



B O O T H A M
BOOTHAM SCHOOL YORK

GCSE CURRICULUM

ENTRY
2008

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COURSES OF STUDY

Our aim is to provide a challenging, rewarding and useful course which will prepare our pupils for A and AS-levels and Higher Education, for vocational and other courses and for the demands of the working world in the twenty-first century.

Our underlying principle is that a Bootham pupil at the age of sixteen should be confidently literate and numerate, should have a knowledge of the principles of scientific and humanitarian studies and of at least one modern foreign language, and should be aware of his or her skills in the creative disciplines.

We feel that the Bootham curriculum in Lower and Upper Senior (Years 10 and 11) will provide that broad programme of study which gives a pupil both understanding and flexibility of mind - qualities which will be in increasing demand in the years ahead and which provide the soundest basis for a full and stimulating education.

We place a great emphasis on meeting the needs of the individual. To help in this we intend that pupils shall have the freest possible choice of options, so that their academic programme can be closely tailored to their needs, interests and abilities. However, we must recognise that it may be impossible to achieve the programme that everyone would ideally like. We ask you to make your choices freely but also to accept that we may have to recommend an alteration in some programmes when the choices and their implications for the balance of the timetable are computed.

THE NATIONAL CURRICULUM

The National Curriculum for children from the age of five through to sixteen is divided into four Key Stages. Bootham being a secondary school covers Key Stage 3 and 4 (A-levels come after Key Stage 4). At the end of a Key Stage each child in a state school is assessed. The Key Stage 3 assessment would therefore come at the end of Upper Schoolroom (Year 9 in the National Curriculum). At Bootham we have decided not to participate in these assessments, preferring our own school generated tests. Bootham's curriculum has for many years incorporated nearly all the developments which have been introduced in the National Curriculum. Independent schools are free from many of the restraints, however, and we ensure that we keep abreast of all the changes as they happen.

The National Curriculum requires that pupils should study all three sciences at Key Stage 4 (GCSE). Bootham agrees with the educational basis for this but would also like to reduce the impact in lesson time for some pupils. We therefore offer two alternatives. The first allows a student to take all three sciences as individual subjects obtaining a GCSE in each. This will take twelve lessons and eight other subjects (including English, Maths and a Modern Language) may be taken. In the second, a student may take two GCSEs, Science and Additional Science in a total of nine lessons, three each of Biology, Chemistry and Physics, but only two grades at GCSE will be awarded, one in Science and the other in Additional Science: unlike the previous Dual Award course these will not necessarily be of the same grade. This will enable nine other subjects to be taken. It is hoped that where needed, the advice of science teachers will be sought on which is the best choice for each individual. Whilst the Science and Additional Science course can still provide entry for A-level it is *strongly* recommended that students wishing to pursue any of the sciences at A-level would be best served by following the three separate sciences, leaving the Science and Additional Science courses for those less inclined towards the sciences.

Whilst many students opt for the three single sciences there are two main reasons for choosing to study the two GCSEs of Science and Additional Science:

- ◆ for a very small minority of students this is the only way of fitting in an unusually wide range of subjects which they wish to study at GCSE.
- ◆ for some students this is an opportunity to minimise the amount of science they do when it is not their strongest area.

There are some caveats. Although it is possible to take A-level sciences having come from the Science and Additional Science, the pupil who does so will be at a disadvantage compared to those who have followed the three separate sciences. If an A-level in one of the sciences is a possible option in the future it is recommended that three separate sciences option is chosen. Pupils who wish to minimise the amount of science they study should be under no illusion that they are getting out of a difficult subject. Science will continue to be a significant part of their curriculum and the intellectual difficulty of Science and Additional Science is identical to that of the three separate sciences: there is just a reduction in the content.

THE WIDER CURRICULUM

PHYSICAL EDUCATION

Physical Education is a compulsory part of the timetable throughout the GCSE years.

In Lower Senior (Year 10) all pupils have five periods per week and in Upper Senior three periods per week. During Lower Senior we hope to refine and consolidate the work covered in the foundation years and then give youngsters the opportunity to study activities in greater depth. Much of our work in Lower Senior is based on team games and we organise a full and varied fixture list in a wide variety of team games including: Basketball; Cricket; Football; Hockey; Netball; Rounders; Tennis - as well as Swimming, Athletics, and Cross Country. We also include a fitness element to the programme where pupils are tested on different aspects of their fitness and then work on improving them.

We hope that our pupils will have an understanding of and an empathy for the spirit and the rules of the games we play.

In Upper Senior (Year 11) pupils choose from a list of options which include team games, badminton, swimming, climbing and going to a gym to do a supervised programme to improve fitness. In the first term it is hoped that those who already represent the school in a team game will continue to do so and then enter the options in the second and third terms, where they will be given priority as some options have limited numbers. Whatever the choice, we expect all pupils will continue to show a determination to fulfil potential, an enthusiasm to work hard and a commitment to support their chosen activity. All our activities are well staffed and our teams competitive and highly motivated.

CAREERS

The careers programme is an ongoing process from Upper Schoolroom in which we try to develop the life skills and research skills required for entry into the world of work. We seek to raise self awareness, identifying our own strengths, limitations, temperament and personal interests in relation to our plans for the future. We also deal with decision making, problem solving, coping with anxieties, communication, assertion and presentation skills as well as study skills, revision and examination techniques.

This leads on to opportunity awareness, discussing work roles, reasons for work and the use of leisure. Whilst focussing on the world of work we deal with safety in the work place and learn to gather and handle information, using the written and audio-visual resources in the Careers Room as well as the computer programs. Further advice is available from Connexions & Careers Guidance, Merchant House, Piccadilly, York, with a designated officer to interview and lead workshops during Upper Senior.

In Upper Senior all pupils become members of ISCO (the Independent Schools Careers Organisation) and all take the Morrisby tests, which result in a personal document detailing

aptitudes and interests and possible career fields to consider. This report is discussed with a member of the ISCO team, resulting in the compiling of a personal action plan which is useful for university entrance. There is a separate fee for this, with an option of membership until the age of 23.

Application skills as well as basic interview skills are dealt with in lessons, involving how to apply by form, letter and telephone and how to write a CV and personal statement, leading towards a fortnight's work experience at the end of Upper Senior.

PERSONAL, SOCIAL & HEALTH EDUCATION

P.S.H.E. takes place weekly involving about twenty students in each group. We hope to help our maturing students to make considered choices so that they can respond to the opportunities of today's society while avoiding some of the risks. We try to help them to become more insightful about themselves and their relationships with others and also to consider some of the issues with which society is likely to confront them. Our goal is a student who takes increasing responsibility for his or her own life and who makes informed and considered choices which will lead to personal happiness and fulfilment.

The course builds upon previous work in biology and health education and functions in close partnership with our Health Centre. The pupils follow half a year of Health Education and half of Careers/P.S.H.E. in Lower Senior, and Careers for the whole of Upper Senior. Some of the topics we explore include growth and maturation, growing up and the family, the development of autonomy, risk-taking (alcohol, drugs, tobacco), sexual decision making, citizenship, study skills and examination stress. The subject is non-examinable.

GENERAL RELIGIOUS EDUCATION

Pupils follow a course entitled "Thinking about God and Morality", which has the two sections "The Existence and Nature of God" and "Ways of Making Moral Decisions and other Morality issues". The topics covered include human rights, abortion, marriage, relationships, prejudice, poverty, war and peace.

The course is designed to 'encourage students to reflect upon the common human experiences that raise questions about the meaning and purpose of life and to develop their own reasoned responses to these questions'. Christian and Muslim responses are particularly explored. The aims include studying the different religious responses to moral issues and to acquire knowledge and understanding of the approaches that different religions have to fundamental questions of life.

Students who choose the full GCSE Religious Studies option in Lower Senior do not need to take this course. Instead they have this timetabled lesson to do either prep in the Library or a study period in a classroom.

THE GCSE OPTION SCHEME

Bootham has a timetabled week of fifty lessons. The information below shows how this is made up in Lower Senior.

Compulsory Subjects No. of Lessons

P.E.	5	These subjects are compulsory for all pupils. English, Mathematics and Science are part of the National Curriculum Core.
P.S.H.E./Careers	1	
R.E.	1	
English	5	
Mathematics	5	
Modern Language	4	
Science	9 or 12	

In Upper Senior, P.E. becomes 3 and English and Mathematics 6

Optional Subjects 4 lessons each

Art	Pupils choose 4 or 5 from these optional subjects. * All pupils have to take one of French, German or Spanish as their compulsory modern language. They may take a second as an option. Students should be taking at least two humanities and consider taking a creative subject.
Classical Civilisation	
Design & Technology	
Drama	
French *	
German *	
Geography	
History	
Latin	
Music	
Religious Studies	
Spanish *	
Sport and PE	

This programme will lead to possible qualification in **eleven** GCSEs.

ALTERNATIVE A

English Language & Literature	2
Mathematics	1
Modern Language	1
Science and Additional Science	2
Options	5

ALTERNATIVE B

Three single sciences	3
English Language & Literature	2
Mathematics	1
Modern Language	1
Options	4

HOW TO CHOOSE

There are some important factors to consider. The pupils should ask themselves:-

- Which subjects do I enjoy?
- Which subjects am I interested in?
- Which subjects am I good at?
- What do I need to take for A-levels?
- What do I need for my career?
- Am I choosing a balanced programme?
- What is possible on the timetable?

Pupils are the best judges of some of the questions. Subject teachers will expect to be asked about GCSE prospects but they will not exert any pressure for a pupil to take a particular subject.

Form teachers, the Director of Studies and the Head of Careers should be asked for advice concerning A-levels, career entry and constructing a balanced programme. Once started on their chosen GCSE subjects pupils are expected to complete the course through to the GCSE examination.

In general, to qualify for entry to Science A-level courses, cover is provided by the Science and Additional Science award or the three single sciences at GCSE. Arts A-levels require a range of GCSEs. If A-level subjects can be anticipated, it is wise to choose them at GCSE. A-level linguists may benefit from taking two GCSE languages but only reasonably strong linguists should consider taking more than one.

Over the two years at GCSE interests can change. It is especially important not to choose a subject simply because of the teacher. Staffing will not be known until after the options are chosen. Forms will be provided with this document which explain exactly how option choices should be made.

DECISION TIMETABLE

The timetable for making decisions concerning GCSE options involves meetings, discussions and interviews from January.

- **Monday 14 Jan:** Designated week for all subjects to discuss what is involved at GCSE.
- **Wednesday 23 Jan:** Meeting with Upper Schoolroom: GCSE prospectus and options system explained.
- Further information sent home at half term.
- Parents' Evening: Discussion of option choices. **Wednesday 27 February.**
- Option forms returned by **Monday 3 March.**
- Choices put into option groups.
- (It may be possible to make a later change. But this depends on option group structure and size of classes.)

CORE SUBJECTS

ENGLISH/ENGLISH LITERATURE

GCSE English and English Literature are taught as a combined course, enabling students to acquire two GCSE qualifications at the end of two years. The school follows AQA Specification A. Pupils can be entered for Foundation or Higher tier on different papers, and their final grade is determined by their overall marks.

Their final marks will be achieved through a combination of coursework and examinations.

ENGLISH

Pupils study a wide range of non-fiction, media, and literary texts, and are assessed on both their reading and writing skills. Speaking and Listening assignments usually arise naturally out of the work they are doing on other aspects of the course. The literary texts include a Shakespeare play, poetry and drama from the English literary heritage, and poetry from a different culture.

ENGLISH LITERATURE

A mixture of texts written pre-and post-1914 are studied over the two years. The three genres of drama, prose and poetry are covered. The work ties in with the English course, so that, by the end of two years, pupils will have studied examples of each genre written over a wide historical period.

An example of texts a pupil might have studied, by the end of two years, through the combined courses would be the following:

William Shakespeare: *Romeo and Juliet*

Jane Austen, *Pride and Prejudice*

Arthur Miller, *Death of a Salesman*

John Steinbeck, *Of Mice and Men*

AQA Anthology of Poetry which comprises work by:

Seamus Heaney, Gillian Clarke, Carol Anne Duffy and Simon Armitage together with a range of pre -1914 poetry.

[NO COURSEWORK]

Mathematics is part of the core curriculum and is therefore studied by every pupil until the end of Year 11. The chief aim of the course is for pupils to experience Mathematics as a meaningful, stimulating and worthwhile activity which has many immediately practical applications as well as leading to further academic study.

All GCSE syllabuses for Mathematics are tied to the National Curriculum which divides the subject into four areas.

- Using and Applying Mathematics: solving multi-step problems
- Number and Algebra: e.g. decimals, fractions, percentages, formulae, equations, ...
- Shape, Space and Measures: e.g. angles, coordinates, shape calculations, trigonometry, ...
- Handling Data: e.g. statistical diagrams, statistical calculations, probability, ...

TIERS OF ENTRY

It is anticipated that all pupils at Bootham will be entered for Higher tier allowing grades E - A*. Pupils in the lower sets will find 30% of the exam questions (those aimed at A and A*) inaccessible but can still achieve a satisfactory grade from the remainder of the questions.

For most employers and institutions of higher education it is envisaged that a C grade will be sufficient to demonstrate basic mathematical competence. Pupils in the higher sets will need to show a good understanding of the whole syllabus to secure the top grades. Teaching in set one will also extend the syllabus where appropriate to lay the foundations for more advanced work.

EXAMINATION

The structure of the examination is as follows:

- Paper One (50%): Non-calculator : 2 hours
- Paper Two (50%): Calculator permitted : 2 hours

There is now no coursework requirement in GCSE Mathematics

[100% examination]

FRENCH, GERMAN AND SPANISH

French, German and Spanish are taught at Bootham. All pupils **must** choose at least one of these at GCSE; some pupils will wish to take two. If pupils are uncertain, they should discuss their choice with their language teachers and the Head of Languages.

Each language will only run if there is a viable class size, so please be aware of this. A second choice might then need to be made.

The four Language skill areas, given equal importance are: listening, reading, speaking and writing. The syllabus requires the study of topics within themes, namely 1) My World, 2) Holiday Time and Travel, 3) Work and Lifestyle, 4) The Young Person in Society. Pupils have a weekly intensive oral with the French "Assistante", and/or the Spanish "Lector/Lectora" and/or the German "Assistent/Assistentin" in their final GCSE year.

EXAMINATIONS

Each of the four skills mentioned above is examined separately at two levels: foundation (grades G - C) and higher (grades D - A*). There will be equal weighting for each skill area within any one level.

Pupils will be entered for those papers in which they are considered likely to have most success; a combination of foundation and higher level papers is possible across the skill areas. A decision on the level will be made after the mock examination. All pupils will take the GCSE in the main examination period at the end of the Upper Senior year. Able students can expect to be extended beyond GCSE requirements to prepare them for further language study. In recent years Modern Languages have been successfully combined with a variety of subjects at A-level.

LANGUAGE LEARNING

A foreign language is perceived as being needed for a few specific careers - teaching, translating, interpreting. However, the developing relationship between Britain and the other European countries is making the acquisition of a European language both essential and desirable. As Britain now forms part of the single European market, the advantages of having one or more foreign languages, even if your chosen career lies in commerce, industry, technology or science, should not be underrated.

A growth area is the combination of a Modern Language with Business Studies and it can also form part of courses in Law, Computer Science and Accountancy at university, often with the option of studying abroad for a year. Scholars who do not proceed to university find Modern Languages helpful in banking, retailing and the hotel trade, to give but three examples. Students wishing to become interpreters, translators or wishing to join the Diplomatic Service could take a foreign language combined with an "exotic" language (e.g. Arabic, Modern Standard Chinese, Japanese or Russian).

[25% Centre-Assessed Unit – for each of the two GCSEs]

It is important to realise that progression to A level science from the two GCSEs of Science and Additional Science is feasible though we would recommend that students intending to take any science at A level follow the three separate sciences option.

In the twenty first century, science plays an increasingly important role in *all* our lives. On a daily basis, the media reports on scientific and technological issues. This is a rapidly changing field with new developments occurring at a bewildering rate. We are all affected in many ways by the various fields of science.

The Science and Additional Science course will equip the student with the skills and understanding necessary to make sense of modern science. Students who have followed the two GCSEs of Science and Additional Science will be able to engage, as informed citizens with science-based issues and will learn to understand better the world in which they live.

Of course, the Science and Additional Science course also provides a basis for progression into science-based careers (as outlined for the individual sciences overleaf) but there can be no hiding the fact that a student who has followed the three separate sciences will be better prepared than one that has followed the Science and Additional Science course.

The Science and Additional Science option follows the AQA Science scheme leading to two GCSE qualifications:

- GCSE Science – units will be covered in Lower Senior
- GCSE Additional Science – units will be covered in Upper Senior

In the **Lower Senior year**, students will cover the following units (the content of the units will be the same as those in the triple award option – see the following pages):

BIOLOGY 1 CHEMISTRY 1 PHYSICS 1

In the **Upper Senior year**, students will cover the following three units (the content of the units will be the same as those in the triple award option – see following pages):

BIOLOGY 2 CHEMISTRY 2 PHYSICS 2

EXAMINATION

Examination of the above will be by six written papers at the end of the course.

GCSE Science will be examined by three papers (Biology1, Chemistry 1 and Physics 1) together with a centre assessed unit and the Additional Science will be examined by a further three papers (Biology 2, Chemistry 2, Physics 2) and a second centre assessed unit leading to the Additional Science GCSE qualification.

In summary, Science and Additional science are *each* assessed as below;

Tier of Entry	Grades Available	Paper No. / Duration	% Weighting
Higher	A* - D	Biology / (45 min)	25
Or		Chemistry / (45 min)	25
Foundation	C - G	Physics / (45 min)	25
		ISA /Lab Time	25

[25% Centre-Assessed Unit]

This taken together with Chemistry and Physics represents the Triple Award Option.

Biology is the science of life. It is a rapidly expanding science with many new applications that will have enormous influence on our lives. Our approach to understanding living organisms is to consider how they function.

In Biology, we encourage an interest in living organisms at all levels, from molecules in cells to global environmental issues. All students should find interest in a subject that touches upon their own lives in so many ways. We take an investigative approach and welcome new information from many sources. This is a subject where significant advances are announced every few weeks.

The study of Biology will allow progression to work in a wide variety of career areas including biological research, environmental science, medicine, veterinary science and conservation to name but a few. The study of Biology will be of benefit no matter what your career choice is and the skills you develop at GCSE will be valid in whatever you choose to do.

The Biology GCSE course is organised into three Units:

BIOLOGY 1	BIOLOGY 2	BIOLOGY 3
NERVOUS/ENDOCRINE SYSTEMS	CELL STRUCTURE AND FUNCTION	GAS EXCHANGE
KEEPING HEALTHY	TRANSPORT IN/OUT OF CELLS	CIRCULATION IN MAMMALS
DRUGS – MEDICINAL AND RECREATIONAL	PHOTOSYNTHESIS	THE EFFECTS OF EXERCISE ON THE BODY
DISEASE	ENERGY FLOW IN THE ENVIRONMENT	KIDNEY FUNCTION
ADAPTATION OF ORGANISMS TO THEIR ENVIRONMENT	NUTRIENT CYCLES IN THE ENVIRONMENT	MICROORGANISMS – FOOD AND DRINK PRODUCTION
INTRODUCTION TO GENETICS AND GENETIC ENGINEERING	ENZYMES	MICROORGANISMS – OTHER INDUSTRIAL USES
EVOLUTION	HOMEOSTASIS	SAFE USE OF MICROORGANISMS
HUMAN IMPACT ON THE ENVIRONMENT	GENETICS - INHERITANCE	

EXAMINATION

Examination of the above will be by three written papers at the end of the course.

Tier of Entry	Grades Available	Paper No. / Duration	% Weighting
Higher or Foundation	A* - D	Paper 1 / (45 min)	25
		Paper 2 / (45 min)	25
	C - G	Paper 3 / (45 min)	25
		Centre-Assessed Unit	25

Assessed Unit will consist of 6 marks awarded on normal practical work during the term and 34 marks on an externally set, internally assessed test taking 45 minutes under examination conditions.

It will examine the following sections:

Fundamental Ideas - distinguishing between opinions based on scientific fact and those based on hearsay evidence or bias.

Observation - making observations in a rational and unbiased manner, leading to hypotheses and predictions.

Designing an investigation - learning about; variables, fair tests, accuracy, precision, reliability and validity.

Making measurements - obtain data, calibration and error, correct choice of instrument for measuring datum.

Presenting data - correct use of tables, line and scatter graphs, pie charts and histograms.

Identifying patterns and relationships in data - recognising linear and proportional relationships, curves etc.

Social aspects of scientific evidence - realise how consequence of scientific experiments may impinge on society.

Limitations of scientific evidence - realise some questions cannot be answered by looking at scientific evidence alone.

[25% Centre-Assessed Unit]

Chemistry, taken together with Biology and Physics forms the Triple Science option.

Chemistry tries to make sense of all the materials around us; be it rocks, air, cotton or jelly. The astonishing achievement of chemistry has been to find a way of making sense of why materials are the way they are and how they interact with each other to make totally new materials. More than any other science, chemistry invites us into a world of the imagination; all our explanations for what we see involve imagining things so small that no one will ever see them. The challenge is to enter into this microscopic world and let it become so real that the mysteries of matter begin to make sense.

This is not a subject for people who are bored with the world or for people who have never asked why things are the way they are. Do not choose this option if you have no imagination or if you are content with your understanding of the world and do not want to know any more. But, if you do opt for this, expect your mind to be stretched and your views to be challenged, expect to have to rethink how you understand things.

By the end of the course you will, naturally, understand the material world better, but you will also be able to evaluate evidence critically. This means that you will be able to tell whether people are just misleading you with statistics or whether they have a genuine point to make. You will be able to play your part in the big decisions facing the world about how best to use natural resources. In other words you will be more a master of the ideas around you rather than a slave of those who would seek to manipulate your thinking.

For some this may even lead into a lifetime of discovery. Could you be the person who develops clothing that will keep you comfortable at all temperatures, or the one who finds how to make solar panels so cheap and so efficient that we can do away with power-stations? Could you develop a paint that could make your car shimmer with images like a TV screen, or a drug that would cure cancer?

The course is organised into three Units:

EXAMINATION

CHEMISTRY 1

Materials from rocks
Metals
Fuels from oil
Plastics
Materials from plants
The atmosphere

CHEMISTRY 2

Atoms
Structures and properties
Controlling amounts of reaction
Controlling rates of reaction
Energy from chemistry
Charged particles everywhere

CHEMISTRY 3

Patterns in the elements
Acids and alkalis
What is in our water?
More energy
Analysing substances

Examination of the above will be by three written papers at the end of the course.

Tier of Entry	Grades Available	Paper No. / Duration	% Weighting
Higher or Foundation	A* - D	Paper 1 / (45 min)	25
	C - G	Paper 2 / (45 min)	25
		Paper 3 / (45 min)	25
		Centre-Assessed Unit	25

The Centre-Assessed Unit will consist of 6 marks awarded on normal practical work during the term and 34 marks on an externally set, internally assessed test taking 45 minutes under examination conditions.

It will examine the following sections:

Fundamental Ideas - distinguishing between opinions based on scientific fact and those based on hearsay evidence or bias.

Observation - making observations in a rational and unbiased manner, leading to hypotheses and predictions.

Designing an investigation - learning about; variables, fair tests, accuracy, precision, reliability and validity.

Making measurements - obtain data, calibration and error, correct choice of instrument for measuring datum.

Presenting data - correct use of tables, line and scatter graphs, pie charts and histograms.

Identifying patterns and relationships in data - recognising linear and proportional relationships, curves etc.

Social aspects of scientific evidence - realise how consequence of scientific experiments may impinge on society.

Limitations of scientific evidence - realise some questions cannot be answered by looking at scientific evidence alone.

[25% Centre-Assessed Unit]

This taken together with Biology and Chemistry represents the Triple Award Option.

Physics is the basic science, involved in one way or another with everything living or non-living, so there are jobs with physics in all sorts of places, for all sorts of people.

The study of physics for the next two years will open up the possibility of exciting work in a whole range of different areas. You could be a technician, technologist, or scientist working with a team of people concerned with:

- using computer-aided designs to make life easier for handicapped people
- using lasers to examine the effect of pollution in the atmosphere
- designing survival clothing for astronauts, explorers
- increasing food supplies by inventing new coverings for greenhouses
- saving energy by researching alternative sources of fuel
- investigating the physical properties of new alloys for aeroplanes and spaceships

The list is almost endless. Even if you choose a career which, in the end, has no apparent connection with physics you studied at school, the ideas and principles which you have learned there will always help you make better sense of the world around you, and scientific information which comes our way, affects our lives every day. The course is organised into three units:

<p>PHYSICS 1 ENERGY TRANSFERS ENERGY EFFICIENCY USING ELECTRICITY FUEL CONSIDERATIONS EM SPECTRUM RADIOACTIVITY-APPLICATIONS ORIGINS OF THE UNIVERSE</p>	<p>PHYSICS 2 FORCES AND MOTION STATIC ELECTRICITY CURRENT ELECTRICITY ELECTRIC CIRCUITS RADIOACTIVE DECAY NUCLEAR FISSION NUCLEAR FUSION</p>	<p>PHYSICS 3 CIRCULAR MOTION MIRRORS & LENSES SOUND ELECTROMAGNETISM GENERATORS TRANSFORMERS LIFE HISTORY OF STARS</p>
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EXAMINATION

Examination of the above will be by three written papers at the end of the course.

Tier of Entry	Grades	Paper No. / Duration	% Weighting
Higher	A* - D	Paper 1 / (45 min)	25
or		Paper 2 / (45 min)	25
Foundation	C – G	Paper 3 / (45 min)	25
		Centre-Assessed Unit	25

The Centre-Assessed Unit will consist of 6 marks awarded on normal practical work during the term and 34 marks on an externally set, internally assessed test taking 45 minutes under examination conditions.

It will examine the following sections:

- Fundamental Ideas** - distinguishing between opinions based on scientific fact and those based on hearsay evidence or bias.
- Observation** - making observations in a rational and unbiased manner, leading to hypotheses and predictions.
- Designing an investigation** - learning about; variables, fair tests, accuracy, precision, reliability and validity.
- Making measurements** - obtain data, calibration and error, correct choice of instrument for measuring datum.
- Presenting data** - correct use of tables, line and scatter graphs, pie charts and histograms.
- Identifying patterns and relationships in data** - recognising linear and proportional relationships, curves etc.
- Social aspects of scientific evidence** - realise how consequence of scientific experiments may impinge on society.
- Limitations of scientific evidence** - realise some questions cannot be answered by looking at scientific evidence alone.

OPTION SUBJECTS

ART AND DESIGN

EDEXCEL

[60% coursework]

The aim of the course is to encourage creativity, expand awareness of visual art and develop a language which deals with inner thoughts, feelings and the environment around us.

The students will work on two major coursework projects both of which will be explored from the start of the course.

One will be led by the teachers and explores different techniques and media, as well as looking at the evolution of contemporary ideas in art. This will involve studying and responding to the work and ideas of traditional and innovative artists. The first two terms will introduce the range of media available and basic techniques needed to use them.

The other project will be initiated by the students themselves and executed in whichever medium they favour: film, photography, installation, computer graphics, three-dimensional work, painting or drawing are amongst the wide range that is possible.

At the end of the course pupils have ten hours of supervised time to produce a piece which accounts for the 40% examination. (They have eight weeks in advance to prepare.)

Whilst we feel the course is a perfect preparation for A-level, we also hope that we are encouraging creative artistic thinking and communication for those who may go on to follow quite different subjects.

[20% coursework; this is optional]

As the name suggests, this course involves study of the Classical Civilisations of Greece and Rome, which form the common basis of our modern European culture.

A good selection of topics is available to us, from which candidates must take five topics, one of which is usually offered as coursework. Each topic counts for 20%. The skills needed are similar to those used in English and History, as pupils will be reading ancient sources in English and also studying photographs and other visual material. A liking for the past and an imagination are a help.

EXAMINATION

The examinations involve comprehension and comment on ancient material, most of which the pupils have studied carefully in detail.

From two papers we choose four topics (-if we are offering coursework too, otherwise five). Each of the two examination papers carries questions on a wide variety of topics. Candidates answer on four topics - 45 minutes per topic.

PAPER 1 - Greek and Roman Civilisation (Topics 1 - 10).

Without listing them all in detail, our choice is very varied and includes Athletic and Theatrical Festivals, Religion, Art and Architecture, Roman Britain and Pompeii.

PAPER 2 - Literature in Translation.

For this we read works of the great classical authors in English. Here we choose from Homer, Sophocles, Euripides, Aristophanes, Herodotus, Virgil, Ovid, Pliny and Tacitus

COURSEWORK

The coursework which we offer can vary but has often been two pieces of work on a Roman Civilisation topic, for which the major Roman City of York can provide a fine resource. We also have a good range of reference books and access to excellent Internet resources. Coursework is carried out mainly in normal lessons and some prep. time. We usually visit Pompeii once in every two years. (*QCA has announced that in classical subjects there should no longer be coursework that is teacher set and marked. The changes will be introduced in September 2009.*)

Some of the work has already been seen by pupils in Upper Schoolroom (Year 9) and employs techniques and themes used earlier in Classics and Latin. However, it is quite possible for a pupil to start this course with no previous knowledge of the subject. The only change in style for GCSE is that there is thorough practice in examination technique, with use of questions of similar style.

Although this subject is not required for any other careers or unrelated courses, it does provide extra practice in English skills using interesting material and contributes to an understanding of our cultural background. We have a long-standing and successful A-level in this subject. The literary topics are helpful for students of modern literature, while others provide some introduction to Ancient History, Archaeology and Anthropology. Classical Civilisation has recently been a marked growth area at A-level in this country and classical subjects retain high status with employers. Graduates in Classical subjects are some of the most readily employable in the arts - beating a surprising number of science specialists.

[60% coursework]

Design and Technology is a multifaceted subject and covers a wide, if not inexhaustible, variety of disciplines. It is an exciting field of study which has a great deal to offer students as manufacturers, consumers and citizens.

This course involves designing and making, using wood, metal and plastics. Other materials are not excluded and are dependent on the solution to the set problem.

This course aims to:

- encourage students to consider the effects and implications of technological activity;
- give students the opportunity to apply skills from other subjects such as Art, ICT, Mathematics and Science.
- give students opportunities to develop practical abilities, and confidence to design, make and modify quality products.
- encourage students' critical and aesthetic abilities, enabling them to evaluate design and technology activities.

COURSEWORK

During Lower Senior students will be involved in a minor project which will develop their designing and making skills. Students will also look at topics such as health and safety, market research, product analysis, mechanisms, ergonomics, structures, new materials and methods of production.

In Upper Senior students will undertake a major design and make project which usually involves about 40 hours of supervised time. They will design and make a usable product from a need which they will identify. This project will be assessed by the subject tutor and the Examination Board. The finished artefact will be accompanied by a design folio.

EXAMINATION

The examination will consist of one written paper (2 hours). Students will be tested on their knowledge and understanding of design and making along with the three main materials, wood, metal and plastics.

THE COURSE

This course is designed to inform, instruct and encourage students in the use of drama and performance as a medium for communication.

The emphasis in Drama is on practical work - used as a process in the exploration of themes, issues and ideas that are found in both the students' own work and in the work of dramatists. Much of the work involves improvisation either as an end in itself or as a means of exploration and interpretation. There is an on-going written element in the form of diaries, working notebooks and portfolio practice pieces.

Drama as a subject is intended not only for aspiring actors but for anyone interested in theatre and performance who has imagination and a sense of humour. The subject encourages team working and the students should be prepared for anything!

It is expected that students will take advantage of the opportunities to see theatrical productions, get enjoyment from them and incorporate these experiences in their work.

The course (Edexcel 1699) consists of three sections: Paper 1 (Units 1 & 2) and Paper 2.

Paper 1 Two units of practical coursework

Unit 1: Exploring issues etc that arise in response to stimulus material from a variety of sources. (Improvisation-based).

Unit 2: Exploring a complete and substantial play. (Involving improvisation and conventional performance skills).

Each of these units will be supported by a portfolio of documentary evidence (written description, diagrams, illustrations etc).

Paper 2 A practical examination of the student's involvement in a staged performance.**ASSESSMENT****1. Paper 1** Practical coursework (Units 1 and 2 - 60 marks each)

[Practical work 40 plus Portfolio 20]

[Internally assessed and externally moderated]

} 75%

2. Paper 2 Practical Examination (Performance 40 marks)

[Externally marked by visiting examiner]

} 25%

[25% coursework]

The study of geography promotes better understanding of not only how the earth has evolved, but also the way in which people interact with their environment so that you will develop more fully "a sense of place". It helps you form a view of the world, and gives you the information to understand what is happening in other countries around the globe.

Geography also gives insights into other ways of life. As people effect change on their surroundings - through pollution caused by over-use of the car, for example - geography can foster an awareness of and respect for the environment. Also the course has a moral element, as it promotes a better understanding of how social injustice occurs and the policies needed to improve matters.

Geography requires an even balance between literacy and numeracy and should also make the connections which help you to better understand other subjects. Information Communication Technology (ICT), map work and field-work are all needed to carry out your geographical study and enquiry. All these skills are transferable and will serve you well in the world of employment way beyond your school life at Bootham.

The Geography specification at a glance relates to *Geography C (GCSE 3033 - AQA)*:

Paper 1

A Decision-Making Exercise

25% of total marks

Comprising a series of structured questions. A question based on an Ordnance Survey map extract may be set. All questions are compulsory.

Paper 2

Three structured questions on the three sections of the subject

50% of total marks

Three structured questions on the three sections of the subject content:

- ◆ Managing Change in the Human Environment
- ◆ Managing the Physical Environment
- ◆ Managing Economic Development

A question based on an Ordnance Survey map extract may be set. All questions are compulsory.

COURSEWORK

An opportunity to do an investigation of your own. The final piece is a result of personal investigations at a local/small scale. Work for this component will be carried out in May or June in the Lower Senior year (Year 10) during a 3 day stay at a field-work centre. The expected location is within the Yorkshire Wolds at Cranedale, near Malton or at Blencathra near Keswick in Cumbria.

RELEVANCE FOR YOUR FUTURE

Interests of those following Geography courses remain many and varied. Recent career paths of Bootham Old Scholars with a geographical training include:

Key roles in charities like Oxfam
Careers in IT/Business Analysts
Tourism/Financial Services
Journalism

Estate Agency/Surveying/Housing & Planning
Agriculture
Management Consultancy
Travel Writing/Reportage/Photography

History is both an enjoyable and exciting option for GCSE. Students will develop critical skills which are recognised and valued in the world of work; these include analysing different types of sources, distinguishing between fact and opinion, debating and developing coherent arguments based on evidence. History is interesting in its own right but it also allows pupils to develop a more balanced sense of their place in the wider world. Studying different cultures and individuals encourages pupils to think critically, to be more tolerant and thoughtful. An ability to write fluent English is a definite asset; however, anyone with an interest in History should find the course fulfilling and rewarding.

CONTENTS OF THE COURSE

The Rise and Fall of the Communist State: The Soviet Union, 1928 – 1991: In October 1917 revolutionaries seized power in Russia and set out to create a perfect world – a communist utopia. This course looks at how and why this went wrong. Stalin’s Machiavellian rise to power and his rule of terror, Khrushchev’s attempts to ‘de-Stalinise’ and modernise the Soviet Union and Gorbachev’s attempts to save what US President Reagan had once called the ‘Evil Empire’ from ruin form the core of this course.

Superpower Relations, 1945 – 1990: For almost 50 years the world’s superpowers, the USA and USSR, were at daggers drawn. The Cold War shaped the course of international relations and helps to explain the Europe we live in today. Students study the reasons for the breakdown in relations between the wartime allies, the nature of the Cold War itself through to why the Cold War ended. Events such as the Berlin Blockade and the Cuban Missiles Crisis give students an insight into why, for almost 50 years, the world feared a Third World War.

Nazi Germany, c 1930 – 1939: Students look at how and why Hitler and the Nazis were able to rise to power in Germany, the nature of the Nazi State and the impact their rule had on ordinary German people. This is a fascinating study into one of the most evil societies the world has known.

Conflict in Vietnam, c1963 – 1975: This study provides students with an opportunity to explore one of the most notorious episodes of the Cold War. They will look at why the USA became involved in Vietnam, the nature of the conflict and its impact on both Vietnam and the USA. The conflict in Vietnam has long haunted the USA and this course will help shape students’ understanding of the world we live in.

Coursework: Students produce coursework on 2 topics – approximately 1,500 words on each. This will involve a combination of extended writing and shorter source-based questions on our two topics:

Votes for Women, 1900 – 1928. Why did pressure for women to gain the vote grow and why were they eventually granted the vote? Students look at the radical methods used by suffragettes and the peaceful methods of suffragists to further their cause and the heated debate at the time as to whether women were capable, or even worthy, of voting!

Britain in the Age of Total War 1939 – 1945. This coursework looks at the impact of the war on Britain – how ordinary people coped with the hardships imposed by war through to how the government handled life on the Home Front.

ASSESSMENT

Paper 1 (40%) Soviet Union and Superpower Relations

Paper 2 (35%) Nazi Germany and Conflict in Vietnam

Coursework (25%) Each coursework assignment of approximately 1,500 words is worth 12.5%.

[20% coursework; this is optional]

The examination is designed to be suitable for those who have been taught using our course. Latin is an unusual subject in that we have been doing GCSE work from the beginning of the course.

We continue with Latin course books until Book 3, so that pupils will have covered all the essential grammar and all vocabulary by then. For GCSE, students will need to be happy with Latin translation work and comprehension for the examination, and interested in archaeology or history for the coursework or its alternative civilisation paper. The skills developed are complex, but Latin is widely held to promote logical thought and a high level of language and social understanding. A government document refers to classicists as "clever and open-minded".

COURSEWORK

This at present counts for 20% of the total marks, but is often replaced by an optional examination on Roman civilisation and will cease completely from September 2009.

There are also set texts from several Roman authors which amount to a few hundred lines. We study these thoroughly and make sure students have an accurate translation. They are then examined using passages from each selection, with comprehension questions and a small amount of translation. The Latin of the set texts is not easy, but there is not too much of it and, with some careful work, it is possible to obtain high marks on them. The remainder of the examination has a passage of Latin, which will not have been seen before. This forms a continuous story that is examined by a mixture of comprehension and translation. Latin is in the same situation as Modern Languages in that you need to have studied it before Lower Senior.

Classical subjects in general and Latin in particular still have a high status with employers. Latin may serve as a language qualification for entry into university courses and is especially welcomed for English, History, Law and Anatomy. GCSE entries for Latin remain at a significant level in independent schools. Classics courses at university are increasingly concerned with civilisation and most recent Ministry figures available show that Classics graduates are readily employable arts graduates.

[66% coursework]

The course comprises four sections:

1. **COMPOSING** (25%) : assessed internally and then moderated in March in year of exam.

All candidates will submit one composition. This represents the coursework component, the necessary skills for which are developed during class time.

2. **PERFORMANCE** (25%) : assessed internally and then moderated in March in year of exam.

(a) Instrumental or vocal solo and

(b) Performing in an ensemble

Solo playing is mostly developed in pupils' individual instrumental lessons. Ensemble playing is fostered by membership of a band, orchestra or group.

3. **INTEGRATED ASSIGNMENT** (25%)

One composition assignment brief will be issued by AQA in the Autumn term of the year of examination. The composition will be submitted in the form of a score and it must be accompanied by a recorded realisation of the piece and an evaluation of its success.

4. **LISTENING** (25%) : a 1 hour 15 minute exam in May of Upper Senior.

Awareness of different musical styles - classical, pop, jazz, folk, techniques of composition, recognition of instruments, composers and genres.

Music is suitable for someone with practical ability as an instrumentalist or singer. As a creative subject it helps to achieve balance in the curriculum. It is preferable, but not essential to have done GCSE in order to take Music at A-level.

[No coursework]

If you like putting forward your opinions on religious topics, questioning the meaning of life and responding to moral issues – both personal and social – then by choosing religious studies you can do this.

AIMS INCLUDE:

To acquire knowledge and develop understanding of the beliefs, values and traditions of one or more religions.

To consider the way in which beliefs affect the behaviour of religious believers.

To discuss religious and other responses to moral issues.

To identify and investigate fundamental questions of life raised by religion.

COURSE OUTLINE:**1. Thinking About God and Morality**

- Arguments for the existence of God. The problem of suffering and evil for religious believers.
- The nature of God.
- Ways of making moral decisions. Absolute and relative morality. Sources of moral authority. Human rights and responsibilities: abortion: sexual relationships: marriage and divorce: prejudice and discrimination. Global issues: poverty: war and peace: the natural world.

2. Truth, Spirituality and Contemporary Issues

- Nature of truth and spirituality. Claims to truth, religious authorities, sacred writings and conscience.
- Ways of expressing spirituality in society – faith communities, individual and communal commitment.
- Religious responses to matters of life and death, drug abuse, media and technology, crime and punishment, rich and poor in society.

ASSESSMENT

Module 1 is examined at the end of the Lower Senior year in an examination of 1 hour 45 minutes duration. This counts for 50 % of the GCSE.

Module 2 is examined at the end of the Upper Senior year in an examination of 1 hour 45 minutes duration. This counts for 50 % of the final GCSE.

All GCSE pupils are also timetabled for an extra period of general RE which they may use for private study.

P.E.**(60% Coursework)**

Are you passionate about sport?

Do you want to learn more about it?

Do you want to improve your own performance?

Well this could be the subject for you! This dynamic course combines theory and practical P.E. and it aims to encourage pupils to develop and apply their knowledge of physical education through taking part in selected practical activities. Factors that affect participation and performance will be investigated, as well as understanding the rules and conventions in selected activities. Pupils will be expected to adopt different roles in their activities when working with others, such as being the coach and captain, and performances will then be analysed and improved.

THE WRITTEN PAPER (40%)**Section A- Health, Fitness and the Factors Affecting Performance:**

Looks at how health and fitness are related, the reasons for undertaking exercise, the importance of a balanced diet and anatomy and physiology. Also, it will be seen how the body systems inter-relate to allow different types of physical activity.

Section B- Principles of Training:

Covers how to apply the training principles, the effects on the body of different training methods, sports and drugs, how sports injuries are caused and treated and what could be done to prevent them.

Section C- Factors Affecting Individual Performance:

This section looks at how school, society, social groupings, leisure time and availability of facilities are all important in promoting physical education and how these factors inter-relate to health and fitness.

Section D- Social and Cultural Factors Affecting Performance:

The factors studied are sponsorship, media, social and cultural aspects and the influences of local and national providers.

COURSEWORK (60%)

This is divided into two parts; **a P.E.P. and four activities:**

The P.E.P.

To plan, perform, monitor and evaluate a health-related exercise programme. The aim is to improve performance in their chosen activity by planning a training programme and pupils will be assessed in warm ups, cool downs, monitoring their progress and leadership skills.

To perform in 4 activities chosen from at least 2 of the following:

Games, gymnastics, dance, athletics, swimming, outdoor education. Here skills will be developed, performance will be analysed, an understanding of rules and conventions of the chosen activity will also be taught. Pupils will also be made aware of tactics and strategies in their activity and the organisation of tournaments.

WHY CHOOSE GCSE P.E (SPORT AND P.E.)

This is an exhilarating course aimed at pupils with a high interest in sport as a participant and observer. The course is useful to those hoping to pursue a career in the ever expanding sports leisure industry, as a coach or as a participant at any level.