 6 in GCSE English Language and Literature
Exam Board	Edexcel
Subject lead contact details:	Mrs Cooke, Head of English; SCooke@qegs.cumbria.sch.uk



Why study Music?

The course is excellent preparation for higher education courses in music, but is equally valuable for non-specialists as a second or third area of study. The A-Level qualification can lead to a wide range of careers in performance, composition, primary and secondary teaching, music therapy, publishing, promotion and marketing, journalism and many other areas.

What do I need to know or be able to do before taking this course?

You must have a good understanding of the content of the GCSE music course and demonstrate a practical ability in a musical instrument or voice at Grade 6. You must be able to read music and have an interest in a wide range of music.

Features of the course:

Edexcel music is a stimulating and enriching course. As with GCSE, students will experience the three key areas of performance, composition and appraisal. 60% of the course is based on practical controlled assessment; the remaining 40% is based on a written examination at the end of the course that focuses on a series of set works from a variety of musical styles, genres and cultures.

Throughout the course you will develop skills as a performer (leading to a recital) and composer (composing to a brief and technical studies). Listening skills are focused on through the study of familiar and unfamiliar music, and understanding how it works.

Key information:

Topics for study:	Performing (30%) Composing (30%) Appraising (40%)
Assessment summary	A recital performance of one or more pieces to be recorded in school and externally marked. Can be a solo or ensemble performance or improvisation lasting a minimum of 8 minutes at Grade 6+ standard. One composition of at least 4 minutes either free or following a brief. One composition exploring compositional techniques and at least one-minute long. 1 x 2 hour written examination based on set works.
Entry requirements	Grade 6 in GCSE Music or proof of practical expertise. Must be able to read music and perform to Grade 6 ABRSM or equivalent.
Exam Board	Edexcel
Subject lead contact details:	Mr Roberts, Head of Music; DRoberts@qegs.cumbria.sch.uk



Why study Medieval History?

History helps you to discover how your world evolved. It helps you to develop skills to look beyond the headlines and to ask critical questions. It teaches you to express your own opinions with clarity and precision. History helps you learn how to think and process information and to also understand the origins of modern political and social problems.

Historians have always made a virtue of the importance of making objective judgements based upon wide reading and an understanding of multiplicity of conflicting sources. We value the ability to write clear, literate, synoptic, analytical prose that represents a balanced assessment of the evidence but which is not frightened of drawing bold conclusions. History training therefore imparts vital transferable skills that are extremely useful in many jobs.

What do I need to know or be able to do before taking this course?

You must have an interest in this period of history and be interested in studying it in more detail. You should be prepared to read more widely around the subjects being discussed and present written work that is beginning to show an ability to justify and explain your thinking.

Features of the course:

In the breadth study students move beyond Western European history to the great civilisations of Byzantium and the Middle East in the age of the crusades. They contain every element of social, political and economic history. For example, the motivation to join a crusade combined the social power of God and the church, the economic impact of poverty in Europe and the political machinations of ambitious noblemen. This course will look at the first four crusades finishing with the infamous sacking of Constantinople in 1204.

The depth study of royal authority and Angevin kings covers the reigns of three monarchs as they struggle to separate their dynasty from their Norman predecessors. The first, Henry II, began the period as arguably the most powerful monarch in Europe, with lands stretching from the Scottish borders to the Pyrenees. His son, Richard I, would spend a mere 10 months of his 10-year rule in England, whilst away on crusade his wife takes his place and becomes one of the most powerful women in Medieval England. The last of the Angevin kings was John, whom history has judged harshly. By 1205, six years into his reign, only a fragment of the Angevin empire acquired by Henry II remained. He was also forced to sign the Magna Carta in 1215.

Key information:

Topics for study:	A breadth study - The Age of the Crusades 1071- 1204 A depth study - Royal Authority and the Angevin kings 1154-1216 A Historical Investigation
Assessment summary	2 x 2 hour 30 minutes examinations (40% each) 1 x historical investigation of 3000-3500 words (20%)
Entry requirements	Grade 6 in GCSE History
Exam Board	AQA
Subject lead contact details:	Mr Baines, Head of History; pbaines@qegs.cumbria.sch.uk



Why study Modern History?

History helps you to discover how your world evolved. It helps you to develop skills to look beyond the headlines and to ask critical questions. It teaches you to express your own opinions with clarity and precision. History can help you learn how to think and process information and understand the origins of modern political and social problems.

Historians have always made a virtue of the importance of making objective judgements based upon wide reading and an understanding of multiplicity of conflicting sources. We value the ability to write clear, literate, synoptic, analytical prose that represents a balanced assessment of the evidence but which is not frightened of drawing bold conclusions. A history training therefore imparts vital transferable skills that are extremely useful in many jobs.

What do I need to know or be able to do before taking this course?

You must have an interest in this period of history and be interested in studying it in more detail. You should be prepared to read more widely around the subjects being discussed and present written work that is beginning to show an ability to justify and explain your thinking.

Features of the course:

The breadth study focuses on Russia, a country that experienced wars, revolution and some of the most interesting and controversial individuals in the whole of history. The course examines the causes, extent and impact of political, economic, social and cultural change across this transformative period. It begins by investigating attempts to preserve the Tsarist autocracy of the late nineteenth century. It goes on to examine the political developments of 1917 before investigating the Bolshevik takeover and establishment of a communist dictatorship under Lenin and later Stalin. Finally, the course considers Khrushchev and the significance of his attempts to reform communism.

The depth study on the making of modern Britain will allow students to study the key social, economic, political and international changes that have helped to create the Britain we live in today. It explores concepts such as class, social division, cultural change and effective government, and challenges students to reflect on Britain's changing place in an increasingly inter-connected world. Students will be encouraged to assess historical questions such as how far the British lived in an affluent society in the 1950s, to what extent did the sixties swing, were the unions to blame for the political crises in the 1970s, did Mrs Thatcher really 'change everything' in Britain as she declared and had Britain become 'cool Britannia' and a multi-cultural society by 2007?

Key information:

Topics for study:	A breadth study - Tsarist and Communist Russia 1855 - 1964 A depth study - The Making of Modern Britain 1951 - 2007 A historical investigation
Assessment summary	2 x 2 hour 30 minutes examinations (40% each) 1 x historical investigation of 3000-3500 words (20%)
Entry requirements	Grade 6 in GCSE History
Exam Board	AQA
Subject lead contact details:	Mr Baines, Head of History; pbaines@qegs.cumbria.sch.uk



Why study Geography?

An A-Level in geography encourages learners to apply geographical knowledge, theory and skills to the world around them. In turn, this will enable learners to develop a critical understanding of the world's people, places and environments in the twenty-first century. Learners will develop both knowledge and understanding of contemporary geographical concepts, together with transferable skills that will enable them to progress to higher education and a range of employment opportunities.

What do I need to know or be able to do before taking this course?

This qualification builds on the knowledge, understanding and skills established at GCSE and particularly aims to develop a deeper understanding of, and ability to apply, the concepts of place, space, scale and environment.

Features of the course:

The subject content focuses on the dynamic nature of physical systems and processes in the real world, and on the interactions and connectivity between people, places and environments in both time and space. The core themes are divided into separate physical and human themes. The non-core content draws on both physical and human geography and people-environment interactions. All themes integrate geographical skills, scale and specialised concepts.

Fieldwork is integrated into the course and covers both physical geography and human geography.

Key information:

Topics for study:	Unit 1: Changing landscapes Unit 2: Changing places Unit 3: Global systems and global governance Unit 4: Contemporary themes in geography Unit 5: Independent investigation
Assessment summary	3 x 2-hour examination (24% each) 1 x 1 hour 30 minutes examination (16%) 1 x independent investigation of 3000-4000 words (20%)
Entry requirements	Grade 6 in GCSE Geography
Exam Board	WJEC
Subject lead contact details:	Mr Douglas, Head of Earth Sciences; JDouglas@qegs.cumbria.sch.uk



Why study Politics?

It is important that you understand how the country you live in operates. Studying this course will help you make sense of current affairs and produce academic and analytical essays.

Politics is particularly useful if you are considering employment in law, journalism or the civil service. The awareness and the skills that you develop through a study of politics, however, are relevant to almost every aspect of life.

What do I need to know or be able to do before taking this course?

Politics is an intellectually challenging and rewarding subject. There are significant elements of written work involved in the course. The ability to articulate views and ideas in both a verbal and written context is essential. You must have an interest in politics in both the UK and USA and be prepared to read widely around the subject.

Features of the course:

This course combines three of the most popular units currently offered by exam boards. It combines practical elements' such as how government works in the UK and USA, with more theoretical aspects including the study of major political ideologies like conservatism, socialism, liberalism, feminism, nationalism and anarchism.

The course aims to widen students' understanding of the key issues in modern society. It investigates where power now lies, how people are represented and the opportunities for change. This includes for example, debates over whether we should go to war, civil liberties, the influence of Europe, the obstacles facing minorities plus the role of political parties.

There are numerous extra-curricular activities to support your study of politics such as a joint history and politics trip to London, debating society, Sixth Form discussion group and events like the school mock election.

Key information:

Topics for Study:	Unit 1: Governments and politics of the UK Unit 2: Government and politics of the USA Unit 3: Political ideas
Assessment summary	3 x 2-hour examinations containing a mix of medium length 'explain' questions and essay style questions
Entry requirements	Grade 6 in GCSE English Language or Literature
Exam Board	AQA
Subject lead contact details:	Mr Martin, Head of Human Science; AMartin@qegs.cumbria.sch.uk



Why study Environmental Science?

Environmental science courses are increasingly popular at universities and new legislation means that industry and the public sector are urgently seeking well-qualified graduates with a background in the subject.

What do I need to know or be able to do before taking this course?

The course focuses on the science of the environment. It is not a pure science, although some universities do accept it as such. The underlying principles are rooted in scientific theory so a sound grasp of GCSE level science is essential.

Students must also be prepared to undertake additional reading. A reading list is available on the student shared area of the school intranet site. Some reading material is supplied in Year 12, but a more independent approach is needed in Year 13 to ensure that students can reach the top grades.

Features of the course:

This course examines how human activity affects the environment. How can these impacts be managed to limit the damage caused and to secure healthy surroundings for us and for future generations? These are increasingly urgent issues, relevant across a range of curriculum and policy areas.

Environmental science is a holistic subject with many interconnected systems and processes. A change to one process can affect many other processes over different spatial and temporal scales. Consideration of environmental issues and the conclusions reached are based on reliable evidence-based information and quantitative data. Students will develop an understanding of how human society relies upon natural systems for resources and life support systems. An understanding of these systems will be used to propose changes in society that would produce sustainable lifestyles.

Key information:

Topics for Study:	The living environment The physical environment Energy resources Pollution Biological resources Sustainability Research methods
Assessment summary	2 x 3 hour written papers
Entry requirements	Grade 6 in GCSE Biology
Exam Board	AQA
Subject lead contact details:	Mr Douglas, Head of Earth Sciences; JDouglas@qegs.cumbria.sch.uk



Why study Geology?

Geology can be considered as a leisure interest subject. It helps us to appreciate and understand our natural environment, both locally and further afield. Cumbria is a particularly good place in which to study geology with its varied landscape, a wide range of formations and its long history of mining. Many students develop a keen interest in collecting minerals and fossils, which they continue after leaving school. Career opportunities are also extremely wide ranging.

What do I need to know or be able to do before taking this course?

There is no charge for the local fieldwork that is a compulsory part of the course, other than basic travel costs. Any equipment needed is supplied by the department but students may wish to buy their own hand lenses and field note-books. There may be opportunities for optional visits that are further afield for which there would be additional costs.

Features of the course:

Geology involves the scientific study of the earth. We examine in detail the materials that occur at the surface, the minerals and the various types of rocks and deposits. We look at how these materials are produced, changed and recycled, and how the processes involved change the landscape. There are in-depth studies of “big” topics - earthquakes, mountain-building, volcanic activity, ocean and continent formation - and we learn how these are related to huge changes in the earth’s interior.

Emphasis is placed on applied geology. All nations depend upon a supply of essential resources: energy resources like coal, oil and gas; metals such as iron, copper, lead and zinc; construction materials such as limestone, sand and gravel, clay and roadstones; and an adequate supply of fresh water. Geologists are involved in finding and developing these vital materials. A consequence of human consumption of raw material is inevitably waste disposal - again needing geological expertise.

Fieldwork is an essential part of the course and in the summer/autumn terms, four days of local field trips (Lake District, Eden Valley and Pennines) are arranged. In addition, there are afternoon excursions, which can be used to complete coursework requirements and occasional visits to local extractive industries such as the mine at British Gypsum.

Key information:

Topics for Study:	Component 1: Geological investigations (35%) Component 2: Geological principles and processes (30%) Component 3: Geological applications (35%) Practical Endorsement: Assessment of practical competencies reported separately
Assessment summary	Component 1: 2 hour 15 minutes examination Component 2: 1 hour 45 minutes examination Component 3: 2 hour examination Practical Endorsement: Non-examined assessment
Entry requirements	Grade 6 in GCSE Maths or Grade 6 in GCSE Science
Exam Board	WJEC
Subject lead contact details:	Mr Douglas, Head of Earth Sciences; JDouglas@qegs.cumbria.sch.uk

**Design Technology: Product Design****Why study Product Design?**

Virtually everything you buy is designed or engineered. This course could be the pathway to many exciting and rewarding career paths in a rapidly changing technological society. From engineers to technicians, to designers, high-level manufacturing in the UK needs a creative, forward thinking, skilled and highly trained workforce that you could be part of. As well as developing knowledge and skills in technology based topics, this subject is one which naturally develops transferable skills such as team work, problem solving and communication skills - all of which are vital in the world of work.

Product design is about making things that people want, that work well. Creating these products is hugely exciting and it is an inventive, fun activity. This course can be used as a complementary subject to mathematics, science and art, or to provide a contrast to humanities subjects. This is a valuable course for anyone seeking a creative, technical or design-based career.

What do I need to know or be able to do before taking this course?

Maths skills are fundamental to design and technology. These will be embedded within the examination for this qualification. Students must have a sound working knowledge of the use of ICT. An interest in designers from the past and present and an enthusiasm for sketching, modelling and making is key in getting the most out of the course.

Features of the course:

You will learn through practical work and theory lessons and have the opportunity to work independently and as a member of a group. Year 12 comprises a mix of theory lessons important in developing exam practice and a number of short skills projects before embarking on a major project which is submitted in Year 13. Students will be required to apply knowledge and understanding of a wide range of materials; including modern and smart materials, and processes used in product design and manufacture. They will be required to develop an understanding of contemporary industrial and commercial practices applied to designing and manufacturing products, and to appreciate the risks involved. Students should have a good working knowledge of health and safety procedures and relevant legislation.

Key information:

Topics for Study:	Performance characteristics of materials; processes and techniques; digital technologies; factors influencing the development of products; effects of technological developments; potential hazards and risk assessment; features of manufacturing industries and designing for maintenance. Presentation skills portfolio, design and make skills project, laminating skills project, 3D cad skills development unit.
Assessment summary	Component 1: 2 hours 30 minutes' examination Component 2: Non-examined assessment portfolio
Entry requirements	Grade 6 in GCSE Design and Technology <i>In exceptional circumstances students who have not met the minimum grade requirements will be considered if they can demonstrate the following: a portfolio showing technical work, a product made by the student that shows technique and understanding of various methods of making, an understanding of both 2D and 3D CAD, an interest in design or a hobby in a design technology based activity.</i>
Exam Board	AQA
Subject lead contact details:	Mr Wilson, Head of Design Technology; FWilson@qegs.cumbria.sch.uk



Why study Biology?

Biology is the window onto the fascinating world of micro-organisms, plants, ecosystems, humans and other animals. Biologists try to understand some of the fundamental aspects of life itself.

Biology is a very rewarding subject that can lead to the study of biology in its own right as well as many associated subjects at a higher level. There are those subjects that are very obviously connected with biology such as medicine, nursing, dentistry, pharmacy, veterinary science, physiotherapy and occupational therapy. There are, however, many other courses and careers where having an A-Level in biology would be useful with the fastest growing areas being those of genetics, biotechnology and sports science.

What do I need to know or be able to do before taking this course?

If you are thinking of studying biology beyond A-Level, make sure you get good advice before making your final A-Level subject choice. Some careers or university courses related to biology will require you to have achieved a full A-Level in a second science subject, most often, but not necessarily, chemistry. Some students have little intention of pursuing biology beyond A-Level and simply wish to take it because it is a subject in which they are interested and one they know they will enjoy. Many students have demonstrated that it is a science that may be studied very successfully alongside art subjects.

Features of the course:

In Year 12 students will build on their knowledge of many of the themes covered at GCSE. Key topics include cell structure, variation, basic biochemistry and exchange and transport.

In Year 13 students will develop their biological skills further as they study energy transfers, responses to changes in their internal and external environments and genetics, populations, evolution and ecosystems.

Key information:

Topics for Study:	Biological molecules; cells; organisms exchange substances with their environment; genetic information, variation and relationships between organisms; energy transfers in and between organisms; organisms respond to changes in their internal and external environments; genetics, populations, evolution and ecosystems; and the control of gene expression.
Assessment summary	Paper 1: 2 hour examination (35%) Paper 2: 2 hour examination (35%) Paper 3: 2 hour examination (30%) Practical Endorsement: Assessment of practical competencies reported separately
Entry requirements	Grade 7 in GCSE Biology and a 6 in GCSE Chemistry
Exam Board	AQA
Subject lead contact details:	Mr Finlinson, Head of Biology; KFinlinson@qegs.cumbria.sch.uk



Why study Chemistry?

Chemistry is the study of the structures and properties of materials, and of the reactions in which one substance is transformed into another. It seeks to explain all this in terms of the behaviour of the atoms and molecules from which all matter is constructed.

The questions asked, and answered, by chemists are not confined to the immediate practical applications of their work. The origin of life on earth, the chemical basis of genetics, the nature of the planets and distant stars, the chemical composition of the centre of the earth's core, life support systems for astronauts and projected planetary colonies are just some of the exciting projects on which chemists throughout the world are working.

Chemistry underpins much of modern life and the high standard of living which most of us enjoy. The increased industrialisation of society has drawbacks, of course - the rapid use of finite natural resources, for example, and increasing pollution. If these problems are to be solved, it will be by the application of scientific knowledge and understanding. Chemistry and chemists will play a central role by developing ways of using our resources more efficiently and, by so increasing our understanding of the chemistry of the atmosphere, oceans and soils, that we may, in future, grow the food we need without the use of large quantities of pesticides and fertilisers.

What do I need to know or be able to do before taking this course?

Chemistry provides a stimulating and rewarding study in its own right. A background in the subject is invaluable to those who are planning careers in engineering, materials science or metallurgy, geology, mining or the biological sciences. A knowledge of chemistry is essential for the successful study of medicine or veterinary science. The course has some mathematical content and you should be comfortable with handling chemical calculations involving moles and general rearrangement of formula.

Features of the course:

Roughly equal time is devoted to each of the three main branches of the subject: physical chemistry - the study of the underlying atomic and molecular principles; organic chemistry - which deals with the behaviour of substances based on carbon (thus with all substances of biological importance) and inorganic chemistry - which covers all the remaining elements, with an emphasis on the properties of the metals.

Key information:

Topics for Study:	Physical chemistry; Inorganic chemistry; Organic chemistry
Assessment summary	Paper 1: 2 hour examination (35%) Paper 2: 2 hour examination (35%) Paper 3: 2 hour examination (30%) Practical Endorsement: Assessment of practical competencies reported separately
Entry requirements	Grade 7 in GCSE Chemistry and Grade 6 in GCSE Mathematics
Exam Board	AQA
Subject lead contact details:	Dr Ireland, Head of Chemistry; SIreland@qegs.cumbria.sch.uk



Why study Physics?

Physics is the most fundamental of all the sciences and is essentially, “the science of matter and energy and the interactions between the two”. Many physicists today are interested in either the science of the very small, such as investigating theories of fundamental particles called quarks and how matter is built from them, or the very large, developing theories on the formation and expansion of the universe.

The subject underpins all types of engineering and provides an excellent background for scientific careers at all levels. The employment prospects for those with qualifications in physics are generally good. Physics provides a route into many careers, and opportunities exist throughout the world. These prospects are not confined to research - they extend into a wide range of industries, into food, medicine, finance, marketing, business and management. The general skills of analysis and problem-solving that physicists develop are highly valued in many different fields of employment.

What do I need to know or be able to do before taking this course?

The mathematical content is modest in the first year of the course but becomes much more substantial in the second year.

Features of the course:

Each of the two years consists of four theory units, but practical work is woven into the course. During the two years, there are a dozen compulsory practical activities that may be assessed in the written examinations. In addition to this, there is an entirely separate practical endorsement, based on demonstration of core practical competencies.

Throughout the two-year course, there is a healthy emphasis on practical work. Students are taught how to make measurements of a range of quantities including length, current, potential difference and temperature. They will develop an awareness of the nature of measurement errors and of their numerical treatment.

Key information:

Topics for Study:	Core content: Measurements and their errors; particles and radiation; waves; mechanics and materials; electricity; further mechanics and thermal physics; fields and their consequences and nuclear physics. Option taken at Queen Elizabeth Grammar School: Medical physics
Assessment summary	Paper 1: 2 hour examination (34%) Paper 2: 2 hour examination (34%) Paper 3: 2 hour examination (32%) Practical Endorsement: Assessment of practical competencies reported separately
Entry requirements	Grade 7 in GCSE Physics and Grade 6 in GCSE Mathematics
Exam Board	AQA
Subject lead contact details:	Mr St John, Head of Physics; SStJohn@qegs.cumbria.sch.uk



Why study Mathematics?

Mathematics is one of the most useful and versatile subjects you can study in the Sixth Form.

If you enjoy the intellectual challenge that mathematics offers and the great satisfaction that is gained from working through difficult mathematical problems, then you have chosen the right subject.

There are very few career routes that do not value A-Level mathematics and many that demand A-Level mathematics.

What do I need to know or be able to do before taking this course?

A sound mathematical basis is crucial to be able to follow the course. Therefore, a grade 7 in GCSE mathematics is essential.

Features of the course:

Over the two years, you study a combination of algebraic techniques in order to solve co-ordinate geometry, trigonometry and sequences problems amongst others. In addition, you will study mechanics and statistics.

Pure mathematics includes proof; algebra and functions; coordinate geometry in the (x, y) plane; sequences and series; trigonometry; exponentials and logarithms; differentiation; integration; numerical methods and vectors.

Mechanics studies things that move and what causes them to move, and things that do not move and the forces within them. The topics include: quantities and units in mechanics; kinematics; forces and Newton's laws and moments.

Statistics allow you to analyse data using increasingly sophisticated techniques. The topics include: statistical sampling; data presentation and interpretation; probability; statistical distributions and statistical hypothesis testing.

Key information:

Topics for Study:	Pure Mathematics, Statistics, Mechanics
Assessment summary	Paper 1: Pure Mathematics, 2 hour examination (33.33%) Paper 2: Pure Mathematics, 2 hour examination (33.33%) Paper 3: Statistics and Mechanics, 2 hour examination (33.33%)
Entry requirements	Grade 7 in GCSE Mathematics
Exam Board	Edexcel
Subject lead contact details:	Mrs Ford, Head of Mathematics; NFord@qegs.cumbria.sch.uk



Why study Further Mathematics?

Further mathematics is an extension of the A-Level mathematics course and you must take A-Level mathematics to be able complete further mathematics.

What do I need to know or be able to do before taking this course?

A sound mathematical basis is crucial to be able to follow the course. Therefore, a grade 7 in GCSE mathematics is essential.

Features of the course:

Students will extend their algebra techniques by looking into topics such as complex numbers, matrices and alternative co-ordinate systems. In addition, students can study further mechanics and statistics or try out a very different type of mathematics called decision. Decision mathematics studies a range of algorithms, for example understanding how a satellite navigation system calculates a route using an algorithm.

Further Pure Mathematics: Proof, complex numbers, matrices, further algebra and functions, further calculus, further vectors; polar coordinates, hyperbolic functions, differential equations, coordinate systems, further numerical methods, inequalities, groups, further calculus, further matrix algebra, further complex numbers, number theory, further sequences and series.

Further Statistics: Linear regression, statistical distributions (discrete), statistical distributions (continuous), correlation, hypothesis testing, Chi squared tests), probability distributions, combinations of random variables, estimation, confidence intervals and tests using a normal distribution, Other hypothesis tests and confidence intervals, probability generating functions, quality of tests and estimators.

Further Mechanics: Momentum and impulse, collisions, centres of mass, work and energy, elastic strings and springs, further kinematics, further dynamics, motion in a circle, statics of rigid bodies, elastic collisions in two dimensions.

Decision Mathematics: Algorithms and graph theory, algorithms on graphs, algorithms on graphs II, critical path analysis, linear programming, transportation problems, allocation (assignment) problems, flows in networks, dynamic programming, game theory, recurrence relations, decision analysis.

Key information:

Topics for Study:	Further Pure Mathematics, Further Statistics, Further Mechanics, Decision Mathematics
Assessment summary	Paper 1: Further Pure Mathematics, 1 hour 30 minutes (25%) Paper 2: Further Pure Mathematics, 1 hour 30 minutes (25%) Paper 3: Further Mathematics Option 1, 1 hour 30 minutes (25%) Paper 4: Further Mathematics Option 2, 1 hour 30 minutes (25%)
Entry requirements	Grade 7 in GCSE Mathematics
Exam Board	Edexcel
Subject lead contact details:	Mrs Ford, Head of Mathematics; NFord@qegs.cumbria.sch.uk



Why study Physical Education?

Physical education encourages students to immerse themselves in the world of sports and PE with the chance to perform or coach a sport (through the non-exam assessment component), and delve into the how and why of physical activity and sport.

Students receive a well-rounded and full introduction to the world of PE, sport and sports science. This complete grounding in the subject provides a fantastic base from which to build when you move on to higher education, employment or further training.

Students can develop a range of practical skills, including communication using appropriate language, dealing with pressure, split second decision-making, analysing and evaluating performance, and more.

What do I need to know or be able to do before taking this course?

You need to do at least one sport which is assessed on the syllabus. The sports you can do are too numerous to list here, please ask a member of PE staff. You do not have to have studied GCSE PE but you need to show a very positive attitude towards sport. It is preferred that you have some evidence of grade 6 in a number of GCSEs - not necessarily in PE.

Features of the course:

You will study:

Physiological factors affecting performance: applied anatomy and physiology, exercise physiology, biomechanics, skill acquisition and sports psychology.

Socio-cultural issues in physical activity and sport: sport and society and contemporary issues in physical activity and sport.

Performance in physical education: performance or coaching and evaluation and analysis of performance for improvement.

Key information:

Topics for Study:	Physiological factors affecting performance, socio-cultural issues in physical activity and sport, performance in physical education
Assessment summary	Paper 1: 2 hour examination (30%) Paper 2: 1 hour examination (20%) Paper 3: 1 hour examination (20%) Non-exam assessment (30%)
Entry requirements	Grade 6 in GCSE PE if taken; demonstrate a positive attitude towards sport. Must be competent in at least one sport assessed on the syllabus.
Exam Board	OCR
Subject lead contact details:	Mr Worth, Head of Physical Education; pe@qegs.cumbria.sch.uk

**Why study French?**

Universities are keen to offer places to applicants with a language at A-Level as it demonstrates that you possess certain skills and attributes such as problem-solving, adaptability, a global mind-set, communicating with different audiences and developing an analytical mind.

Graduates with language skills are definitely more employable and earn an average of 8% - 20% more. A recent Confederation of British Industry (CBI) employee report found that seven in ten businesses value foreign language skills among their employees.

You can enhance your career prospects in many fields by having a language capability alongside other specialist subjects. If you aim to follow for example maths, biology and chemistry, a language is a very good additional option at A-Level.

An A-Level in French will enable you to apply for any ab initio language course at university. It could be your door to Mandarin, Spanish, Arabic or many other exciting or unusual languages. An A-Level would usually give you the required language skills to enrol and, indeed, many universities also teach in English.

What do I need to know or be able to do before taking this course?

You will study grammar in more depth at A-Level and learn how to express yourself much more fluently with a high level of complexity. Many of the topics at A-Level are connected to those studied at GCSE. However, whereas GCSE focuses on your personal experiences, the A-Level course studies topics in their wider context. For example, when at GCSE you might be asked "How do you get on with your siblings?" at A-Level you might discuss "How would you define 'family'?"

Features of the course:

We will study technological and social change, and look at diversity and multiculturalism and the benefits and issues they bring. You will study highlights of French-speaking artistic culture, including art, music, architecture and cinema. You will learn about political engagement, how the political landscapes of France were formed and who wields political power in the French-speaking world.

You will explore the influence of the past on present-day French-speaking communities. Throughout your studies, you will learn the language in the context of French-speaking countries and the issues and influences which have shaped them. You will study texts and film and have the opportunity to carry out independent research on an area of your choice.

Key information:

Topics for Study:	Social issues and trends, political and artistic culture, grammar, works: literary texts and films.
Assessment summary	Paper 1: Listening, reading and writing, written examination 2 hours 30 minutes (50%) Paper 2: Writing, written examination 2 hours (20%) Paper 3: Speaking, oral exam 21-23 minutes (including 5 minutes preparation time (30%))
Entry requirements	Grade 6 in GCSE French
Exam Board	AQA
Subject lead contact details:	Mr Wilson, Head of Modern Languages; JWilson@qegs.cumbria.sch.uk

**Why study German?**

Universities are keen to offer places to applicants with a language at A-Level as it demonstrates that you possess certain skills and attributes such as problem-solving, adaptability, a global mind-set, communicating with different audiences and developing an analytical mind.

Graduates with language skills are definitely more employable and earn an average of 8% - 20% more. A recent Confederation of British Industry (CBI) employee report found that seven in ten businesses value foreign language skills among their employees.

You can enhance your career prospects in many fields by having a language capability alongside other specialist subjects. If you aim to follow for example maths, biology and chemistry, a language is a very good additional option at A-Level.

An A-Level in German will enable you to apply for any ab initio language course at university. It could be your door to Mandarin, Spanish, Arabic or many other exciting or unusual languages. An A-Level would usually give you the required language skills to enrol and, indeed, many universities also teach in English.

What do I need to know or be able to do before taking this course?

You will study grammar in more depth at A-Level and learn how to express yourself much more fluently with a high level of complexity. Many of the topics at A-Level are connected to those studied at GCSE. However, whereas GCSE focuses on your personal experiences, the A-Level course studies topics in their wider context. For example, when at GCSE you might be asked, "How do you get on with your siblings?" at A-Level you might discuss, "How would you define 'family'?"

Features of the course:

We will study technological and social change, and look at diversity and multiculturalism and the benefits and issues they bring. You will study highlights of German-speaking artistic culture, including art, music, architecture and cinema. You will learn about political engagement, how the political landscapes of Germany were formed and who wields political power in the German-speaking world.

You will explore the influence of the past on present-day German-speaking communities. Throughout your studies, you will learn the language in the context of German-speaking countries and the issues and influences which have shaped them. You will study texts and film and have the opportunity to carry out independent research on an area of your choice.

Key information:

Topics for Study:	Social issues and trends, political and artistic culture, grammar, works: literary texts and films.
Assessment summary	Paper 1: Listening, reading and writing, written examination 2 hours 30 minutes (50%) Paper 2: Writing, written examination 2 hours (20%) Paper 3: Speaking, oral exam 21-23 minutes (including 5 minutes preparation time (30%))
Entry requirements	Grade 6 in GCSE German
Exam Board	AQA
Subject lead contact details:	Mr Wilson, Head of Modern Languages; JWilson@qegs.cumbria.sch.uk

**Why study Economics?**

Studying economics will help you develop transferable skills that will prepare you for studying at university or moving into the world of work. These include skills in data interpretation and essay writing. You will also develop commercial awareness.

Suitable higher education courses include economics degrees or degrees in applied economics such as environmental economics, labour economics, public sector economics or monetary economics. You might choose to study business economics, international business or a business and management degree.

Economics students can follow a wide range of careers in industry, commerce, finance and the civil service. You might choose a career in banking, sales, product management or general management.

What do I need to know or be able to do before taking this course?

It does not matter if you have not studied economics before. You might have an interest in economics and business. You might want to investigate some of the stories you hear in the news - Why do some economies grow and others do not? Why did economists not predict the global financial crisis? What impact does the economy have on the business world? What is globalisation? This course will help you to understand all this and more.

Features of the course:

Markets, consumers and firms - In this theme, students explore the way in which consumers make choices and entrepreneurs create desirable products.

The wider economic environment - This theme explores how businesses can become more competitive. It introduces students to the wider international and economic environment in which businesses operate.

The global economy - This theme builds on the content of theme 2 and continues its focus on the international economic and business environment. Issues such as globalisation and the impact of emerging economies are studied.

Making markets work - This theme considers degrees of competition within markets and then encourages students to apply their understanding to how governments may improve the functioning of markets and the economy.

Key information:

Topics for Study:	Markets; consumers and firms; the wider economic environment; the global economy; making markets work.
Assessment summary	Paper 1: 2 hour examination (35%) Paper 2: 2 hour examination (35%) Paper 3: 2 hour examination (30%)
Entry requirements	Grade 6 in GCSE Mathematics and a Grade 6 in GCSE English Language or Literature
Exam Board	Edexcel
Subject lead contact details:	Mr Martin, Head of Human Sciences; AMartin@qegs.cumbria.sch.uk



Why study Philosophy

In this course you will explore deep philosophical questions; does life have a meaning? Is there a God? How can you tell what is right and what is wrong? Is there life after death? As well as this, you learn how to structure a reasoned argument. Different forms of reasoning are considered and you will learn to think clearly and precisely. In the second year, the course broadens to look at the eastern philosophical tradition, especially as it appears within the Buddhist tradition. At the end of the course, each student should grasp the fundamental concepts and ideas underpinning eastern and western thought.

What do I need to know or be able to do before taking this course?

Students are required to demonstrate knowledge and understanding of the content, including using philosophical analysis, conceptual analysis and argument analysis. They must also be able to analyse and evaluate the philosophical arguments within the subject content to form reasoned judgements.

Features of the course:

Philosophy of religion - In this unit students examine the philosophical issues relating to the concept of God. They will review cosmological, teleological and ontological arguments for the existence of God, together with the criticisms of David Hum, Immanuel Kant and Bertrand Russell. They will analyse whether or not the concept of God is coherent, looking at the Parable of the Stone, Plato's Euthyphro dilemma and the problem of the possibility of free will in relation to God's omniscience. Students will study religious language, considering the philosophies of AJ Ayer and Anthony Flew, who together argued that religious language was meaningless.

Ethics – Here students will examine the difference between right and wrong. How do we know what a good action is? In this section, we consider three ethical theories and a variety of moral problems. The ethical theories we consider are Virtue Ethics, Utilitarianism and Kant's Deontological ethics. We consider these theories in relation to different ethical situations.

The development of eastern philosophical thought - This section of the course focuses on issues raised in the Asian philosophical tradition, especially as found within Buddhism. We examine the Buddhist understanding of the nature of reality as 'Sunyata' or emptiness. We examine the philosophical arguments underpinning concepts such as karma and rebirth. We study various forms of meditation within the Buddhist tradition and modern practices such as mindfulness. To support our study, we spend a couple of days at a Buddhist meditation centre. We also examine the scientific evidence surrounding meditation practices.

Key information:

Topics for Study:	Philosophy, Ethics and Eastern Philosophy
Assessment summary	Paper 1: 2 hour examination Paper 2: 2 hour examination Paper 3: 2 hour examination
Entry requirements	Grade 6 in GCSE RE
Exam Board	OCR
Subject lead contact details:	Mr Proctor, Head of Religious Studies; DProctor@qegs.cumbria.sch.uk



Why study the Extended Project?

All students who are studying three A-Levels in September 2018 will take the extended project qualification. Those who are studying four A-Levels will have the opportunity to choose the extended project. The extended project develops a range of core skills that will be essential for preparation for future study and many careers.

What do I need to know or be able to do before taking this course?

The EPQ aims to develop many of the skills required by students at university. One of the most appealing aspects about doing an EPQ is that you can choose a topic or issue that really interests you. In order to complete a successful EPQ, you will need to be both self-motivated and organised. You will need to be able to undertake independent research with minimal teacher input. You also need to keep clear detailed notes and accessible records of how your project develops. Much of the EPQ mark scheme is not concerned with your final product, but instead, how developing core skills, doing your research and good planning got you there. As such, students wanting to take an EPQ need to consider where their academic interests lie, what topic might they like to explore further and how they intend to organise their time to do the work required.

Features of the course:

Students will begin by completing an online course that will develop some of the practical research and planning skills that an EPQ requires. Students will be paired with teacher mentors (supervisors) who are there to teach key skills and support students. Students will then begin researching their topic and will generate a working title that the school EPQ co-ordinator will need to approve. After that, the student, under their teacher mentor's supervision will develop and complete their project culminating in a product (either a 5000 word investigation or an artefact with 3000 - 5000 word report) and a public presentation to an audience.

Key information:

Topics for Study:	The topic is chosen by the student in conjunction with their supervisor.
Assessment summary	5000 word investigation or an artefact with a 3000 – 5000 word written report. Both types of EPQ also require a public presentation to an audience.
Entry requirements	All students on a three A-Level programme will study the EPQ. It is optional for those students on four A-Levels.
Exam Board	AQA
Subject lead contact details:	Miss Fergus; EPQ Coordinator MFergus@qegs.cumbria.sch.uk