



Shrewsbury School

# **THE FOURTH FORM CURRICULUM**

**2013 – 2014**

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# THE FOURTH FORM CURRICULUM

## Introduction

In September your son will move into the Fourth Form, and will embark on a two-year programme that will lead to GCSE or IGCSE examinations in the Summer of 2015. He will continue to study English, Mathematics, and at least one Modern Foreign Language (from French, German and Spanish) together with the three science subjects (Biology, Chemistry, and Physics). He will also choose 3 other subjects from a range that includes humanities, additional languages, creative subjects and Physical Education.

In addition he will study non-examined courses in Information Technology and PSHE (Personal, Social, and Health Education).

Fourth Form Curriculum
English
Mathematics
Core Modern Language (Option L)
Biology
Chemistry
Physics
Option A
Option B
Option C

## What decisions do the boys have to make?

Two decisions have to be made:

- Which Modern Foreign Language to choose as the Core Language (Option L)
- Which other subjects to follow in the Option Blocks

Further information on Modern Foreign Languages can be found on Page 3, with an overview of the option courses on Pages 5 to 14. (Pages 15 to 19 give an overview of the English, Mathematics and Science courses.)

## When do these decisions have to be made?

Boys will be asked to indicate a provisional set of choices to their Housemaster after Exeat in the Lent Term. This is in order that the school can make initial projections of numbers and assess the consequent staffing requirements. There may be some small changes made to the block structure at this stage to accommodate as many combinations of choices as possible.

We do realise that this is a very early stage for boys to make their choices, and that their choices may change through the remainder of the Lent Term. Boys will be asked for a firm set of choices directly after the Parents' Meeting in April. At this stage the school timetable will be compiled. Boys will be permitted to change their choices after this, but only provided that the change can be accommodated within the timetable structure.

## **How to reach a decision**

When deciding on which subjects to take, a boy should consider a number of different issues. First and foremost, he should look to pursue subjects that interest him, that he enjoys, and that he feels he could do well in. However, he also needs to be aware of the implications of his GCSE choice on his future studies and he should give some thought to the grouping of subjects that he selects. In some cases a boy may decide to concentrate on a particular area of study, for example by selecting three humanities subjects. In other cases a boy may decide to follow a balanced course that might include a language, a humanities subject, and a creative subject.

Parents and pupils may have seen publicity regarding the “English Baccalaureate”. This is gained when a pupil gains at least a C grade at GCSE in English, Mathematics, two science subjects, a language, and either History or Geography. At this stage, the School does not feel that pupils should feel under pressure to make their GCSE choices conform to this by necessarily choosing one of History or Geography. However, it is worth pointing out that in recent years nearly all boys have selected at least one of the humanities subjects (History, Geography, Religious Studies, Ancient History). All boys and parents should consider carefully the importance of these four subjects in shaping our understanding of our own times, regardless of later A Level choice.

## **MODERN FOREIGN LANGUAGES**

Pupils are required to study at least one Modern Foreign Language (out of French, German and Spanish). Historically, a majority of the year has chosen to study two (or even three). French is no longer the compulsory language, although it is thought that most boys will wish to continue French, a language which many will have already studied for several years.

Pupils choosing to study only one Modern Foreign Language must choose it in the L Block.

Pupils choosing to study 2 Modern Foreign Languages must allocate their choices as follows:

- French and German                      Choose French in L Block and German in A Block
- French and Spanish                      Choose French in L Block and Spanish in A Block
- Spanish and German                      Choose Spanish in L Block and German in A Block

Pupils choosing to study 3 Modern Foreign Languages must allocate their choices as follows:

- Choose French in L Block, German in A Block and Spanish in C Block.

## **FRENCH, GERMAN, SPANISH**

In each of the modern languages, the courses continue the work begun in the Third Form. French prepares for the CIE IGCSE qualification and Spanish for Edexcel IGCSE, while the German course leads to the WJEC GCSE (which features periodic Controlled Assessments).

Speaking, Listening, Writing and Reading are all assessed towards the final grade. The emphasis is on practical communication in the language, alongside the preparation of a solid grammatical foundation especially for those who continue to Sixth Form level and beyond. We hope too to stimulate boys' interest through the use of challenging cultural material and to provide enjoyable and interesting courses.

We believe the cultural and vocational benefits of studying modern foreign languages to be considerable; in many E.U. countries, indeed, such a course of study is compulsory. Employers world-wide increasingly specify foreign language competence in job advertisements.

In each language, boys receive specialist conversation classes with native speakers, and they are encouraged to enrol for the school study visits to Montpellier, Bavaria and Spain, or participate in the exchange programme with San Bartolome School in Argentina.

## THE BLOCK SYSTEM (PROVISIONAL)

Block L	Block A	Block B	Block C
French	Geography	Ancient History	Art
German	German	Design	Astronomy
Spanish	Greek	Geography	Design
	History	History	Geography
	Religious Studies	Latin	History
	Spanish	Music	Music
		Religious Studies	Physical Education
			Spanish

The block structure above is **provisional**. In late February, Housemasters will ask pupils for their initial choices, based on the blocks given above. Pupils will also be asked to indicate if there is a combination of subjects that they would like to study, but which is not possible under the given block structure.

The Deputy Head (Academic) will review the choices submitted, and may make small alterations to the block structure if these will provide a greater number of pupils with their favoured combinations of subjects. It is worth pointing out, even at this early stage, that it may not be possible to design the blocks in such a way as to accommodate all possible combinations of subjects, and so some pupils may not be able to study precisely the group of subjects that they might wish.

## **OPTION SUBJECTS**

**(TO BE READ IN ASSOCIATION WITH THE SECTION ON MODERN FOREIGN LANGUAGES ON PAGE 3)**

### **ANCIENT HISTORY**

This is an exciting course which aims to explore the history of the ancient Greek and Roman world through the written and archaeological sources available to us. There are three written exam papers and one piece of controlled assessment which involves the boys researching and writing up an essay set by the exam board under our supervision.

All texts are studied in translation and no knowledge of Latin or Greek is expected at any stage. The subject is a humanities option which combines well both with languages and also History, Geography and Religious Studies.

The four modules to be covered are as follows:

- Paper 1: The Greeks at War with especial reference to the Persian Wars of 490 - 479BC
- Paper 2: The rise of Rome with especial focus on Hannibal and the Punic Wars
- Paper 3: Women in ancient politics – Cleopatra or Agrippina the younger
  
- Paper 4 is Controlled Assessment, where boys submit an extended essay on one of the following historical topics:
  - Troy and the Myceneans
  - The ancient Persians
  - Ancient Egypt
  - The hellenistic world after 323BC
  - The Celts

## **ART**

The aim of this course is to establish knowledge and skills which will enrich the lives of boys in two ways - firstly, in the creative areas of Drawing, Painting, Print-making, Photography and Ceramics; secondly, in gaining a basic understanding of some of their heritage in the Visual Arts by studying a range of work from all periods.

A real commitment to the subject, a facility for drawing and an enjoyment in doing it are the only pre-requisites. The core discipline at this level is the development of a high degree of observational skill through analytical drawing. Tasks like the skeleton and life drawing will be the challenges that enable candidates to raise their drawing skills and in turn their confidence. AQA GCSE involves the creation of a portfolio of work, and an extensively developed sketchbook, which will include an introduction to some aspects of the History of Art. All candidates will be required, as part of the AQA course, to visit galleries and museums. We usually organise these trips on Sundays.

Some boys will wish to continue into the Sixth Form, either because they are considering Further Education in the fields of Design, Advertising, Architecture or the History of Art, or because they simply wish to continue with creative work. Sixth Form work will build on earlier achievements, and whilst boys are welcome to join the Art course at that stage, they would be at a certain disadvantage.

## **ASTRONOMY**

Astronomy is one of the oldest of the sciences. It has had a significant influence on cultural development throughout the world and astronomical ideas permeate everyday life.

Recent advances made in astronomical discovery through the application of science and the use of new technology, especially in the realm of space exploration, further illustrate the relevance and value of studying GCSE Edexcel Astronomy. This course will enhance and extend your work in the sciences, and the coursework involves aspects of observational astronomy that can be pursued using simple, home-made equipment, the School's binoculars and telescopes (including the observatory) and remote links to research grade equipment (e.g. the Faulkes telescope in Hawaii).

You will be expected to recall key facts about astronomical objects and theories including the historical development of the subject and you will learn how to carry out and interpret your own observations. Some aspects of the course involve the application of mathematical ideas (e.g. Newton's law of gravitation, stellar magnitudes etc.) and these skills will be reinforced and practised in class.

The course involves units on Planet Earth, The Moon and the Sun, The Solar System, Stars and Galaxies, and Observing Techniques and Space Exploration. 25% is assessed by Controlled Assessment.



# DESIGN AND TECHNOLOGY: PRODUCT DESIGN ENGINEERING

## What is Design & Technology: Product Design Engineering?

The subject is fundamentally an enquiry into the man-made world. Pupils investigate products, design methods, materials science, manufacture and marketing by solving real-world design problems. Design & Technology study allows pupils to demonstrate and develop their creative ability and a capacity to research, analyse and present objective solutions to such problems, while demonstrating their knowledge and understanding of product engineering.

The subject differs in nature from most other academic disciplines, both in the manner in which the subject is taught and how pupils learn subject content. The theoretical design process and practical activities allow pupils to develop a capacity for engineering products, and communicate understanding using a range of techniques. Teaching and learning is dynamic; alongside traditional methods, pupils will disassemble and analyse real products, model and evaluate their own ideas on paper, in 3 dimensions and by computer modeling and testing.

Design problems are solved through conducting projects that follow a structured design process. Research and investigation is used to develop design criteria on which design idea development and evaluation is based. Project outcomes can differ greatly, including the design of electronic products, furniture, graphic design, packaging, and interior and architectural models and simulations. Pupils will have the opportunity to try to solve problems for a range of project contexts and design disciplines throughout the GCSE course.

## Why Study Design & Technology?

Pupils with a real interest and commitment to learning more about products, architecture and systems of design would gain value from the course. D&T is of particular value to pupils wishing to continue with Design & Technology study to A Level, and those who have an interest in pursuing careers in engineering, architecture, industrial and product design, ergonomics and other design led disciplines.

### **Subject Content:**

#### **Design and Market Influences:**

- Evolution of product design;
- Design in practice;
- Product Development;
- Communication and representation of ideas;
- Design Methodology;
- Packaging;
- Product Marketing;
- Human factors.

#### **Materials and Components:**

- Classification and working properties of materials;
- Manipulating and combining materials;
- New and smart materials;
- Environmental and sustainable issues.

#### **Processes and Manufacture:**

- Product manufacture;
- Industrial and commercial practice;
- Methods of production;
- Manufacturing systems;
- Use of ICT in Product Design and Manufacture.
- Health and Safety;
- Quality control.

## **AQA Design & Technology: Product Design Assessment Components:**

### **Unit 1: Written Examination Paper**

40% of total marks (2 hours)

A pre-release theme / design context on which the examination is based is issued to students in March of the examination year.

### **Unit 2: Design and Making Practice**

60% of total marks (Approximately 45 hours)

Consists of a single design and make activity selected from a range of examination board set tasks. Pupils generate an e-portfolio and 3-D realisation of a design solution.

## **GEOGRAPHY**

We follow the International GCSE Geography course offered by Edexcel International. It is a course that will:

- Encourage critical and reflective thinkers with enquiring minds.
- Develop knowledge and understanding of geographical concepts and an appreciation of the relevance of these concepts to our changing world.
- Develop a framework of reference in which to appreciate the importance of the location of places and environments from local to global.
- Appreciate the differences and similarities between people's views of the world, its environments, societies and cultures.
- Understand the significance of values and attitudes to the development and resolution of issues.
- Help to develop global citizens who are prepared to contribute to a future that is sustainable and inclusive.
- Allow students to develop and apply learning to the real world through fieldwork.
- Use geographical skills, appropriate technologies, enquiry and analysis.

### **What are the key features and benefits of the course?**

- The international flavour adds an extra international dimension to the study of geography.
- It encourages out-of-classroom activities to underpin knowledge and understanding of geography.
- The assessment is through one external examination at the end of the two year course.
- It provides an excellent basis for progression to GCE AS and Advanced qualifications in geography.

This International GCSE qualification is assessed through **one** written examination paper. There is no coursework.

### **What is in the course?**

#### **Section A – The natural environment and people**

We complete two of the three topics:

- River environments
- Coastal environments
- Hazardous environments

#### **Section B – People and their environments**

We complete two of the three topics:

- Economic activity and energy
- Ecosystems and rural environments
- Urban environments

#### **Section C – Fieldwork**

Students answer 2 questions in the exam, one from fieldwork done in Section A and one on fieldwork done in Section B.

## **Section D – Global issues**

We complete one of the three topics:

- Fragile environments
- Globalisation and migration
- Development and human welfare

### **How is it assessed?**

The assessment of this qualification is through a 3 hour examination paper, set and marked by Edexcel. The single tier of entry will contain a variety of questions types, such as multiple-choice questions, short and extended answer questions, graphical and data questions and fieldwork questions.

### **Will it suit me?**

We feel that the new International GCSE syllabus is challenging, exciting, and yet is still true to the traditional geographical aims that we have adhered to in the Geography Faculty over the years. It is a course that bridges the gulf between the sciences and the arts, and aims to make learning enjoyable and relevant. It is a course that will suit all students here at Shrewsbury School.

## **GREEK**

This course is intended for those who opted for the language in the Third Form. The boys spend the first year of OCR GCSE completing the study of the language up to GCSE standard, reading Greek texts in prose and verse (such as Homer, Euripides, Xenophon, Herodotus and Plato) in the original language as well as acquiring the linguistic knowledge to translate any piece of Greek at sight. In the Fifth Form they will study set texts in both prose and verse: the prose will be taken from history or else from a lawcourt speech and the verse will be taken from Homer. They take four written papers in the final exams, and each of these papers is worth 25% of the total marks for the GCSE.

## **HISTORY**

In 1918 World War I ended and European and American leaders tried to put bring peace and stability to Europe. Yet just over twenty years later an even more destructive war broke out, one that was to lead to the end of the British Empire and the rise of two global superpowers: the USA and the USSR.

GCSE History students will be studying the first half of the twentieth century in detail. The first part of the course covers international relations in the interwar period. Topics covered include the Treaty of Versailles of 1919, the impact of the Wall Street Crash of 1929 and the collapse of the League of Nations. The second part of the course then focuses on Germany. Students will examine how defeat in WWI affected Germany, with particular reference to how Hitler was able to exploit the German public's unhappiness with the harsh terms of the Treaty of Versailles. The course also covers how WWI had a similarly catastrophic affect on Russia, though the results of military defeat here were very different. Students will learn about the rise of the Communist Bolshevik party and how Lenin, leader of the Bolsheviks, was able to ruthlessly enforce his rule. In the Fifth Form, students also look at Britain in the run up to WWI, with a focus specifically on how British society changed between 1890 and 1918.

We follow the OCR GCSE Modern World course. Students complete one piece of Controlled Assessment in the Lent Term of the Fifth Form, and take two written papers in the summer of the Fifth Form. The different units are set out as follows:

- Paper 1: International Relations 1919-1939 and German Depth Study, 1919-1945
- Paper 2: British Depth Study, 1890-1918
- Controlled Assessment: Russia, 1905-1941

The course allows students to develop a number of very useful academic skills, including how to structure essays, argue a point and examine primary and secondary sources. In addition, in enabling students to have a greater knowledge of the past, the course will improve their understanding of the events of the present day.

## LATIN

This course builds on the foundations laid in the Third Form and leads to OCR GCSE after two further years of study. The study of Latin at GCSE level will provide candidates with an opportunity to study the language and literature of ancient Rome as well as elements of the culture, language and social and political life of Roman civilisation. It is of use to other subjects as well as being fascinating in its own right.

Candidates must take four papers in all – two language papers and two literature. The literature papers require the close study of a passage of prose and also a substantial excerpt from Virgil's great epic poem *The Aeneid*. There is no coursework. Each of the four papers is worth 25% of the total marks for the GCSE.

## MUSIC

We offer the AQA GCSE music syllabus. It consists of four Units that are appealing and reflect developments in 21st century music whilst retaining essential subject content.

- Unit 1 is a one hour written Listening paper exam marked by AQA examiners. Students respond to questions based on short musical extracts drawing on music from a range of genres and styles. This unit is 20% of the total marks.
- Unit 2 is a Controlled Assessment of one composition where the students also appraise the process and outcome. This is externally assessed and worth 20% of the total marks.
- Unit 3 is Performing where the students offer one individual performance and one group performance. These performances are recorded and can be made at any time during the course. This unit is internally assessed and externally moderated and worth 40% of the total marks.
- Unit 4 is composing one piece of music in any style or genre of the student's choosing. It is internally assessed and externally moderated and worth 20% of the marks.

Any boy already learning a musical instrument with a keen interest in music-making will be able to derive much pleasure from studying the AQA GCSE course. The two-year course aims to stimulate and develop an appreciation and enjoyment of music through active involvement and the flexibility within the course should make it appealing to the talented and moderately talented musician alike.

## PHYSICAL EDUCATION

GCSE Physical Education is an exciting combination of the study of sport and physical activity in a practical and theoretical setting; on many occasions practice and theory are combined in some truly interactive and action-packed lessons!

The PE department will follow the Edexcel specification, and it can be summarised as follows:

### **Assessment**

#### **Unit 1 – The Theory of Physical Education**

- 40% of the total GCSE, examined by a written paper (90 minutes). The specification includes study of the cardiovascular, respiratory, muscular and skeletal systems, plus a detailed look into a physical and active lifestyle, what that means and how to plan for oneself and others.

#### **Unit 2 – Performance in Physical Education**

- 60% of the total GCSE, examined by continuous practical assessment plus external moderation at the end of year two. Students will take part in structured practical lessons each week in a variety of activities, enabling them to improve their practical ability to the set GCSE criteria. Candidates will also have the chance to experience officiating and leading, as well as analysing each other's performance.

#### **Unit 2 – Section 2.1**

- The student must select four sports or activities in which to be assessed from a minimum of two different activity areas. Assessment can be as a performer, official or leader, although at least two must be as a performer.
- There are **six** different activity areas such as “Outwitting Opponents”, e.g., cricket, association football, rugby union, etc, and “Performing at maximum levels in relation to speed, height, distance, strength or accuracy”, e.g., athletics, rowing, cross country.

#### **Unit 2 – Section 2.2**

- The student must undertake an analysis of performance, which is made up of five separate components. One of the components is a written Personal Exercise Programme, and the other four involve the student providing verbal evidence under internal and external moderation conditions.

GCSE Physical Education is an outstanding opportunity for pupils across the academic spectrum to learn about their own and each other's performance in a theoretical and practical setting.

## RELIGIOUS STUDIES

Why do bad things happen to good people?  
Are there good reasons for faith?  
Should people be helped to die?  
Are fertility techniques good?  
How do we justify going to war?  
How should criminals be treated?  
What makes a strong marriage?  
Can Science support faith?

These are just a selection of the 'Philosophy and Ethics' issues that we consider in the OCR GCSE course.

More specifically, the Philosophy paper deals with areas (in a broad christian context) such as why people believe in God, what sort of a god they believe in, how such a being communicates with mankind, and how and why people worship. We also look at the nature of the relationship between Religion and Science, and discuss issues about Death and ideas of the Afterlife. Finally, students look closely at the issue of Good and Evil, including the nature of suffering and responses to it.

The Ethics paper focuses on important current moral issues. Specifically, these are Human Relationships (marriage and divorce etc.), Medical Ethics (especially abortion and euthanasia), Equality and Discrimination, Poverty and Wealth, War and Peace, and the Role of the Media. Again, the variety of christian responses and perspectives provide a main framework for the course.

Assessment is by means of two two-hour examination sessions at the end of the Fifth Form, with students choosing four from six structured questions to answer on each area. There is no coursework.

As RS teachers, we are not trying to persuade students about particular answers but encouraging them to think for themselves – a vital part of not only the assessment but also for dealing with life! As such, students of any faith (or none) choose Religious Studies for GCSE, and the best ones have an inquiring mind, a readiness to think carefully, and an ability to listen to the views and ideas of others. One would also expect candidates to gradually strengthen their ability to assess evidence and formulate a convincing argument both orally and on paper – skills that are highly valuable in many contexts.



## INFORMATION ON ENGLISH, MATHEMATICS, AND SCIENCE

### ENGLISH

Immediately the Fourth Form commences, boys will embark upon their IGCSE courses.

The separate qualifications of CIE IGCSE English and English Literature are taught together, then examined separately at the end of the Fifth Form. The combination of these courses offers the chance to study a wide-ranging and challenging variety of literature, including at least one Shakespeare play, which is delivered either for examination or through the completion of several coursework tasks.

There are two modules for **IGCSE English**:

Paper 2: Reading Passages – Extended. (Examination – analysis and summary of non-fiction, media and information texts – 50% of total marks.)

Paper 4: Coursework folder. (Three assignments, each 500 to 800 words – writing to analyse, creative writing, writing to inform – 50% of total marks.)

There are two modules for **IGCSE English Literature**:

Paper 1: Set Texts (Open Book). (Examination – three texts: drama, poetry and prose – 75% of total marks.)

Paper 2: Coursework folder. (Two assignments, each 800 to 1200 words – critical or empathetic responses to two texts – 25% of total marks.)

All coursework for both English and English Literature will be completed by the end of the Michaelmas Term in the Fifth Form.

Boys should enjoy the courses and find the work stimulating and thoughtful, as well as sound preparation for both A Level English Literature and A Level Theatre Studies in the Sixth Form.

## MATHEMATICS

All boys continue with Mathematics through to the Fifth Form, following the Edexcel IGCSE course. They will be prepared for the higher of two tiers, which allows grades of A\* to E. The vast majority of boys will ultimately be entered for this higher tier, although a small number may be prepared and entered for the foundation tier at the end of the Fifth Form if they are finding the material exceptionally difficult. The highest grade possible in the foundation tier is a C.

There is no coursework, and grades will be awarded solely on candidates' performance in two papers taken in June of the Fifth Form. Both papers are two hours long and allow the use of a calculator.

The course is broadly broken down into numerical work, algebra, shape and space, geometry and probability. The A\* material is predominantly concerned with algebra, containing an introduction to topics such as functions and calculus in order to ease the transition to A Level.

The most able and most enthusiastic boys in each year-group will be able to take part in the Intermediate Mathematics Challenge, a national competition which takes place annually in February. There are also mathematical competitions within the school, and boys are encouraged to participate in these.

## **AN OVERVIEW OF THE SCIENCE GCSEs**

The Edexcel IGCSE science courses are linear – all examinations are taken at the end of the Fifth Form and there is no separate coursework component. Practical skills are assessed within the theory papers. It is anticipated that boys in the top five sets will be prepared for examinations in the three separate sciences, resulting in three separate grades, e.g. A\* for Biology, A for Chemistry and B for Physics. Those boys in the lower two sets will prepare for the Double Award Science qualification, resulting in two grades, e.g. AB or BB. The Double Award course covers approximately two thirds of the content of the three separate science courses (see summaries that follow) and each science within the Double Award is taught by a subject specialist. A boy following the Double Award course will still attend separate classes in Biology, Physics and Chemistry, and will receive the same total contact time as a boy studying for separate sciences, thus allowing time for review and consolidation of the material.

### **BIOLOGY**

The Biology IGCSE course has five sections:

- The nature and variety of living organisms – a survey of biodiversity
- Structures and functions in living organisms – physiology of animals and plants
- Reproduction and inheritance – reproduction in plants and humans, and genetics
- Ecology and the environment – ecological principles and human influences
- Use of biological resources – crops, fermenters, genetic modification and cloning

The Double Science IGCSE course also includes these five sections but they are studied in slightly less detail. For example, the effects of both temperature and pH on enzymes are studied for Biology, but only the effect of temperature for Double Award.

All boys will take Biology Paper 1 in the summer term of the Fifth Form. This is a two hour written examination that covers parts of the syllabus that are common to Biology and Double Award. It constitutes 66% of the total marks for IGCSE Biology. It constitutes 33% of the total marks for IGCSE Double Award Science.

Boys taking IGCSE Biology will also take Biology Paper 2 in the summer term of the Fifth Form. This is a one hour written examination, that covers the entire syllabus, including the parts that are not studied for Double Award. It constitutes 33% of the total IGCSE marks for Biology.

## CHEMISTRY

The Chemistry IGCSE qualification is a linear course comprised of two papers taken at the end of the Fifth Form.

- Paper 1 is assessed through a two hour externally assessed examination and the total number of marks available is 120 (two-thirds of the total IGCSE marks).
- Paper 2 is assessed through a one hour externally assessed examination and the total number of marks available is 60 (one-third of the total IGCSE marks).

Paper 1 will only assess the core material of the syllabus, whereas Paper 2 will assess all the syllabus content including the supplementary material. There is no separate coursework component because practical skills are assessed within the theory papers. The syllabus content is split into five sections:

- Section 1: Principles of chemistry
  - States of matter
  - Atoms and atomic structure
  - Relative molecular and formula masses
  - Chemical formulae and chemical equations
  - Ionic compounds and covalent substances
  - Metallic crystals
  - Electrolysis
- Section 2: Chemistry of the elements
  - The Periodic Table
  - The Group 1 elements – lithium, sodium and potassium
  - The Group 7 elements – chlorine, bromine and iodine
  - Oxygen and oxides
  - Hydrogen and water
  - Reactivity series
  - Tests for ions and gases
- Section 3: Organic chemistry
  - Introduction
  - Alkanes and Alkenes
  - Ethanol
- Section 4: Physical chemistry
  - Acids, alkalis and salts
  - Energetics
  - Rates of reaction
  - Equilibria
- Section 5: Chemistry in society
  - Extraction and uses of metals
  - Crude oil
  - Synthetic polymers
  - The manufacture of some important chemicals

## PHYSICS

The Physics IGCSE qualification is a linear course comprised of two papers taken at the end of the Fifth Form.

- Paper 1 is assessed through a two hour externally assessed examination and the total number of marks available is 120 (two-thirds of the total IGCSE marks).
- Paper 2 is assessed through a one hour externally assessed examination and the total number of marks available is 60 (one-third of the total IGCSE marks).

Paper 1 will only assess the core material of the syllabus, whereas Paper 2 will assess all the syllabus content including the supplementary material. There is no separate coursework component because practical skills are assessed within the theory papers. The syllabus content is split into seven sections:

- Section 1: Forces and motion
  - Movement and position
  - Forces, movement and shape
  - Astronomy
- Section 2: Electricity
  - Mains electricity
  - Energy in circuits
  - Electric charge
- Section 3: Waves
  - Properties of waves
  - The electromagnetic spectrum
  - Light and sound
- Section 4: Energy resources and transfers
  - Energy transfer
  - Work and power
  - Energy resources and electricity generation
- Section 5: Solids, liquids and gases
  - Density and pressure
  - Change of state
  - Ideal gas molecules
- Section 6: Magnetism and electromagnetism
  - Magnetism
  - Electromagnetism
  - Electromagnetic induction
- Section 7: Radioactivity and particles
  - Radioactivity
  - Particles