



**MOULTON SCHOOL
& SCIENCE COLLEGE**

SIXTH FORM

COURSE GUIDE



CONTENTS

SCIENCE & MATHS COURSES

Biology	A-level	Page 5
Chemistry	A-level	Page 6
Physics	A-level	Page 16
Mathematics	A-level	Page 14
Further Maths	A-level	Page 14
Sports & Exercise Science	Level 3 BTEC	Page 19

HUMANITIES & SOCIAL SCIENCE COURSES

Business	A-level	Page 6
Economics	A-level	Page 7
English Language	A-level	Page 8
English Literature	A-level	Page 9
Geography	A-level	Page 11
Health & Social Care	Level 3 BTEC	Page 12
History	A-level	Page 12
ICT	A-level	Page 13
Psychology	A-level	Page 17
Sociology	A-level	Page 18

MODERN FOREIGN LANGUAGE COURSES

French	A-level	Page 11
Spanish	A-level	Page 18

ARTS COURSES

Drama	A-level	Page 7
Fine Art	A-level	Page 10
Music	A-level	Page 15
Product Design	A-level	Page 16

OTHER COURSES

Extended Project Qualification	AS level	Page 9
--------------------------------	----------	--------



What to STUDY

Selecting just three or four subjects to pursue at Sixth Form can be difficult, particularly as there will be some new options available that you have not had the opportunity to study before. When deciding which subjects to choose for A-level, you might consider:

- Which subjects will you enjoy the most?
- Which subjects match your skills and strengths?
- Which subjects link to the university degree or career you might go on to pursue?

It may be useful to consider which subjects are best suited to your strengths and will enable you to achieve the highest grades. The Russell Group (a group of 24 of the UK's leading research universities) created the following classifications of students in order to help them choose which A-level subjects they might be suited to:

The Scientist

Students that are strong in the sciences might choose to study Biology, Chemistry, Physics, Maths or Further Maths. Choosing two or more of these courses is necessary for certain degrees, for example, Medicine, Dentistry, Veterinary Science or Engineering. For other specific career paths or courses, it might be useful to study a different science-based subject, such as Psychology, Health & Social Care, ICT or Sport & Exercise Science. To maintain a wider outlook, many students in this category replace one of the sciences with an arts, humanities or a social science subject, such as Economics, English Literature, History etc. Indeed, some universities encourage this.

The Essay Writer

The majority of students fall into the 'essay' category, where most of their subject choices will be in the humanities and social

sciences. A range of university degrees in the arts, humanities, social sciences and business fields will be open to these students, but not normally degrees in the mathematics/sciences field. Students that fall into this category may enjoy studying Business, Economics, English Language, Literature, Geography, Health & Social Care, History, ICT, Psychology or Sociology, perhaps studying two or three of these subjects alongside an arts subject, such as Drama or Fine Art or a science such as Biology or Sports & Exercise Science.

The Linguist

Some students will emphasise their linguistic abilities by doing one or even two foreign languages. Students that study languages are highly sought after by universities for language degrees or courses with a language component. Languages can be studied equally well alongside all other subjects, but may particularly compliment English Language or Literature.

The Artist

If you are a creative student or have a passion for Music, Art, Drama or Product Design, you may wish to pursue courses that allow you to showcase and develop this talent further. You might decide to study multiple arts subjects, such as Fine Art and Product Design or Music and Drama as well as studying a science or essay based subject for variety.

The above, however, is just a guide. It is important to realise that there are no 'wrong' combinations of subjects. Just pick courses that you will enjoy and succeed on.

GENERAL ENTRY REQUIREMENTS

for Moulton Sixth Form

To study 4 A-level/Level 3 courses:	A minimum of 6 GCSEs at Grade A/A*
To study 3 A-level/Level 3 courses:	A minimum of 3 Bs and 3 Cs at GCSE
English Grade:	A minimum of Grade C in English
Maths Grade:	A minimum of Grade C in Maths

ENTRY REQUIREMENTS per subject

A-LEVEL COURSE	ENTRANCE CRITERIA (GCSE GRADE)			
Art	Art	B		
Biology	Biology	A	or Additional Science	A
Business	Business (if taken)	C		
Chemistry	Chemistry	A	or Additional Science	A
Drama	Drama (if taken)	B	and English	B
Economics	Maths	B	and English	B
English Language	English Language	B		
English Literature	English Literature	B	or English	B
Extended Project				
French	French	A		
Further Maths	Maths	A*		
Geography	Geography (if taken)	B	and Additional Science	C
Health & Social Care	Level 2 BTEC H&SC (if taken)	Merit		
History	History (if taken)	B	and English	B
ICT	ICT (if taken)	Level 2 Pass	or GCSE ICT	C
Mathematics	Maths	A		
Music	Music	B	and Instrument at Grade 5	
Physics	Physics	A	or Additional Science	A
Product Design	Design (if taken)	B		
Psychology	English	B	and Additional Science or Biology	B
Sociology	English	B		
Spanish	Spanish	A		
Sports & Exercise Science	Level 2 BTEC PE (if taken)	Merit	or GCSE PE	B

BIOLOGY (A-level)

About the subject

Biology is the fascinating study of living things. The subject examines how they function and interact with each other and their surroundings. The course looks at the wide range of living things that exist, how they obtain their energy and how their cells perform the chemical reactions needed to keep the organism alive. The inheritance of genes from one generation to the next and biotechnological advances in genetic engineering are studied in detail and provide interesting facts as well as extremely relevant moral issues for our times.

Alongside studying the topics on the syllabus, you will also complete a Practical Endorsement which will be reported on separately from the A-level grade. It involves a minimum of 12 practical activities undertaken in class to demonstrate skills such as:

- Microscopy.
- Dissection.
- Sampling Techniques.
- Rates of Enzyme Controlled Reactions.
- Colorimeter or Potometer.
- Chromatography or Electrophoresis.
- Microbiological Techniques.
- Transport in and out of cells.
- Qualitative testing.
- Investigation using a data logger OR computer modelling.
- Investigation into the measurement of plant or animal responses.
- Research skills.

What will you study?

You will study topics such as:

- Development of practical skills in biology.
- Foundations in biology.
- Exchange and transport.
- Biodiversity, evolution and disease.
- Communication, homeostasis and energy.
- Genetics, evolution and ecosystems.

Where does it lead?

If you are thinking of any careers in Medicine, Nursing, Ophthalmics, Physiotherapy, Veterinary Science, Environmental Studies or General Biological Research then Biology will provide a useful start to that career if not proving to be an essential requirement for course entry.





BUSINESS (A-level)

About the subject

Business is the study of the organisations that produce the goods and services that are the foundation of modern life. Running a successful organisation is challenging and every day countless business ventures are closed. This course aims to provide you with the skills and knowledge to analyse business dilemmas and develop successful business strategies. The subject will appeal to students who one day aspire to start up their own business or who dream of making the transition from the classroom to the boardroom.

A-level Business examines firms of differing sizes and industries, from how to launch your own small business to how to effectively manage a multinational organisation. In particular, you will learn about the many challenges and barriers involved in running a successful company. You will also study many of the ethical considerations that are a focus of modern businesses and will learn about the effect that business activity has on other groups and individuals in society.

What will you study?

You will study topics such as:

- **Forms of business ownership** – from small enterprises to large public limited companies.
- **Management & leadership** – theories of how to lead a successful organisation.
- **Marketing** – examining tools such as advertising, promotions and pricing strategies.
- **Operational performance** – studying how to improve the productivity and efficiency of a business.
- **Finance & Accounting** – learning about how to record and appraise the financial performance of a business.
- **Human Resource performance** – examining how to recruit, train and motivate a workforce and measure their effectiveness.
- **Coping with a dynamic external environment** – studying the interrelationship between entrepreneurs and the wider business environment.

Where does it lead?

If you are interested in careers such as advertising, accountancy, finance, business law, management, entrepreneurialism, investment banking, politics and government, logistics, events management, or marketing then Business A-level will provide a potential route in to these careers as well as preparing you to study business courses at university.



CHEMISTRY (A-level)

About the subject

Chemistry has been described as “The Central Science”: it has clear links with both biology and physics. Chemistry at A-Level is a practical course and you will be encouraged to learn chemical concepts through careful experimentation. Chemistry is the study of materials at a molecular level: you will have opportunities to learn about the properties of everyday materials and even make some of them. You will also learn about the energy changes involved in chemical reactions: why fuels produce energy and how explosions may occur and how they can be controlled.

A recurring feature of the course will be the application of chemistry in society. For example you will look at how pharmaceuticals are developed and how chemists can control pH to make foodstuffs more palatable and cosmetics safe to use. Many of our students will be studying more than one science to A-level, although this is by no means compulsory.

Practical work will be a continual theme running throughout the course and you will build up a portfolio of evidence of your skills in this important aspect of the subject. This will be assessed and reported separately to the main A-level grade.

What will you study?

You will study topics such as:

- **Atomic structure and chemical bonding.**
- **Quantitative chemical calculations.**
- **Organic chemistry.**
- **The Periodic Table and chemical energetics.**
- **Reaction rates and equilibria.**
- **Practical applications of chemistry.**

Where does it lead?

If you are thinking of any careers in Medicine, Dentistry, Forensic Science, Pharmacology and Veterinary Science as well as courses in Chemistry, Biochemistry and Engineering at university then Chemistry A-level will provide the ideal pathway.



DRAMA & THEATRE (A-level)

About the subject

A-level Drama and Theatre develops your understanding of twenty-first century theatre practice through both practical and written work. You will participate in a range of creative and practical drama elements including both acting and directing. You will develop the ability to recognise and understand the interrelationship between performer, designer and director as well as the ability to understand how performance texts can be interpreted and performed. Through the course, you will learn to analyse and evaluate your own work and the work of others.

What will you study?

During the A-level course you will study 3 components: Devising, Text in Performance and Theatre Makers in Practice.

- **Devising** allows students to create their own piece of Drama based around the work of a text and practitioner which they will have practically explored. Students will then produce a written portfolio which reflects on and evaluates this devising process.
- **Text in Performance** gives students the opportunity to contribute to a performance as either an actor or designer. This component also allows students to choose and perform a monologue or duologue of their own choice. Both of these performances will be in front of a live audience.
- **Theatre Makers in Practice** will be the student's final written exam at the end of year 13. The questions for this paper require students to:
 - Evaluate a live performance that they will have been to see during the course.
 - Discuss how they've practically explored a text during the course.
 - Interpret a text for a contemporary audience from the point of view of a director.

Where does it lead?

If you are considering careers in acting, stage management, arts administration, drama teaching, drama therapy, television and radio production and presenting or theatrical directing then this is the ideal course to pursue.



ECONOMICS (A-level)

About the subject

Economics is the study of how best to manage an economy so that we maximise the well-being of all the people in that society.

Our country, in fact our entire planet, has a finite supply of resources. There are limits to the amount of workers, raw materials, buildings, machinery and land that are available to produce all of the goods and services that we are desperate to consume. National governments strive to develop a system where everyone has a satisfactory standard of living, yet we live in a world where the wealthiest 1% own more than the other 99% combined and where more than 1 billion people survive on less than £1 a day.

In Economics, you will study different economic theories and systems that seek to explain these phenomena as well as examining the complex interrelationships between individuals, firms and governments in an economy.

What will you study?

You will study topics such as:

- Different economic systems.
- How prices are determined by market mechanisms.
- Why the market mechanism fails.
- How the Government manages the national economy and corrects market failure.
- Measuring macroeconomic performance.
- Monetary & Fiscal policies pursued by government.
- Global economic issues.

Where does it lead?

Economics can lead to a diverse range of careers, such as accountancy, management, finance, statistician, economist, stock broking, local and national government, diplomacy and international relations, law and journalism. Most of the Government's cabinet have an Economics degree, but don't let that put you off!



ENGLISH LANGUAGE (A-level)

About the subject

English Language is a subject which is both challenging and enjoyable in which you will have the opportunity to develop speaking and listening as well as reading and writing skills. You will develop methods of using, analysing and understanding spoken and written language for particular audiences and the use of language in contemporary communication. The subject aims to encourage a critical response to texts in a range of forms, styles and contexts.

As part of the course, you get to produce a coursework folder, which explores an area of language which is of particular interest to you.

You may take English Literature in combination with English Language if you wish.

What will you study?

You will study topics such as:

- How meaning is communicated in a wide range of written and spoken texts.
- How language and gender influence texts.
- How language and power influence texts.
- Creative writing with a real-world purpose in mind, to explore a range of topical language issues.
- How children acquire language.
- Language in the media.
- How language changes over time.

Where does it lead?

English Language combines well with virtually any other subject, and is regarded as being useful for a wide variety of careers such as teaching, careers in media such as journalism, publishing or TV and radio, professions such as law and accountancy, as well as creative careers such as marketing and advertising.



ENGLISH LITERATURE (A-level)

About the subject

This course is designed to fuel and develop your enthusiasm for literature. You will get to study a range of texts from different periods and genres. A significant part of the course is the exploration of relationships between the set texts as well as reading widely within the periods and genres explored.

What will you study?

You will study texts such as:

- A post-1900 prose text.
- A post-1900 drama text.
- A post-1900 novel.
- A Shakespeare play.
- A pre-1900 poetry text.
- A pre-1900 drama text.

Currently, set texts include '1984' by George Orwell, 'Hamlet' by William Shakespeare, 'The Homecoming' by Harold Pinter and 'The Merchant's Prologue and Tale' by Geoffrey Chaucer.

You will also get to produce a coursework folder, which explores links between texts on a given theme, such as men and women or love and marriage.

Where does it lead?

Your English Literature A-level may support you in careers requiring strong communication skills, such as journalism, media and publishing, academic careers such as teaching or lecturing, creative careers such as advertising and marketing as well as professions such as law.



EXTENDED PROJECT QUALIFICATION (EPQ) (AS level)

About the subject

The Extended Project Qualification is a one year, AS course that students can study alongside the three or four A-levels they are pursuing. The aim of the course is to provide students with some of the academic skills necessary for higher education, such as research skills, referencing, dissertation writing and editing.

On the Extended Project course, students are given the freedom to select a topic or question that they wish to study. Usually, students select a question that is related to the university course or career that they wish to enter or a particular passion or interest they have. Students then conduct their own research into that topic before preparing a dissertation and presentation on their chosen title.

What will you study?

You could study any title related to your future university or career plans. Below are just a few of the examples that previous students have investigated:

Law e.g. Should the UK imprison those convicted of non-violent crimes?

Medicine e.g. Should organ donation be compulsory?

Science e.g. Should parents be allowed to design their child?

Economics e.g. Should the UK introduce a tax on sugary drinks?

Politics e.g. Should the UK adopt the US electoral model?

Education e.g. Should UK students repeat a school year if they fail to meet end of year criteria?

History e.g. To what extent did the failings of Nazi high command contribute to the loss of the battle of Stalingrad?

Sport e.g. Should the Premier League introduce a wage cap?

Where does it lead?

The Extended Project is popular with universities as it demonstrates that you already have experience of university-style study and assessment. Many universities even lower their entry requirements for students that have completed the Extended Project Course. The course provides students with an additional AS qualification and is graded from A*-U, as with other A-level subjects. These grades are worth the equivalent UCAS points to AS qualifications in other subjects.



FINE ART (A-level)

About the subject

On this course, you will develop an understanding of the basic elements of art - colour, tone and form and an enthusiasm to research and explore ideas and new media. Above all, you will have the opportunity to develop your own art projects and build an understanding of traditional and contemporary art.

You will develop a working knowledge of materials, practices and technology within art. You will develop the skills to interpret and convey your ideas and feelings using art, craft and design and develop your imaginative and creative powers and your experimental, analytical and documenting skills. You will also develop a specialist vocabulary and the knowledge and understanding of the place of art, craft and design in history and contemporary society.

What will you study?

A-level Fine Art incorporates two linked elements:

- **Practical study**, which aims to provide opportunities for you to pursue your own creative, visual ideas in a chosen area of Art and Design.
- **Personal Study**, where you produce an illustrated dissertation on a selected aspect of others' art, craft and design.

Through these elements, you will get to:

- Develop your ideas through demonstrating analytical and critical understanding.
- Experiment with and select appropriate resources, media, materials, techniques and processes, refining your ideas as your work develops.
- Record your observations and insights, demonstrating an ability to reflect on your work and progress.

Where does it lead?

An A-level in Fine Art could lead to a career as an artist, architect, art therapist, fashion designer, illustrator, animator, ceramics maker, costume designer, product designer, sign writer, set designer, gallery curator, interior designer, art historian, courtroom artist, graphic designer, police sketch artist, jewellery designer, makeup artist or countless other exciting jobs.



FRENCH (A-level)

About the subject

We need languages if we are to compete in the business world. According to a debate in the House of Lords:

"80 per cent of English exporters are unable to conduct business in a foreign language."

"77% of British exporters believe they lose business because they can't speak other languages."

"Exporters who use language skills achieve, on average, 45% more sales"

In class we will spend time building up your confidence in speaking French. You will use an MP3 player to enable you to complete listening work individually. You will also study up to date topics and widen your general knowledge of French culture and society, learn how to interpret spoken and written French and translate it into English and get to study French literature and films, which will provide the stimulus for your written work, presentations and group discussions.

What will you study?

You will study topics such as:

- **Current trends in French speaking society** (including the changing nature of family, the cyber-society and the place of voluntary work).
- **Artistic culture in the French-speaking world** (including culture and heritage, contemporary francophone music and French cinema).
- **Current issues in French-speaking society** (positive features of a diverse society, life for the marginalised and how criminals are treated).
- **Political life in the French-speaking world** (teenagers, the right to vote and political commitment, demonstration & strikes and politics & immigration).

Where does it lead?

For most people knowledge of a language is like having a driving licence. It may not be the main requirement of their career but it opens up extra opportunities in whatever career they choose. Whatever you want to do, having a language will give you access to Europe and beyond. In higher education languages can be studied combined with almost anything else, in particular with subjects such as Business Studies, Law and Marketing.

A second language may lead to a career as a translator, interpreter, journalist, teacher, diplomat, overseas aid worker or support those looking to work in management, logistics, international business, law or tourism.



GEOGRAPHY (A-level)

About the subject

The world's population is expected to reach over 9 billion by the year 2050. What pressures will this create on where we live and what we do?

This A-level is truly global in the issues it tackles and the areas we discuss. It looks at the pressures our planet is under and the threats and opportunities there are in its future management: from the rapid economic growth of China to the preservation of the Rainforests of Borneo; from the impacts of Tsunamis, to the use of the London Olympics to regenerate parts of London.

What will you study?

You will study topics such as:

- **Dynamic Landscapes** – Tectonic hazards and processes.
- **Physical Systems** – Water cycle, water insecurity, carbon cycle & energy insecurity.
- **Landscapes** – Coastal landscapes & change.
- **Dynamic Places** – Globalisation.
- **Human Systems & Geopolitics** – Superpowers.
- **Shaping Places** – Regeneration.
- **Global Development** – Migration, identity & sovereignty.

You will also have the opportunity to complete a fieldwork based investigation on a chosen physical/human geography option covered in the specification.

Where does it lead?

The skills you use in this course will make you a highly employable person and offers you a wide choice of career opportunities should you think of taking the subject further.

You will develop a variety of skills, particularly those in research, fieldwork and analysis of data and resources. Career options are diverse and exciting, ranging from jobs relating to conservation, tourism, recreation, teaching, retail, banking and town planning.

HEALTH & SOCIAL CARE (Level 3 BTEC)



About the subject

The Pearson BTEC Level 3 National Extended Certificate in Health and Social Care is equivalent in size to one A-level. It is for students interested in learning about the health and social care sector alongside other fields of study, probably with a view to progressing to a wide range of HE courses, not necessarily in the health or social care sector.

The health and social care sector comprises two sub sectors; health care and social care. Health care encompasses all hospital activities; medical nursing homes and GP services, for example. The social care sector includes residential nursing care, residential nursing facilities, residential care facilities, domiciliary care and social work.

This qualification aims to provide an introduction to study of the sector and is for the student interested in learning about the health and social care sector as part of a balanced study programme.

What will you study?

You will study topics such as:

- **Human lifespan development.**
- **Working in Health and Social Care.**
- **Meeting individual support needs.**
- **Meeting additional needs.**

This course is assessed through two externally set examinations and two internally assessed pieces of coursework

Where does it lead?

The content of this qualification has been developed in consultation with higher education and employers to ensure it supports progression towards higher study.

Students are able to progress into work in the sector through degree programmes in nursing, midwifery, social work, physiotherapy, occupational therapy and pharmacy, for example. It is also a suitable foundation for careers such as primary education, psychology and counselling. There are more than 300 distinct career paths in this sector. The sector is a major employer, employing almost four million people across the UK.

HISTORY (A-level)



About the subject

History is a very popular A-level choice because students enjoy immersing themselves in the past. Historians seek to question and understand the world that they live in.

The course comprises four units to provide a wide range of historical understanding from different periods and aspects of History. These units reflect the expertise in the Department. The course provides a British and European focus but also an understanding of the influence of Asia. They cover aspects of political, social, economic and military history.

The course is open to anyone who has an interest in History and a curiosity about the past. Although it is desirable that students have studied GCSE History, we welcome students who have a renewed interest in the subject and wish to pursue this.

What will you study?

You will study topics such as:

- **Britain 1783–1853:** Government in the age of revolution and reform. Investigates the political, social and economic upheavals of this period spanning Georgian and Victorian Britain. This is the era of what Boyd Hilton refers to as the 'mad, bad, and dangerous people'.
- **Conflict in Asia 1945–1993:** Korea, Vietnam and Cambodia. Considers the changing role of America's motives, policies and strategies in Asia. As Nixon said of the war in Vietnam "No event in American history is more misunderstood ... It was misreported then, and it is misremembered now."
- **Russia and its Rulers 1855–1964:** From Royalty under the Tsars to Red Terror under the Communists. Explores the changes and continuities in the ideology, structure and experiences of Tsarist and Communist Russia. Reach your own judgement on Putin's claim that "Anyone who doesn't regret the passing of the Soviet Union has no heart. Anyone who wants it restored has no brains."

You will also have the opportunity to complete an assessed independent investigation, which provides you with the opportunity to explore a topic of interest from one of the three examined units in more detail.

Where does it lead?

History is highly regarded in both the workplace and in higher education. Its investigative and analytical skills can be translated to virtually any employment field but particularly the legal profession, the police force, accountancy, the civil service and journalism.

Many of our students go on to study History or Law as a single discipline at University, or they choose to combine History alongside politics and economics.

ICT (A-level)

About the subject

Does the mere thought of Playstations, World of Warcraft and Football Manager whet your appetite? If these are the kinds of computing activities that interest you tremendously, then studying ICT at A-Level may well change your whole approach to life! The UK's ICT industry is worth £58 billion annually and consists of considerably more than just gaming. On this course you will be given the opportunity to demonstrate and develop a practical knowledge and understanding of all aspects of ICT.

You will get to learn about practical applications of ICT, such as CGI computer modelling of the type seen in major films and TV series and how video, audio, text and graphics are combined in a multimedia presentation.

What will you study?

You will study topics such as:

- Data, information, knowledge and processing.
- Software and hardware components of an information system.
- Software development.
- The role and impact of ICT.
- Designing computer-based information systems.
- Networks and communications.

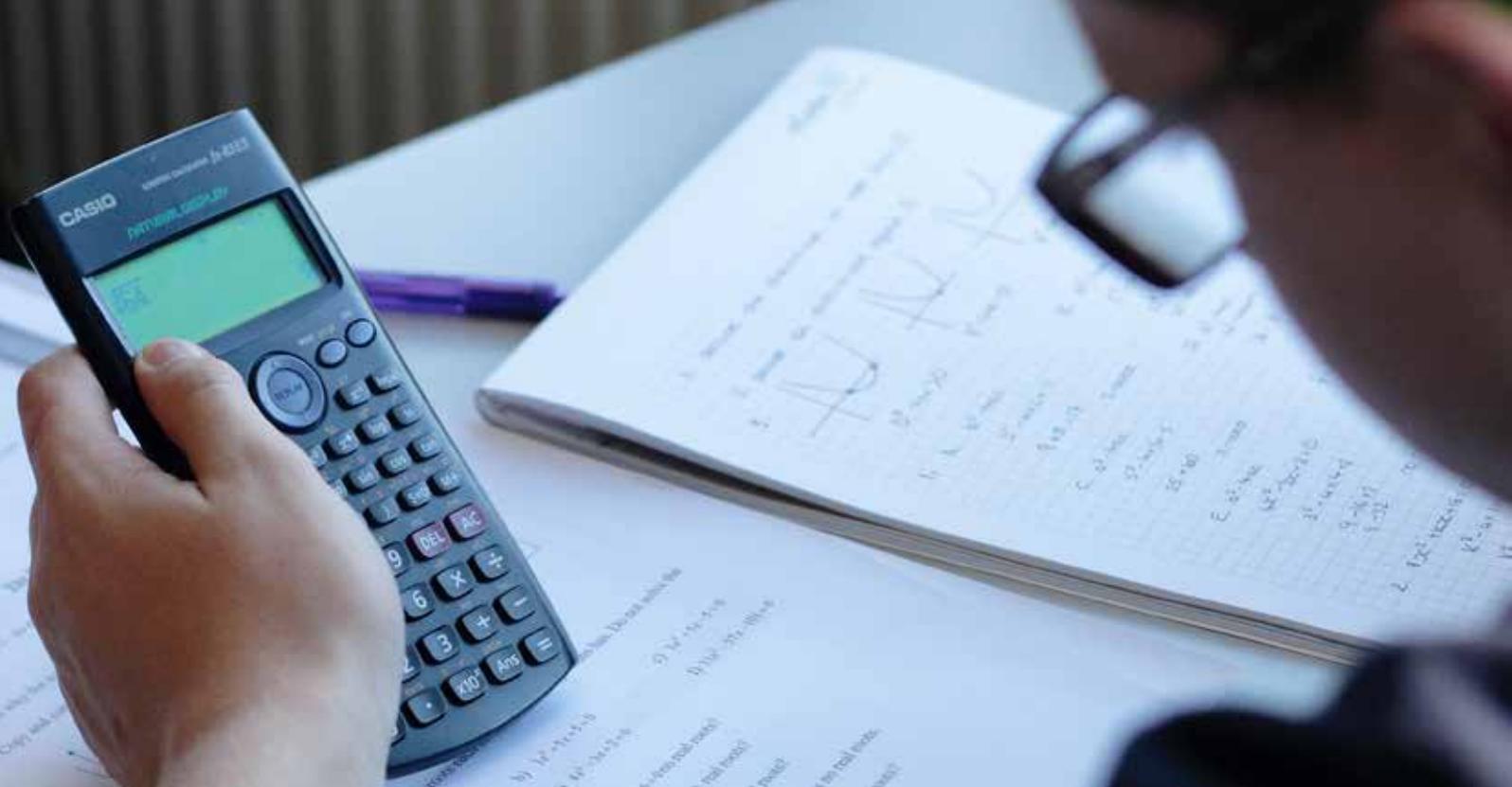
Alongside examinations, your ability to apply your knowledge of ICT will be assessed through coursework and projects over the two years.

Where does it lead?

Virtually any career you care to consider will involve some application of Information Technology and this course will introduce you to a wide range of industry standard and specialist software applications. In Higher Education, ICT can be studied as a straight degree course, or combined with other areas such as Business Studies, Economics and Engineering amongst many others.

Careers in ICT include web designer, games developer, graphic designer, programmer, software engineer, systems analyst, network engineers or IT trainer.





MATHS (A-level) FURTHER MATHS (A-level)

About the subject

A-level mathematics builds on and extends the learning of students from GCSE. It develops essential skills of logic, application of reason, method and problem solving. It is highly regarded in both the workplace and in education.

Able mathematicians should consider the possibility of taking Further Maths in addition to maths, particularly those considering university courses in Maths, Physics or Engineering.

What will you study?

You will study topics such as:

- **Pure maths**, which forms the backbone of all other branches of mathematics. It includes topics such as algebra, geometry, trigonometry and calculus. We try to approach the work from a practical point of view.
- **Mechanics** deals with physical mathematics and considers how to

describe mathematically the motion of objects and how they respond to forces acting on them. Students have the opportunity to apply theory to practical situations.

- **Statistics** gives students the opportunity to learn how to analyse and summarise numerical data in order to arrive at conclusions about it. Some new techniques of analysing data will be studied and there will be further work on probability. The skills taught in this course are applicable to a wide range of problems and activities from insurance work to testing the validity of experimental evidence.

Where does it lead?

Mathematics at A-level is highly sought after by universities and employers. Mathematics will equip you to study many courses including engineering, physical sciences, computer science, economics, statistics and of course mathematics.

Such students will be welcomed into careers in the fields of finance, banking, accountancy, engineering and many more. All employers and higher education institutions view mathematics as a clear indicator of intellectual potential with strong problem solving and reasoning ability.

For those who have a real enjoyment of mathematics and/or are thinking about a degree in Maths, Science or Engineering the option of studying Further Maths should be explored.

MUSIC (A-level)

About the subject

Music provides opportunities for various kinds of musicians, from the intending career performer to the young person who simply enjoys listening to and performing all kinds of music. You will develop your performing skills on one or two instruments and/or voice leading to an examined performance or recital. Aural skills are developed through structured listening and dictation tests which are worked at throughout the course.

You will learn to read music fluently and apply technical vocabulary and knowledge of theory so that you are able to explain and appreciate a wide range of musical styles. There is a written paper where knowledge of Music history and a study of set works and composers is tested. A wide range of musical styles and cultures are explored throughout the course.

You will get to demonstrate your own creative ideas in the form of a composition. Increasingly, the use of technology is important and you will have access to computers, recording equipment and synthesisers to aid work in all areas of the course.

What will you study?

The three components that are studied and assessed in A-level Music are:

- **Performing.**
- **Composing.**
- **Appraising.**

Where does it lead?

There are a wide range of Music degree and diploma courses on offer including graduate courses in popular music, jazz and theatre performing as well as combined performing arts degrees.

Universities and employers widely recognise the importance of the creative, disciplinary, academic and social skills implicit in the study of music.

If your intention is to enter a career as a musician, there are a wide range of openings in performing, entertainment, music production, recording industry, library and information, television and film, media, publishing or music management.



PHYSICS (A-level)



About the subject

From the microscopically small to the incredibly large, physics is the study of energy and matter and the forces which govern the Universe. In this age of computers, laser technology and the internet, physics has played a key role in the technological advances, making a physicist of each of us, and the course is designed to place your studies in this wider context. The breadth of study gives you flexibility in the future, whether you wish to continue to study science beyond A-level or move straight into a job in the technological field.

The course is structured so that you will be given an opportunity to encounter a range of learning activities and to provide you some choice in the style of task that you complete. As such, the course will place demands on your motivation and ability to study independently of the teacher, making sure that you use your time and the resources available to you to the best effect. These skills will be invaluable both to your success at A-Level and to any studies beyond A-level.

What will you study?

You will study topics such as:

- **Measurements and their errors.**
- **Particles and Radiation.**
- **Waves.**
- **Mechanics and Materials.**
- **Electricity.**
- **Further mechanics and thermal physics.**
- **Fields and their consequences.**
- **Nuclear physics.**
- **Engineering physics.**

Where does it lead?

Physicists are in great demand nationwide. Physics is an obvious choice if you are considering a career in physical science such as engineering, aeronautics or architecture, but it is also a useful choice if you are intending to pursue a career in biological sciences, including medicine. The analytical, logical and disciplined methods developed through a study of physics are also highly valued in careers such as law, finance and computer programming.

It is also, of course, an excellent foundation for anyone intending to study the subject beyond A-Level. Employers continue to look favourably on physics students, as they have displayed an ability to work methodically and will have knowledge of new technologies. This opens up a multitude of career options from applied sciences and medical physics, through to commerce, business and marketing.

PRODUCT DESIGN (A-level)



About the subject

Product Design (3-D Design) is a course designed to:

- Encourage you to take a broad view of design and technology
- Develop your capacity to design and make products and to appreciate the complex relations between design, materials, manufacture and marketing.

We will support you as you seek to develop areas of weakness and build on areas of strength; with fewer subjects and time you will be able to practice to advance your skills and techniques. We are looking for enthusiasm and commitment rather than raw talent alone.

The A-level course in Product Design will extend your understanding of how things are designed and made. You will learn how the commercial world uses designers to resolve their production problems, to make better and more competitive products. You will also have the opportunity to look at how designers through history have responded to solve problems.

What will you study?

You will study topics such as:

- **Graphical communication.**
- **Computer aided designing (CAD).**
- **Computer aided manufacturing (CAM).**
- **Information and Communication Technology (ICT).**

Year 12 is a multi-materials project portfolio year with work from four projects including compliant, non-compliant materials and a virtual design. Year 13 is a 'design and make' project working for a real life external client.

Where does it lead?

Many students who have studied A-level Design go on to study 'design' related higher education courses though it is a valuable qualification for a whole range of architectural, engineering and managerial type courses and careers.



PSYCHOLOGY (A-level)

About the subject

A-Level Psychology is a course which provides the opportunity for you to develop an understanding of human behaviour. You are about to explore a discipline that studies the many complexities and contradictions of the human mind.

You will discover how psychologists carry out their studies and collect and analyse their data on a wide range of psychological issues, such as memory, crime and punishment and psychological conditions such as depression and phobias.

What will you study?

You will study topics such as:

- **Social influence** – Why people conform in social situations and why people obey authority figures unquestioningly.
- **Memory** – How memory works and the different types of forgetting. You will find out about the accuracy of memories and how they are affected

by leading questions and anxiety.

- **Attachment** – The bond between infant and caregiver is studied and you will examine types of attachment as well as considering what happens when attachments aren't formed or are disrupted.
- **Psychopathology** – You will be defining and explaining abnormality and specifically about depression, phobias and obsessive compulsive disorder.
- **Biological psychology** - Studying the nervous system, endocrine system and fight or flight response.
- **Gender** – Examining gender bias and the influence of nature and nurture. You will learn about biological and psychological explanations of gender development and gender identity disorder.
- **Schizophrenia** – You will find out about the symptoms of schizophrenia and you will study its causes and the different treatments for this disorder.
- **Forensic psychology** – You will learn about offender profiling, different explanations of crime and dealing with offender behaviour.

Where does it lead?

Psychology is offered by all universities, either as a single subject or in combination with other subjects. Career opportunities include clinical psychology, offender profiling, educational psychology, occupational psychology, sports psychology, probation officers, teaching, advertising, and jobs in human resource management.

SOCIOLOGY (A-level)



About the subject

Why am I at school? That's a question pupils (and teachers) have often asked! Sociology has the answer. In fact it has many different answers to this question, and other questions as well. That's the interesting aspect of Sociology. There's no right or wrong, but much intelligent argument and debate.

Questions such as...

"Why is the crime rate rising?"

"What's the point of families?"

"Why do some people get better jobs than others?"

...are all debated and theorised about. Your discursive skills, and ability to make sense of different arguments, will be given the chance to develop. You will also have the chance to engage in social research yourself. Sociology will not tell you the meaning of life but it will help you to make sense of an ever increasingly complex and bewildering world.

What will you study?

You will study topics such as:

- **Sociology theories and methods** – You will investigate different sociological theories and methods in detail.
- **Education** – You will examine what education is for, educational policy, pupil subcultures and differential achievement in relation to ethnicity, class and gender.
- **Families and households** – You will look at different forms of family, the roles of different members of the family and how the family has changed over time.
- **Beliefs in society** – You will also study beliefs in society and will explore the different religious organisation, e.g. churches, cults and new age movements. You will learn about which social groups in society are religious and whether or not religion is disappearing or increasing in importance.
- **Crime and deviance** – You will study patterns of criminality and causes of crime. You will also examine how modern society has changed the nature, extent and punishment of crime.

Where does it lead?

Sociology is an excellent grounding for pupils who wish to study social sciences at a higher level, such as Sociology, Anthropology, Social Policy or combinations of these subjects. It is also a relevant qualification for a wide number of careers and professions such as managerial and service occupations, youth workers, social work, police and probation services, teaching or work in the voluntary sector.

SPANISH (A-level)



About the subject

Through this course, you will develop the ability to communicate confidently in Spanish, through both speaking and writing. You will also get to learn about different aspects of Spanish society and about life in other Spanish speaking nations. The course will provide you with a foundation to study the subject further or access jobs where a knowledge of a second language is desirable.

You will get to study Spanish literature, media and films and will learn to write essays on some of the issues facing Spanish society and build up your competence in translating from Spanish to English and vice versa.

What will you study?

You will study topics such as:

- **Aspects of Hispanic society:** Modern and traditional values, cyberspace and equal rights.
- **Artistic culture in the Hispanic world:** Modern day idols, Spanish regional identity, cultural heritage and cultural landscape.
- **Multiculturalism in Hispanic society:** Integration, racism and immigration
- **Aspects of political life in the Hispanic world:** Today's youth, tomorrow's citizens, monarchies, republics & dictatorships and popular movements.

Where does it lead?

For most people knowledge of a language is like having a driving licence. It may not be the main requirement of their career but it opens up extra opportunities in whatever career they choose. Whatever you want to do, having a language will give you access to Europe and beyond. In Higher Education languages can be studied combined with almost anything else, in particular with subjects such as Business Studies, Law and Marketing.

A second language may lead to a career as a translator, interpreter, journalist, teacher, diplomat, overseas aid worker or support those looking to work in management, logistics, international business, law or tourism.

SPORT & EXERCISE SCIENCE

(Level 3 BTEC)

About the subject

Year on year, the sport sector out performs the rest of the UK economy; this has been the case since the economic recession of the late 1990s ended, and researchers predict this will be the case for years to come.

In recent years, sport and exercise scientists have been a growing presence in the world of sport, and as we look to the future all the signs suggest their influence in sport will increase. From the elite performers' reliance on a large support team, to the casual gym user's use of ergogenic aids, sport and exercise sciences' core elements - anatomy, physiology, psychology and biomechanics - are seen in almost every aspect of, and activity within, the sport sector.

What will you study?

You will study topics such as:

- **Anatomy for Sport and Exercise** – Studying the systems in the human body that work together and allow us to take part in a huge variety of sport and exercise activities.
- **Sport and Exercise Physiology** – Exploring the responses of the cardiovascular, respiratory and energy systems to the anticipation and initial stress of exercise, the mechanisms of fatigue and how the body recovers from sports and exercise.
- **Sport and Exercise Psychology** – This unit applies a scientific approach to the study of people and their behaviour in sporting environments.
- **Fitness testing for Sport and Exercise** – You will be able to study how sports performers regularly participate in fitness tests to determine their baseline measures and how fitness testing results are then used to identify strengths and areas for improvement.
- **Fitness training and programming** – You will examine different methods of fitness training and learn about the principles of training and the concept of periodisation.
- **Sports Injuries** – Will develop a basic understanding of the types of injuries associated with sport and how they might occur and what can be done to help promote recovery.

Where does it lead?

The annual contribution of the sport sector to the UK economy is over £8 billion. This sector has over 36,000 employers creating work for over 600,000 full and part-time employees, and over five million volunteers.

Careers in the industry include personal trainer, sports coach, teaching, sports medicine, dietician, sports psychologist, biomechanics analyst, physiotherapist, sports journalism, events management and sports marketing and administration.





**MOULTON SCHOOL
& SCIENCE COLLEGE**

SIXTH FORM

Pound Lane, Moulton, Northampton, NN3 7SD

T. 01604 641600

www.sixthform.moultonschool.co.uk

 @Moulton6thForm

