



**TIANJIN YINGHUA CAMBRIDGE
INTERNATIONAL SCHOOL**

YEAR 10 AND YEAR 11 IGCSE CURRICULUM BOOKLET



**Cambridge Assessment
International Education**

PRINCIPAL'S MESSAGE



We are proud to present the subject choice booklet for Year 10. This booklet contains a full description of the courses available and the subject choice list. This course is the initial course with us at TYCIS. TYCIS offers a British Styled Curriculum of IGCSE and A Level courses. These course are rigorous and highly regarded around the world as a result we select our students very carefully. Our graduates have secured university places at some of the most eminent universities in the UK, USA, Canada and Hong Kong.

To give you the opportunity to fully understand the structure of IGCSE's and the individual courses being offered you will be given a presentation during your first few days. This presentation will provide you with information to allow you choose your subjects well. Please remember that the courses usually run for 2 years and once you begin the course you will not be able to change.

During this presentation the individual subject outlines will be fully explained as well as the compulsory 'Core' elements of the curriculum for Year 10 and 11 enabling you to make an informed choice of the courses to study for the next two years.

We will do our best to accommodate each student's subject choice however this is not always possible. Classes will have a minimum and a maximum number students to be able to operate and students are guided to ensure they choose subjects appropriate to their academic aspirations.

Year 10 is a very important year in TYCIS. This booklet will help you decide which subjects to choose. The subjects that you choose will be dependent on many factors such as:

- Where do you want to go to university?
- What subject would you like to study at university?
- What career are you thinking of? What subjects would be useful to you in your chosen career?
- What subjects are you good at?
- What subjects do you enjoy?

Do not choose a subject because you like the teacher or because your friends have chosen it. Above all, talk with the subject teachers, your tutor, or the university guidance counsellor.

Remember that ALL STUDENTS must study the following subjects:-

English, Mathematics, at least 2 Science subjects. In addition you will have Chinese Language and Culture class and PE (which is not examined).

John P Evans
Principal

IGCSE INFORMATION

will normally take 9 subjects which are examined, plus three non examined core subjects namely PE, Chinese Culture and Tutorial. Some of the IGCSE subjects form part of the Core Compulsory Curriculum and others are available for students to choose, (electives / options) that complete the students overall study programme. Students receive the following core compulsory subject lessons:

English, Mathematics, 2 Science subjects, (PE, Chinese Culture and Tutorial)

In addition to the mandatory core subjects, students choose other subjects from the list of optional subjects from a subject choice selection sheet (an example of this is shown on page 5). Each student is expected to tick one subject in each "Subject Block" and cannot tick the same subject twice. Careful attention must be given to any restrictions which are designed to allow students to pursue a broad and balanced curriculum. The students will be provided with a subject choice selection form upon enrolment.

HOMework

Homework is seen as an important aspect of the curriculum and students are expected to complete their tasks by the specified date and to the best of their ability. The time frame for homework given here is only a guide. Many assignments given at IGCSE (especially coursework which contributes to final exam marks) are long term and require students to develop good time-management skills.

Students studying IGCSE should expect to spend 2 – 2.5 hours each night on homework and study consolidation. Experience has shown that students respond well to parental interest in their work and we encourage parents to monitor their child's homework habits and take an interest in what is being studied at school.

SUBJECT CHOICE PROCESS

Once a student has been accepted into our programme they complete a subject choice form. This form should be submitted to the school as soon as possible. This form indicates the subjects that they are likely to want to take for IGCSE.

From this information the Year 10 curriculum timetable is created to achieve the highest possible subject choice satisfaction rate for the students. It is not always possible to satisfy every student's individual choices. Those students who are not able to get all of their subject choices are counselled onto alternative suitable IGCSE subjects.

ASSESSMENT AND REPORTING

Students are assessed regularly in a variety of different ways, depending on what is appropriate to the subject and the type of work being undertaken. For example, they will regularly sit end-of-topic tests, complete extended written assignments or be observed preparing creative work. The way in which students' work is marked varies from subject to subject. This means that we are continually assessing the students in our classes and using the results of those assessments to identify routes for the individual student to improve.

At the end of Year 10, all students sit exams in the subjects that they have been studying. The exams assess what they have learnt throughout the year, so it is important that students revise all the work they have covered. During January/February in Year 11 all students will sit "mock" IGCSE exams. Some subjects require students to prepare a portfolio or coursework over the duration of the course that is assessed and forms part of the final IGCSE grade. Details of the IGCSE assessment structure for the individual subjects are provided in this booklet. Students are also informed at the beginning of every year so that they understand the various procedures that apply.

A report is produced at least twice a year which contains an attainment grade and an effort/engagement grade for every subject studied. The grades are an aggregate of the students' performance over the year to that date and are calculated using the marks or grades gained throughout the preceding months from their tests, homework and other assessments.

Students will be graded from A-U for attainment and "Colour Coded" for effort/engagement. The attainment grades are based on assessment criteria produced by the external examination boards and the criteria printed on the reports.

TEXT BOOKS

Text books are available for most courses and offer a useful aid to learning. The text books generally cover the complete IGCSE course and therefore, in most cases, one text book will cover Year 10 and Year 11 work. Each year the teachers inspect the available text books and adopt a text book for their course. The school will order a text book for each student and for course they choose to take.

TUTORS

Students are placed in a group which is overseen by a tutor. Students meet their tutors every day at morning registration. Tutors are the first point of contact for students experiencing difficulties. They also monitor use of the Student Planner which is used for recording homework and provides a means for staff and parents to communicate with one another.

Students will also have a Chinese speaking tutor or Housemaster to help with communication with parents

CHOOSE

All students will take English, Mathematics and IGCSE Chinese in addition to their chosen subjects.

You then can choose one subject from each colour option block.

So that means you pick one subject from red block, one from green, one from orange, one from blue and one from pink.

You can pick all 3 Sciences (Biology, Chemistry and Physics) but you must pick a minimum of two of the three sciences.

You cannot pick the same subject twice. So even if your subject is in many blocks, you can only pick it once

You will have 9 subjects in total

Below is a sample of subject choice option blocks

ENGLISH

MATHS

PHYSICAL EDUCATION

RED BLOCK	GREEN BLOCK	ORANGE BLOCK	BLUE BLOCK	PINK BLOCK
Biology	Business Studies	Chemistry	Biology	Biology
Business Studies	Chemistry	Computer Science	Chemistry	Chemistry
Computer Science	Economics	Geography	Environmental Management	Economics
Economics	Environmental Management	Global Perspectives	Global Perspectives	English Literature
Physics	Physics	History	History	History
		Physics		Physics

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UNIVERSITY AND CAREER

The aim of the University and Careers Department is to prepare TYCIS students from Year 10 through to Year 13 to identify their opportunities and responsibilities, through the development of career management skills with a clear focus on the best fit between subject choices at school, interests, strengths culminating in each student's individual personal university choices towards their chosen career.

- The university guidance counsellor is available for appointments throughout the school day for one-on-one appointments to discuss future educational career options.
- Parents are welcome to have appointments with the university guidance counsellor.
- During each year there will be one-on-one interviews organised with the university guidance counsellor.
- Throughout each year students will be encouraged to attend the university information sessions within the school from United Kingdom, United State of America and Canada.
- Students will be encouraged to foster their interests in their university/degree choices via their chosen activities.
- Student sessions will work towards identifying what they want to study to ascertain what subjects/skills are required to study his/her chosen course.
- Students will have sessions to identify their passions, interests, subject likes and dislikes and skills, working towards identifying what they may wish to study and career choices.

BIOLOGY

0610

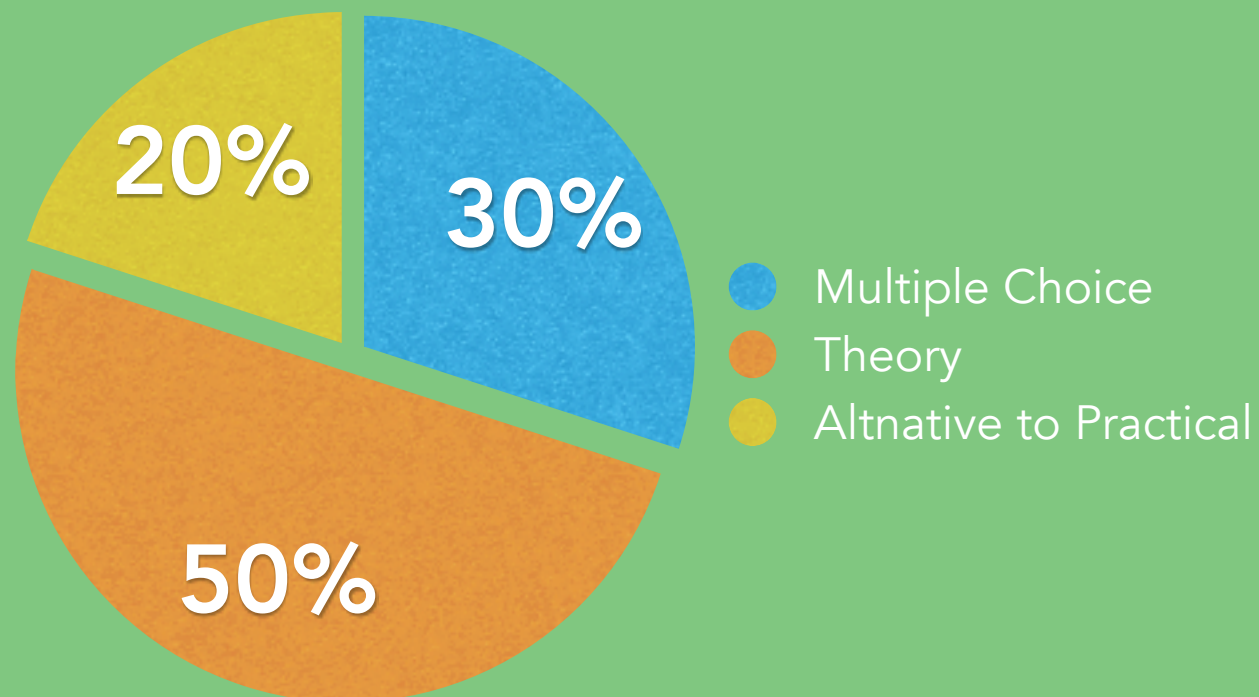


ABOUT

The Cambridge IGCSE Biology course provides an enjoyable and worthwhile educational experience for all learners, whether or not they go on to study science beyond this level. Learners will acquire a good understanding of how organisms are built up from cells, how the human body functions, and develop relevant scientific skills.

What will you do? During the course, we encourage class discussions, enquiry is always welcome. You will perform research and deliver presentations to others on various topics, make posters, visit the school kitchen to see how they apply food hygiene methods, make investigation plans, do experiments to better understand the principles behind life processes, and so on. You need to engage yourself, think independently, and of course cooperation is very important to fulfill group tasks.

ASSESSMENT



TOPICS

1. Classification of organisms
2. Cell structures
3. Human organ systems, circulatory system, reproductive system
4. Plant nutrition and structure
5. Pathogen & Immunity
6. Reproduction in plants & humans
7. Inheritance and variation
8. Ecology
9. Biotechnology

SKILLS AND AIMS

Learners will:

Develop critical thinking skills, analytical skills, problem solving skills and experimental skills.

For instance, how to safely use techniques, apparatus and materials, plan experiments and investigations, record observations and measurements, interpret data, evaluate experimental methods and suggest possible improvements.

- Develop lifelong scientific attitudes such as concern for accuracy and precision, objectivity, integrity, enquiry, initiative, inventiveness.
- Develop a systematic approach to problem solving
- Grow an interest in, and care for, the environment
- Communicate effectively through the language of science, by applying appropriate terminology
- Appreciate that science is subject to social, economic, technological, ethical and cultural influences and limitations
- Acquire sufficient knowledge and understanding on basic life science and biotechnology that is changing people's life



WHY

Biology is amazing; you will learn more about how your body parts work together to enable you to move, think, and pass on your genes to your children. Besides the human body, you will also learn about plants, ecology, biotechnology, among others.

Overall, you will understand the intriguing science behind life, and develop scientific attitude and skills essential for both further study and everyday life.

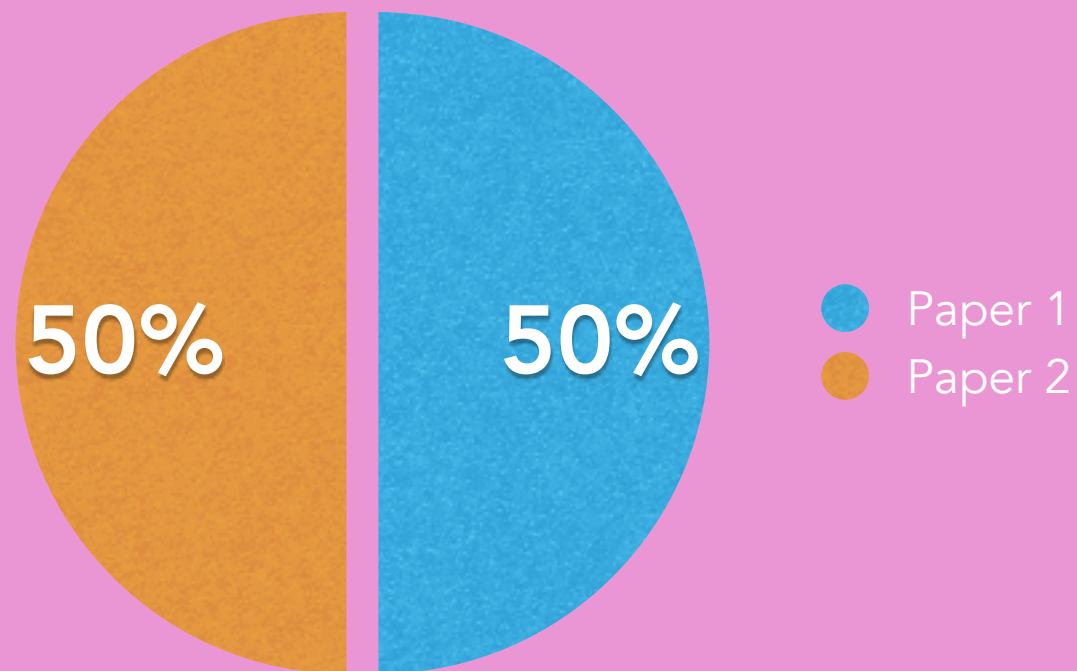
BUSINESS STUDIES 0450



ABOUT

The course considers the types of business organisation present in the global community and how these organisations meet their objectives through internal development and processes. External influences on businesses are analysed and students consider real world case-studies to apply theory.

ASSESSMENT



TOPICS

The course is split over 6 main areas that are studied for several weeks at a time:

1. Business aims and types of organisations,
2. Human resources,
3. Marketing
4. Finance
5. Operations management
6. External influences on businesses.

SKILLS AND AIMS

Students will have an understanding of how commercial entities operate internally and the purpose and activities of different functions across business organisations. They will develop business English where they are able to use the right grammar and vocabulary to explain and analyse business operations. Students will be able to develop skills in numeracy, literacy, develop approaches to finding sources of information and present data effectively.

WHY

The course will provide students with a good foundation in understanding business theory and processes in a workplace. Students can build on this knowledge for success with future studies at A Level and degree level. Students also learn transferrable academic skills such as researching and organising data, critical thinking and summarising information.

CHEMISTRY

0620

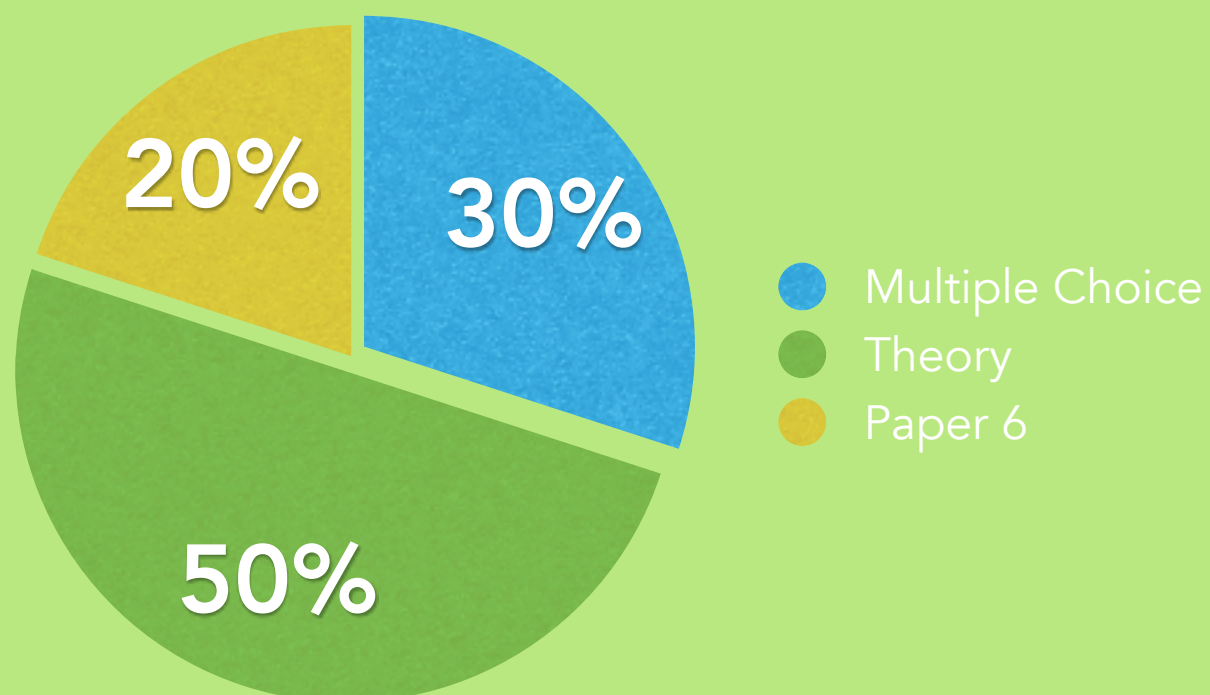


ABOUT

Cambridge IGCSE Chemistry is accepted by universities and employers as proof of essential knowledge and ability. As well as a subject focus, the chemistry syllabus enables learners to:

- Better understand the technological world, with an informed interest in scientific matters
- Recognise the usefulness (and limitations) of scientific method, and how to apply this to other disciplines and in everyday life
- Develop relevant attitudes, such as a concern for accuracy and precision, objectivity, integrity, enquiry, initiative and inventiveness
- Develop an interest in, and care for, the environment
- Better understand the influence and limitations placed on scientific study by society, economy, technology, ethics, the community and the environment
- Develop an understanding of the scientific skills essential for both further study and everyday life.

ASSESSMENT



TOPICS

1. The particulate nature of matter
2. Experimental techniques
3. Atoms, elements and compounds
4. Stoichiometry
5. Electricity and chemistry
6. Chemical energetics
7. Chemical reactions
8. Acids, bases and salts
9. The Periodic Table
10. Metals
11. Air and water
12. Sulphur
13. Carbonates

SKILLS AND AIMS

Cambridge programmes and qualifications are designed to support learners in becoming:

- confident in working with information and ideas – their own and those of others
- responsible for themselves, responsive to and respectful of others
- reflective as learners, developing their ability to learn
- innovative and equipped for new and future challenges
- engaged intellectually and socially, ready to make a difference.

WHY

Scientific subjects are, by their nature, experimental. Learners should pursue a fully integrated course which allows them to develop their practical skills by carrying out practical work and investigations. CIE aim is to balance knowledge, understanding and skills in the programme and qualifications to enable candidates to become effective learners and to provide a solid foundation for their continuing education



WINTER PERFORMANCE



14

COMPUTER SCIENCE 0478

15

ABOUT

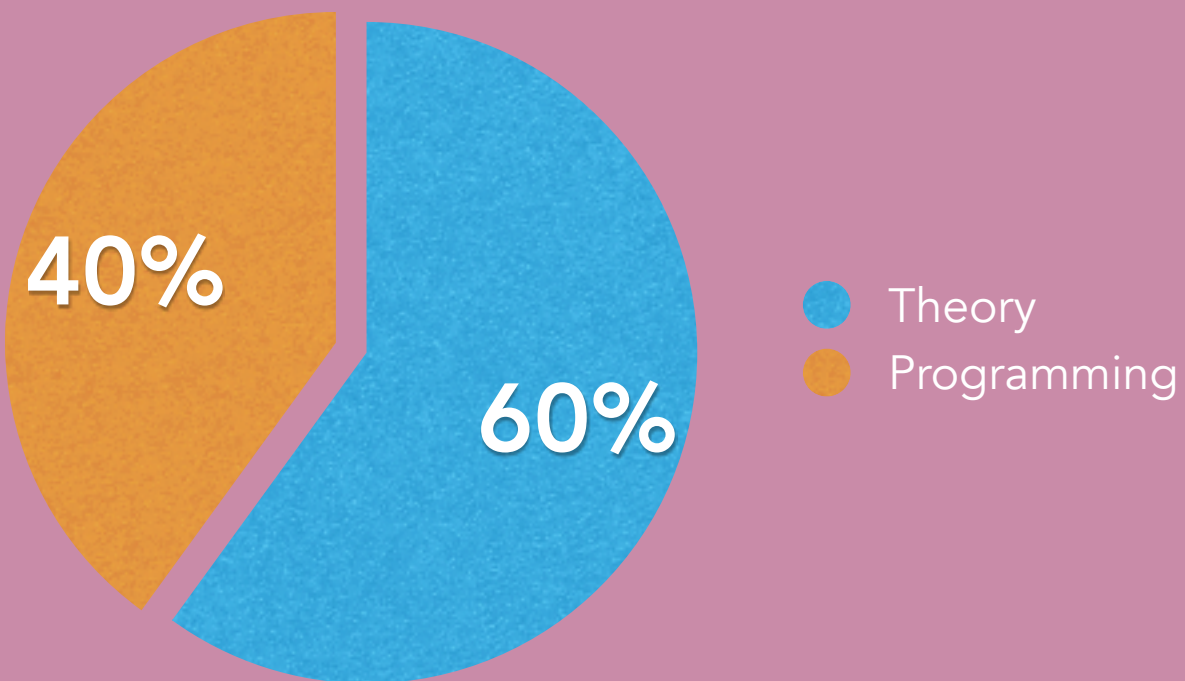
This course will give you an understanding of how computers do what they do. You probably know how to use a computer and in this course you will learn how a computer operates, what makes it function and you will write your own computer program also

TOPICS

You will learn:

Binary, hexadecimal, how data is transmitted, logic gates, memory, storage devices, how languages are translated, programming languages, HTML, CSS, PHP, SQL and Visual Basic

ASSESSMENT



SKILLS AND AIMS

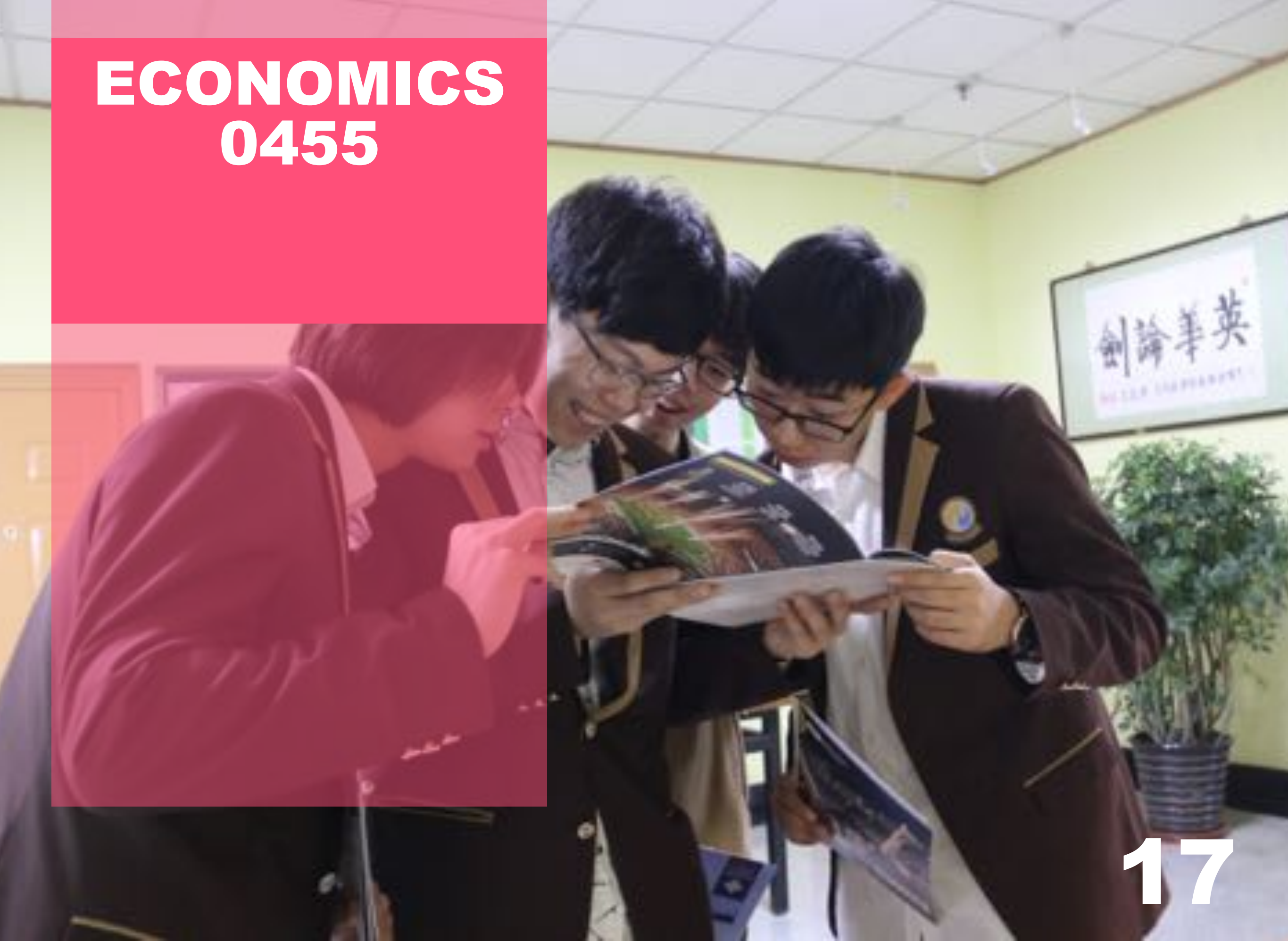
Cambridge IGCSE Computer Science syllabus aims are to develop:

- Computational thinking that is thinking about what can be computed and how, and includes consideration of the data required
- Understanding of the main principles of solving problems by using computers
- Understanding that every computer system is made up of sub-systems, which in turn consist of further sub-systems
- Understanding of the component parts of computer systems and how they interrelate, including software, data, hardware, communications and people
- Skills necessary to apply understanding to solve computer-based problems using a high-level programming language.

WHY

Computer Science will give a huge advantage if you want your future to involve technology in some way. From web development, database modelling to design and game development. The topics covered may be the first time you ever encountered the topic, this means the amount of new and interesting knowledge is a lot as is the challenge of studying Computer Science.

ECONOMICS 0455



ABOUT

Cambridge International IGCSE Economics programme and qualifications develop not only subject knowledge but also skills. We encourage

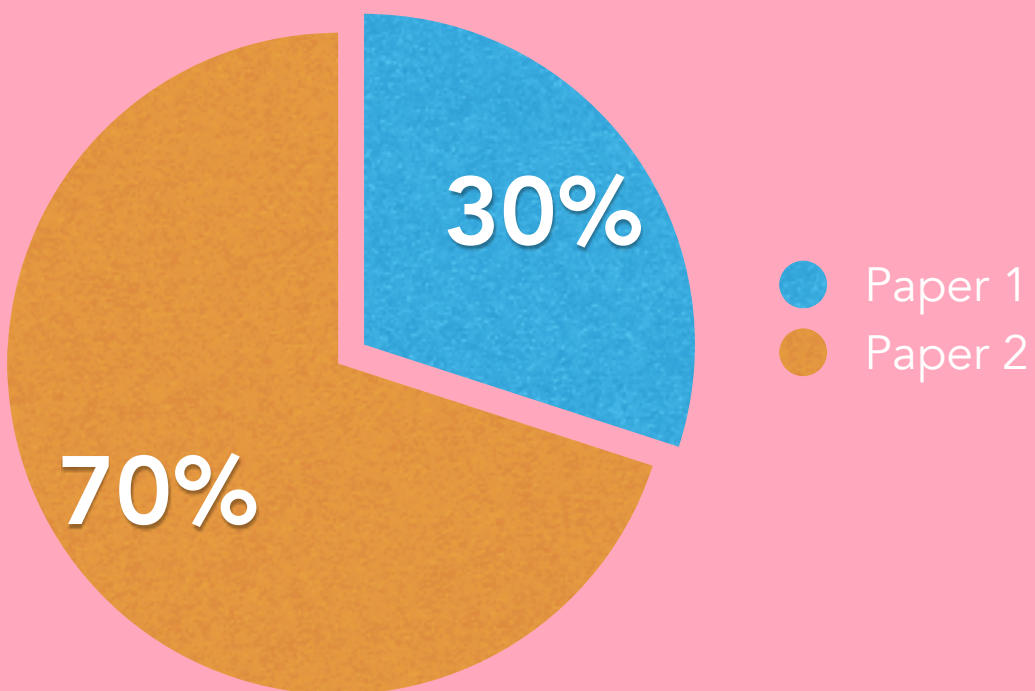
Cambridge learners to be:

- Confident in working with information and ideas – their own and those of others
- Responsible for themselves, responsive to others
- Reflective as learners, developing their ability to learn
- Innovative and equipped for new and future challenges
- Engaged intellectually and socially, ready to make a difference.

In addition, during their learning, students will develop the ability to apply the tools of economic analysis

- The ability to distinguish between facts and value judgments in economic issues
- An understanding of, and an ability to use, basic economic numeracy and literacy
- The ability to take a greater part in decision-making processes in everyday life
- An understanding of the economies of developed and developing nations
- An excellent foundation for advanced study in economics.

ASSESSMENT



TOPICS

IGCSE Economics curriculum covers:

1. Basic economic problem: choice and the allocation of resources
2. The allocation of resources: how the market works; market failure
3. The individual as producer, consumer and borrower
4. The private firm as producer and employer
5. Role of government in an economy
6. Economic indicators
7. Developed and developing economies: trends in production, population and living standards
8. International aspects

SKILLS AND AIMS

The aims of learning IGCSE Economics are to: develop candidates' knowledge and understanding of economic terminology, principles and theories; develop candidates' basic economic numeracy and literacy and their ability to handle simple data including graphs and diagrams; develop candidates' ability to use the tools of economic analysis in a particular situation; show candidates how to identify and discriminate between differing sources of information and how to distinguish between facts and value judgments in economic issues; develop candidates' ability to use economic skills (with reference to individuals, groups and organisations) to understand better the world in which they live; develop candidates' understanding of the economies of developed and developing nations and of the relationships between them; and to develop their appreciation of these relationships from the perspective of both developed and developing nations.



WHY

This course will help learners develop an informed curiosity and a lasting passion for learning. As an international Qualification, it is recognised by the world's best universities and employers, giving students a wide range of options in their education and career. In addition, IGCSE Economics is a high-quality educational programme that can unlock learners' potential.

ENGLISH AS A SECOND LANGUAGE 0511



ABOUT

English as a Second Language offers learners the opportunity to gain lifelong skills and knowledge including:

- Better communicative ability in English
- Improved ability to understand English in a range of everyday situations and in a variety of social registers and styles
- Greater awareness of the nature of language and language-learning skills
- Wider international perspective.
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This course is compulsory for IGCSE students as it satisfies the English requirement for a significant number of universities worldwide.

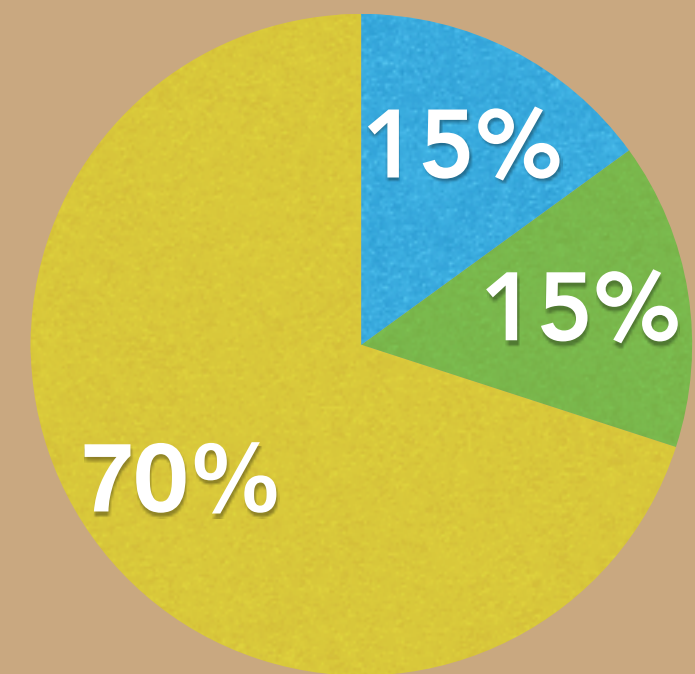
ASSESSMENT

TOPICS

Students will improve their skills in Reading, Listening, Speaking and Writing by studying the following set texts with guided questions in the style of exam questions. Each component is designed to run for approximately six to eight weeks.

1. Novella – Of Mice and Men – John Steinbeck
2. Play – The History Boys – Alan Bennet
3. Poetry – Selected poems from Touched with Fire – Jack Hyde
4. Exam Practice – Exam techniques and Past Papers

- Speaking
- Listening
- Reading and Writing



SKILLS AND AIMS

The aims of English as a Second Language are to:

- Develop ability to use English effectively for the purpose of practical communication
- Form a solid foundation for the skills required for further study or employment using English as the medium
- Develop awareness of the nature of language and language-learning skills
- Promote personal development.

WHY

This course offers an excellent foundation to academic English. It helps prepare students for studying and living in English-speaking schools and countries, as well as providing a solid base for advanced English courses. Taking the course will also help students to demonstrate their English ability or to build the skills for other examinations which will satisfy university language requirements.



ENVIRONMENTAL MANAGEMENT 0680

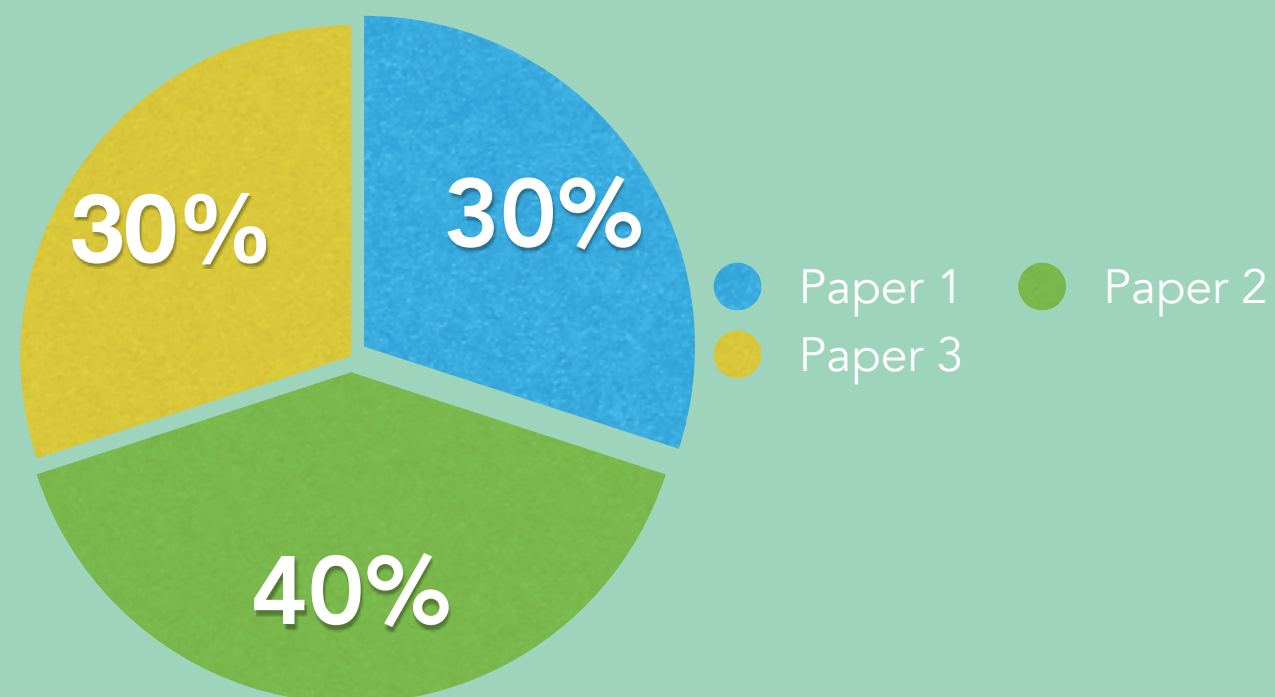
ABOUT

Cambridge IGCSE Environmental Management is accepted by universities and employers as proof of knowledge and understanding of issues concerning sustainable development and how the Earth's resources are used.

Students studying this syllabus:

- Draw upon disciplines such as biology, Earth science, geography, economics and anthropology
- Consider the interdependence of the Earth's natural systems and how people use natural resources
- Examine the impact of development on the environment considering issues such as environmental pollution and resource depletion
- Explore ways in which we may change the nature of future development to make it more sustainable.

ASSESSMENT TOPICS



The content is divided into four broad areas:

1. Lithosphere – rocks, minerals, soils, plate tectonics.
2. Hydrosphere – water cycle, oceans.
3. Atmosphere – air, climate, weather.
4. Biosphere – biomes, ecosystems, populations.

In each case, these are explored through an analytic process of consideration of:

- Resources – How does the natural system work?
- Development – How do people use natural resources?
- Impact – How does development change the environment?
- Management – How can the environment be developed sustainably?

The content is structured as a series of learning outcomes that lay out what candidates should know, understand and be able to analyse and discuss.

SKILLS AND AIMS

1. Knowledge of the functioning of the natural system which makes life possible on Earth
2. An understanding that humankind is part of this system and depends on it
3. An appreciation of the diverse influences of human activity on the natural system
4. An awareness of the need for management and human responsibility to keep the system in a healthy condition if life as we know it is to continue
5. An understanding of sustainable development and management to meet the needs of the present, without compromising the ability of future generations to meet their own needs
6. An understanding of how local environments contribute to the global environment
7. A sensitivity to, and a sense of responsibility and concern for, the welfare of the environment and all other life forms which share this planet
8. An awareness of their own values concerning environmental issues
9. An awareness of the values of others
10. A willingness to review their own attitudes in the light of new knowledge and experiences
11. A sound basis for further study, personal development and participation in local and global environmental concerns.

WHY

This course provides students with a wider understanding of literature in different cultures, allowing students to broaden their horizons and enrich their knowledge of the literary cannon. Students also learn to analyse, interpret and evaluate a variety of themes pertaining to humanity and the contemporary world. Candidates who are awarded grades A* to C in this programme are well prepared to follow courses leading to Cambridge International AS and A Level in English and/or other literatures, or the equivalent.



FIRST LANGUAGE ENGLISH 0500



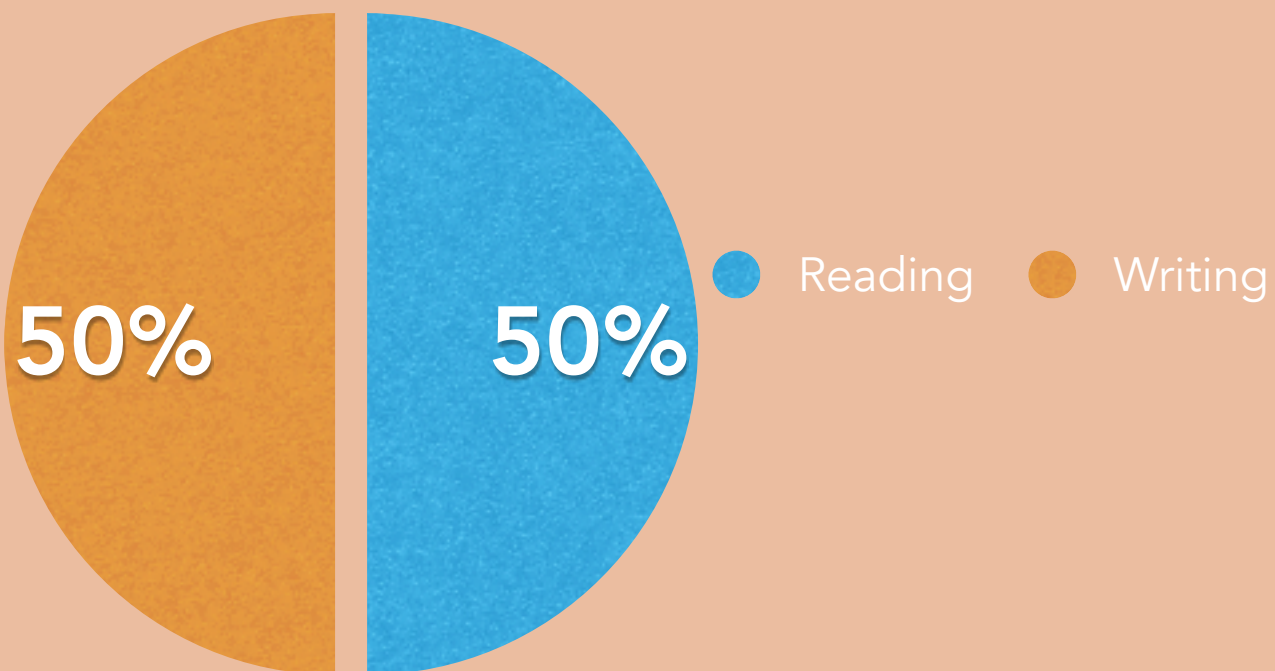
ABOUT

Cambridge IGCSE First Language English offers candidates the opportunity to respond knowledgeably to a rich array of reading passages. Candidates will use these passages to inform and inspire their own writing, and write in a range of text types for different audiences. Candidates also have the opportunity to develop both their speaking and listening skills, presenting to others and responding to feedback and questions.

Candidates are able to develop a range of skills in organising content and adapting their written and spoken language to meet the needs of the purpose and audience. Candidates are encouraged to become appreciative and critical readers, writers, speakers and listeners.

This programme will start in Year 11 and will be completed in one year.

ASSESSMENT



TOPICS

- Unit 1 Developing Reading Skills
- Unit 2 Developing Writing Skills
- Unit 3 Writing Summaries
- Unit 4 Commenting on Language Techniques
- Unit 5 Directed Writing
- Unit 6 Speaking and Listening
- Unit 7 Composition Writing

SKILLS AND AIMS

The aims are to enable learners to

- Understand and respond to what they hear, read and experience
- Communicate accurately, appropriately, confidently and effectively
- Enjoy and appreciate a variety of language
- Complement their ability to work with information and ideas in other areas of study, for example, by developing skills of analysis, synthesis and the drawing of inferences
- Promote personal development and an understanding of themselves and others



WHY

The aims are to enable learners to

- Understand and respond to what they hear, read and experience
- Communicate accurately, appropriately, confidently and effectively
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- Promote personal development and an understanding of themselves and others

DEBATE COMPETITION



GEOGRAPHY

0460



30

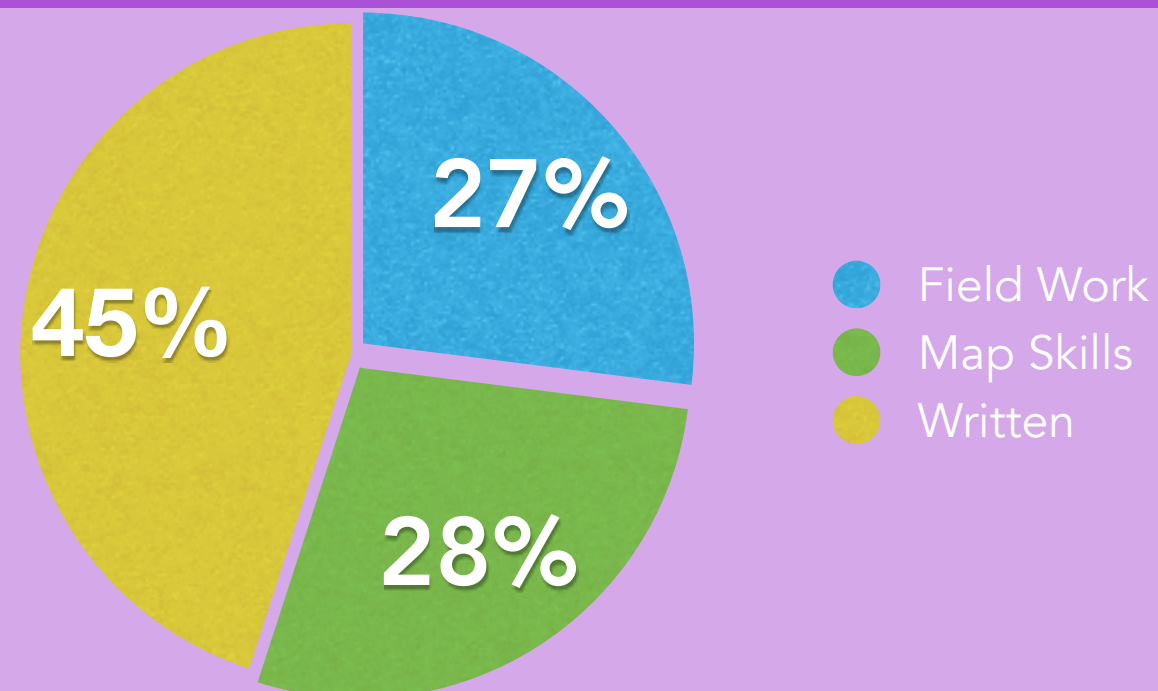
ABOUT

The combination of knowledge and skills in Cambridge IGCSE Geography gives learners a solid foundation for further study. Candidates can develop an understanding of location on a local, regional and global scale; an awareness of the characteristics, distribution and processes affecting contrasting physical and human environments; an understanding of the ways in which people interact with each other and with their environment; an awareness of the contrasting opportunities and constraints presented by different environments; an appreciation of and concern for the environment and an appreciation of the earth including its people, places, landscapes, natural processes and phenomena.

WHY

Cambridge Global Geography is an all encompassing course that seeks an understanding of the Earth and its human and natural complexities-not merely where objects are, but how they have changed and come to be. It's an ideal course that bridges the arts and social and natural sciences, proving a broad education and addressing pressing issues including environmental change, regional and global inequalities and transformation of global economy and culture. Students obtain a coherent view of the rapidly changing world and the ways in which society influences and is influenced by it.

ASSESSMENT



SKILLS AND AIMS

Cambridge IGCSE Geography encourages learners to develop lifelong skills. These include:

- An understanding of the processes which affect physical and human environments
- An understanding of location on a local, regional and global scale
- The ability to use and understand geographical data and information
- An understanding of how communities around the world are affected and constrained by different environments.

TOPICS

The syllabus is divided into three themes which have been designed to develop an understanding of both the natural and the human environment:

1. Population and settlement
2. The natural environment
3. Economic development.



GLOBAL PERSPECTIVES 0457



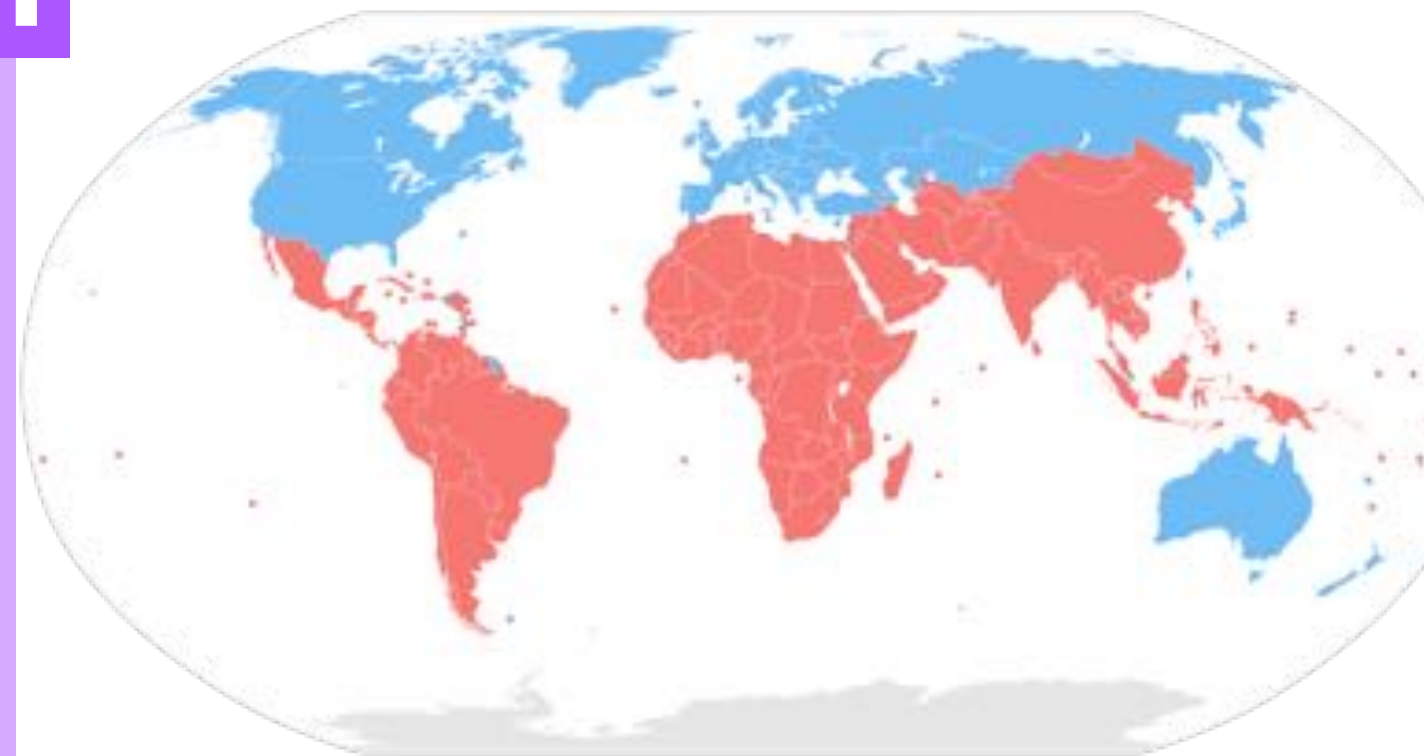
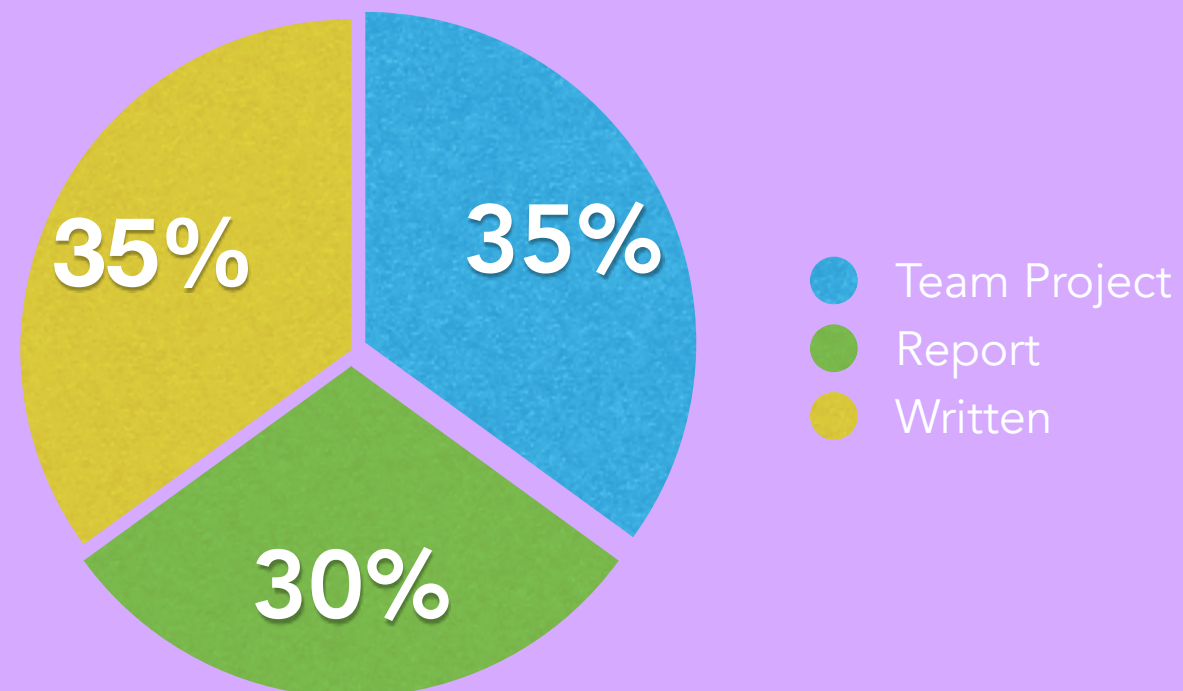
ABOUT

Cambridge IGCSE Global Perspectives provides opportunities for enquiry into, and reflection on, key global issues from different perspectives: personal, local/national and global.

Cambridge IGCSE Global Perspectives encourages awareness of global problems and offers a range of opportunities to explore solutions through cooperation and collaboration.

The course is not about getting everybody to think identically; rather it is a matter of opening minds to the complexity of the world and of human thought, and encouraging empathy for the diversity of human experience and feeling.

ASSESSMENT



SKILLS AND AIMS

Candidates who are awarded grades C to A* in Cambridge IGCSE Global Perspectives are well prepared to follow courses leading to Cambridge International AS and A Level or the equivalent in a wide variety of subjects, especially across the humanities and social sciences. In particular, this IGCSE syllabus allows progression to Advanced Level Global Perspectives qualifications.

TOPICS

Cambridge IGCSE Global Perspectives emphasises the development and application of skills rather than the acquisition of knowledge. Candidates develop transferable skills that will be useful for further study and for young people as active citizens of the future. Cambridge IGCSE Global Perspectives candidates will have opportunities to acquire and apply a range of skills to support them in these challenges, including:

- Researching, analysing and evaluating information
- Developing and justifying a line of reasoning
- Reflecting on processes and outcomes
- Communicating information and reasoning
- Collaborating to achieve a common outcome.

WHY

Cambridge Global Perspectives is an ideal course for students preparing to go to university. As many of our students will be preparing to go to a university abroad, Global Perspectives gives students the opportunity to study in a way more attributed to western culture. They will learn skills that are vital to succeeding at university and will have the opportunity to learn about Global Issues that are not covered in other subjects.

HISTORY

0470



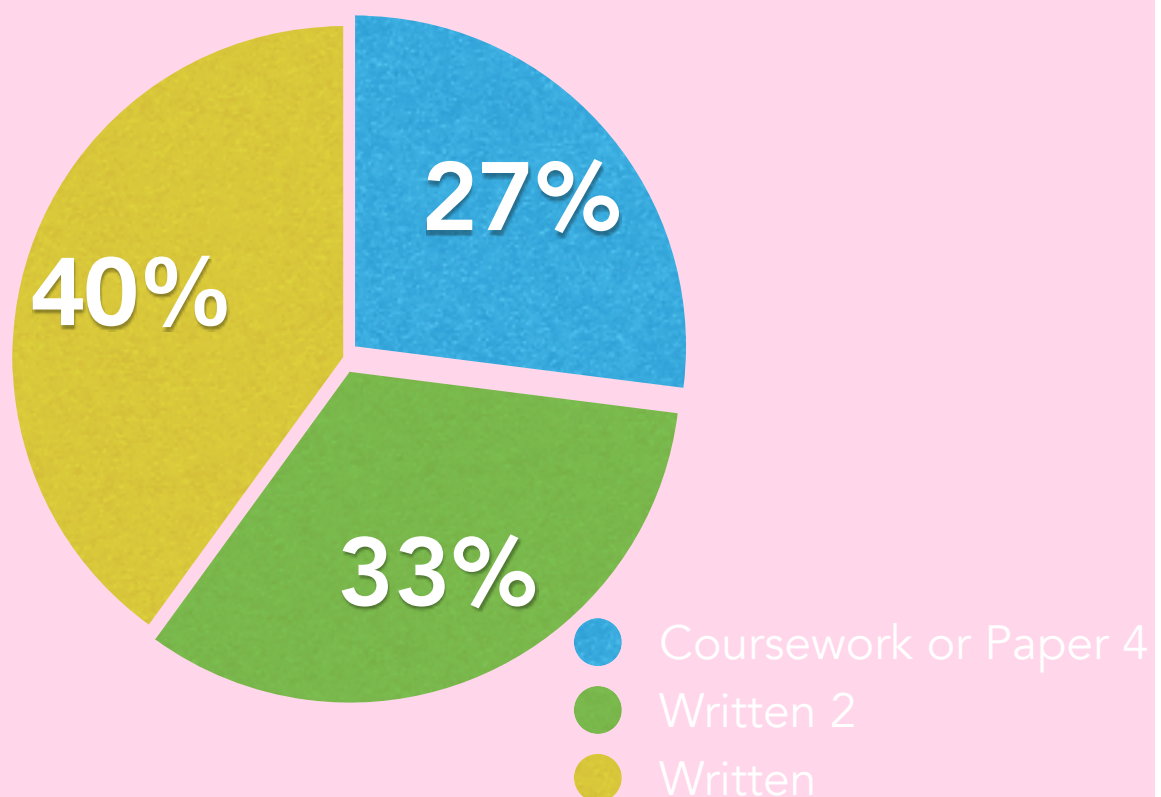
ABOUT

History IGCSE covers the major events of 20th Century European History but the course is just as much about learning important skills such as how to debate and form a judgement, how to analyse evidence and how to write clear and concise evaluations.

SKILLS AND AIMS

- Develop an interest in and enthusiasm for learning about and understanding the past.
- To learn how events from the past have many different explanations as to why they happened.
- Learn how to analyse different types of historic evidence including cartoons, newspapers, posters and photographs in order to find what hidden messages that lie behind them.
- Gain a greater understanding of international issues and exploring how political and economic issues have created the world we live in.
- Learn how to present clear, logical arguments.

ASSESSMENT



TOPICS

The IGCSE History course focuses on 20th century History. The topics covered are the causes of World War 1, the origins of the Russian Revolution, the rise of Hitler, the causes of World War 2 and the rise of the Cold War following World War 2.



WHY

The way History is taught is active not passive.

You will be expected to take part in debates, give presentations, and be able to analyse texts, speeches, data, cartoons and videos using the information to form a supported judgment and discuss these things.

You need a good standard of English to study History but you will be taught during the course how to write in good, clear and concise paragraphs. Skills which will help you in any other subjects you take.

It is not an easy subject and unless you are willing to put in a lot of time and effort you won't do well but if you do the rewards are huge and you will have an amazing two years.

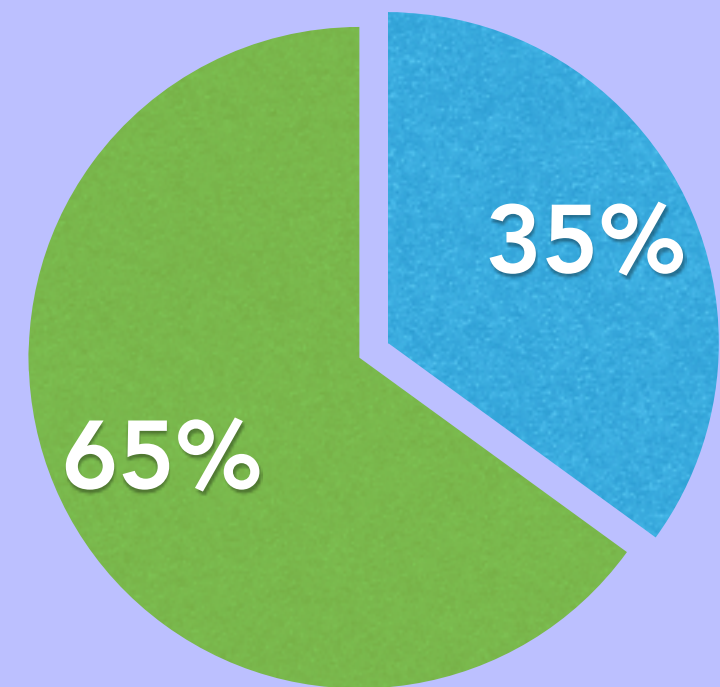
MATHEMATICS IGCSE 0580



ABOUT

It is recommended that students who are beginning this course should have previously studied an appropriate lower secondary mathematics programme. All students in Y10 will follow the Extended curriculum. Students who are awarded grades A* to C in Cambridge IGCSE Mathematics Extended curriculum are well prepared to follow courses leading to Cambridge International AS and A Level Mathematics. For a detailed syllabus of the course see www.cie.org.uk/igcse for further information.

ASSESSMENT



● Paper 2 ● Paper 4

TOPICS

1. Number
2. Algebra and graphs
3. Geometry
4. Mensuration
5. Co-ordinate geometry
6. Trigonometry
7. Matrices and transformations
8. Probability
9. Statistics

SKILLS AND AIMS

The aims are to enable candidates to:

- Develop their mathematical knowledge and oral, written and practical skills in a way which encourages confidence and provides satisfaction and enjoyment
 - Read mathematics, and write and talk about the subject in a variety of ways
 - Develop a feel for number, carry out calculations and understand the significance of the results obtained
 - Apply mathematics in everyday situations and develop an understanding of the part which mathematics plays in the world around them
 - Solve problems, present the solutions clearly, check and interpret the results
 - Develop an understanding of mathematical principles
 - Recognise when and how a situation may be represented mathematically, identify and interpret relevant factors and, where necessary, select an appropriate mathematical method to solve the problem
 - Use mathematics as a means of communication with emphasis on the use of clear expression
 - Develop an ability to apply mathematics in other subjects, particularly science and technology
 - Develop the abilities to reason logically, to classify, to generalise and to prove
 - Appreciate patterns and relationships in mathematics
 - Produce and appreciate imaginative and creative work arising from mathematical ideas
 - Develop their mathematical abilities by considering problems and conducting individual and co-operative enquiry and experiment, including extended pieces of work of a practical and investigative kind
 - Appreciate the interdependence of different branches of mathematics
- acquire a foundation appropriate to their further study of mathematics and of other disciplines.

WHY

Cambridge IGCSE Mathematics is accepted by universities and employers as proof of mathematical knowledge and understanding. Successful candidates gain lifelong skills, including:

- Deeper understanding of mathematical principles
- The further development of mathematical skills including the use of applications of mathematics in the context of everyday situations and in other subjects that they may be studying
- The ability to analyse problems logically, recognising when and how a situation may be represented mathematically
- The use of mathematics as a means of communication
- A solid foundation for further study.

SPORTS DAY

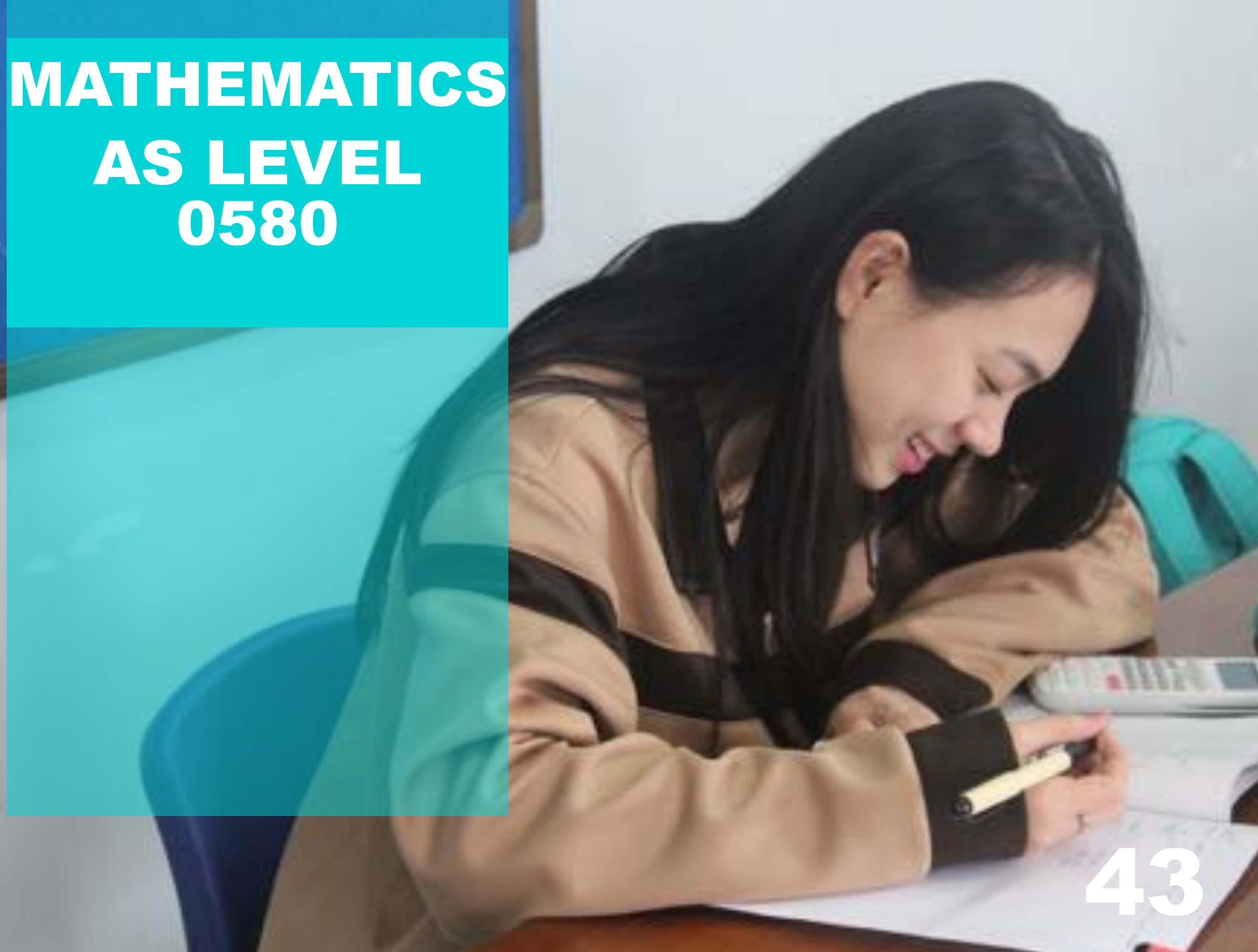


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MATHEMATICS

AS LEVEL

0580



ABOUT

Cambridge International AS Level Mathematics provides a suitable foundation for the study of Mathematics or related courses in higher education. Students who have studied IGCSE Mathematics in Year 10 will have completed the final exams in Paper 2 and Paper 4. In Year 11, students will study AS Level Mathematics which is the first year of the two-year course where students will sit Pure Mathematics 1 (P1) and Mechanics 1 (M1). For a detailed syllabus of the course see www.cie.org.uk/alevel

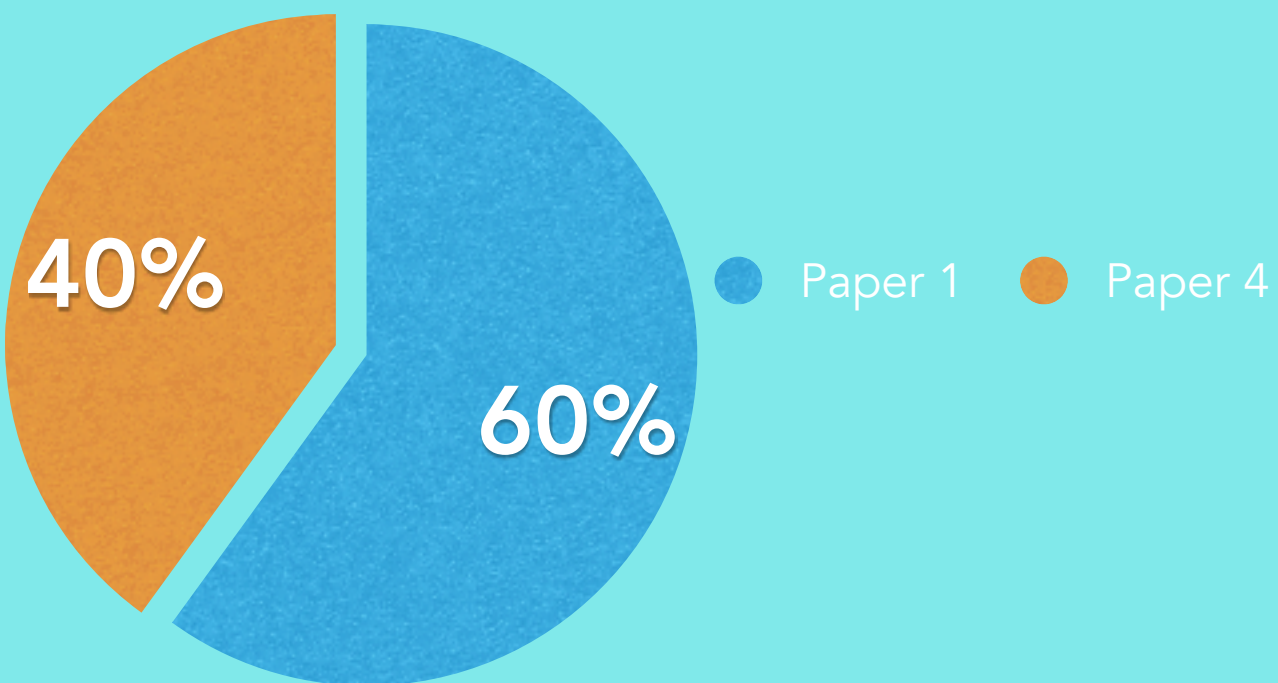
TOPICS

The mathematical content for each unit in the scheme is detailed below. The order in which topics are listed is not intended to imply anything about the order in which they might be taught. For all units, knowledge of the content of Cambridge IGCSE Mathematics is assumed. Students will be expected to be familiar with scientific notation for the expression of compound units.

Unit P1_Pure Mathematics 1 (Paper 1): This course covers Quadratics, Functions, Coordinate geometry, Calculus - Differentiation and integration, Sequences and series, Circular measure, Trigonometry, Vectors.

Unit M1_Mechanics 1 (Paper 4): This course covers Motion and kinematic equations, Newton's laws of motion and application of forces, Work, power and energy.

ASSESSMENT



SKILLS AND AIMS

The aims are to enable candidates to:

- Develop their mathematical knowledge and skills in a way which encourages confidence and provides satisfaction and enjoyment
 - Develop an understanding of mathematical principles and an appreciation of mathematics as a logical and coherent subject
 - Acquire a range of mathematical skills, particularly those which will enable them to use applications of mathematics in the context of everyday situations and of other subjects they may be studying
 - Develop the ability to analyse problems logically, recognise when and how a situation may be represented mathematically, identify and interpret relevant factors and, where necessary, select an appropriate mathematical method to solve the problem
 - Use mathematics as a means of communication with emphasis on the use of clear expression
- acquire the mathematical background necessary for further study in this or related subjects.

WHY

Cambridge International AS and A Level Mathematics is accepted by universities and employers as proof of mathematical knowledge and understanding. Successful candidates gain lifelong skills, including:

- Deeper understanding of mathematical principles
- The further development of mathematical skills including the use of applications of mathematics in the context of everyday situations and in other subjects that they may be studying
- The ability to analyse problems logically, recognising when and how a situation may be represented mathematically
- The use of mathematics as a means of communication
- A solid foundation for further study.

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PHYSICS

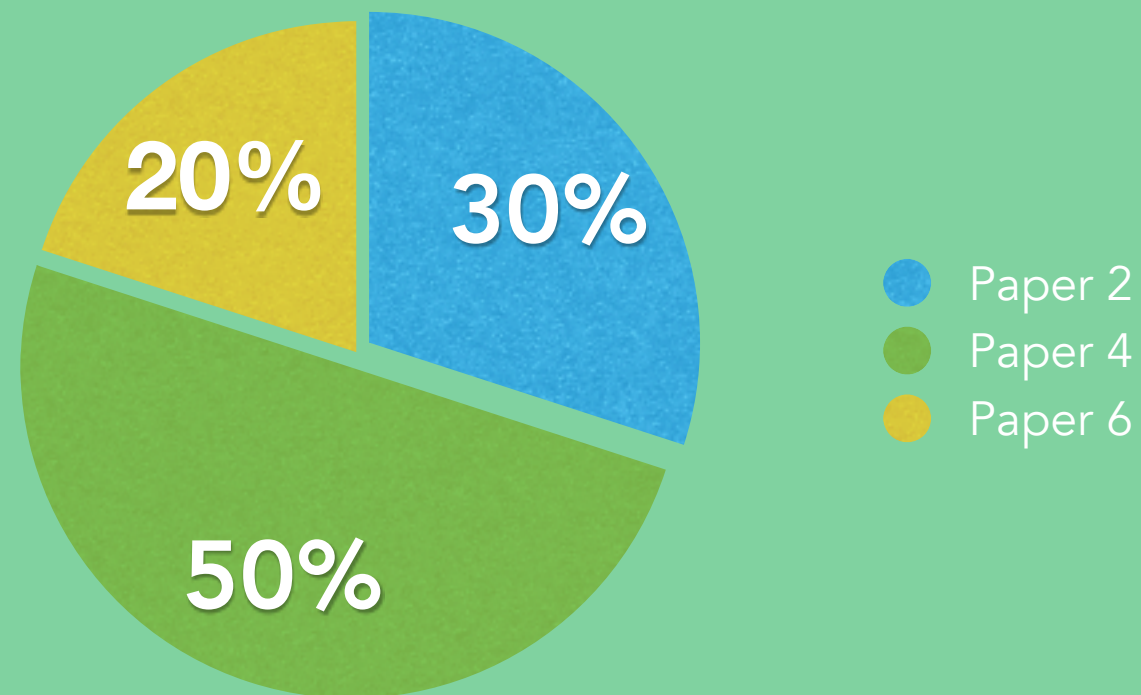
0625



ABOUT

The course goals are developing an understanding of basic concepts of physics and improving experimental and investigative skills. Students will learn to state hypotheses, design and perform experiments to test them.

ASSESSMENT



TOPICS

General Physics:

Measurements, Motion, Forces, Energy, Work, power and momentum.

Thermal Physics:

States of matter, Kinetic model, Thermal properties and Thermal energy transfers.

Waves:

Sound, Light, Wave properties, Reflection, Refraction, Diffraction and spectra.

Electricity and Magnetism:

Permanent magnets, Static electricity, Electrical circuits and Electromagnetism.

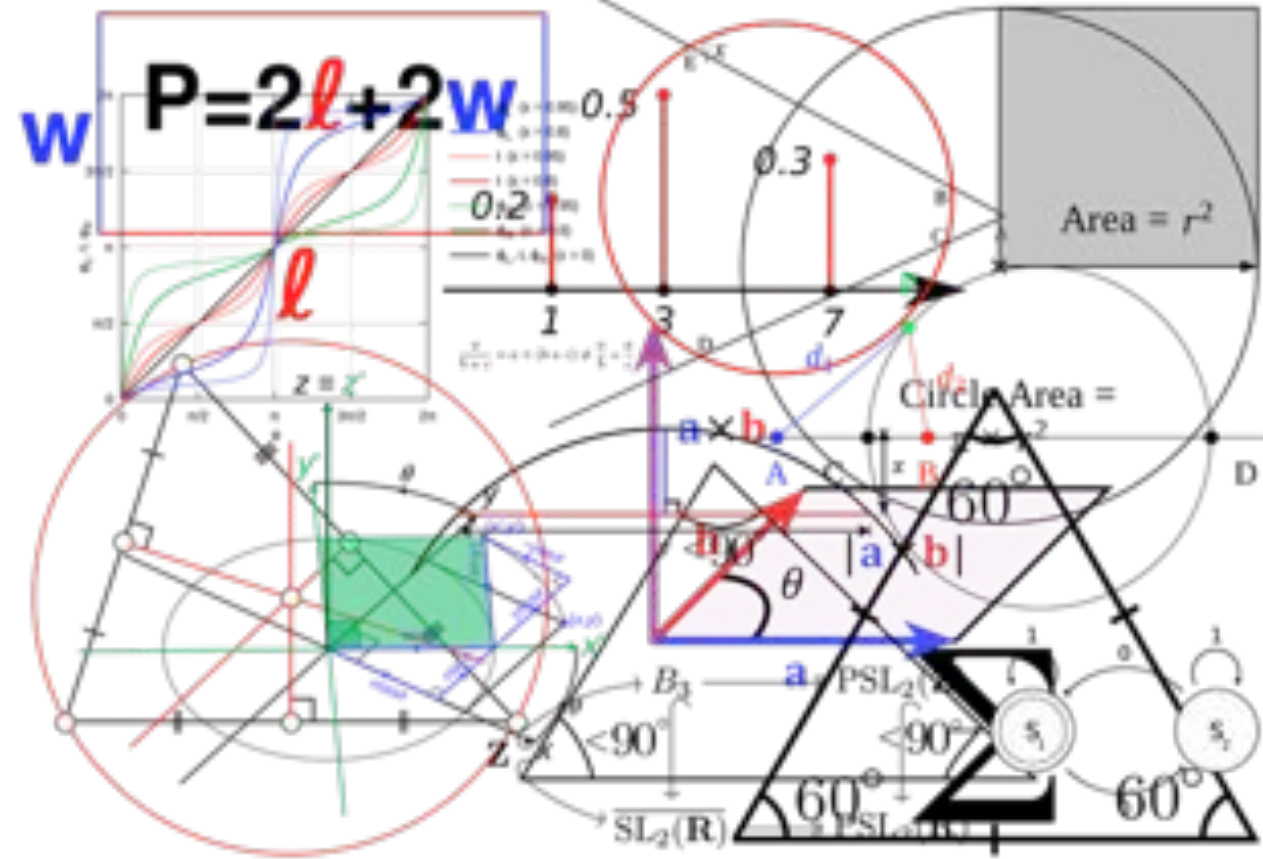
Atomic Physics:

Atomic structure, Radioactive decay and Nuclear physics.

SKILLS AND AIMS

The aims are:

1. To provide an enjoyable and worthwhile educational experience for all learners, whether or not they go on to study science beyond this level
2. To enable learners to acquire sufficient knowledge and understanding to:
 - Become confident citizens in a technological world and develop an informed interest in scientific matters
 - Be suitably prepared for studies beyond Cambridge IGCSE
3. To allow learners to recognise that science is evidence based and understand the usefulness, and the limitations, of scientific methods
4. To develop skills that:
 - Are relevant to the study and practice of physics
 - Are useful in everyday life
 - Encourage a systematic approach to problem-solving
 - Encourage efficient and safe practice
 - Encourage effective communication through the language of science
5. To develop attitudes relevant to physics such as:
 - Concern for accuracy and precision
 - Objectivity, integrity, enquiry, initiative and inventiveness
6. To enable learners to appreciate that:
 - Science is subject to social, economic, technological, ethical and cultural influences and limitations
 - The applications of science may be both beneficial and detrimental to the individual, the community and the environment



WHY

The course provides the broad knowledge and skills to understand science processes and supports students to practice creative and critical thinking to answer questions and solve problems.

Course activities are designed to encourage students to develop an interest in science and aspire to research and explore concepts and laws of physics.

Cambridge IGCSE Physics is accepted by universities and employers as proof of essential knowledge and skills.

WORLD LITERATURE 0408



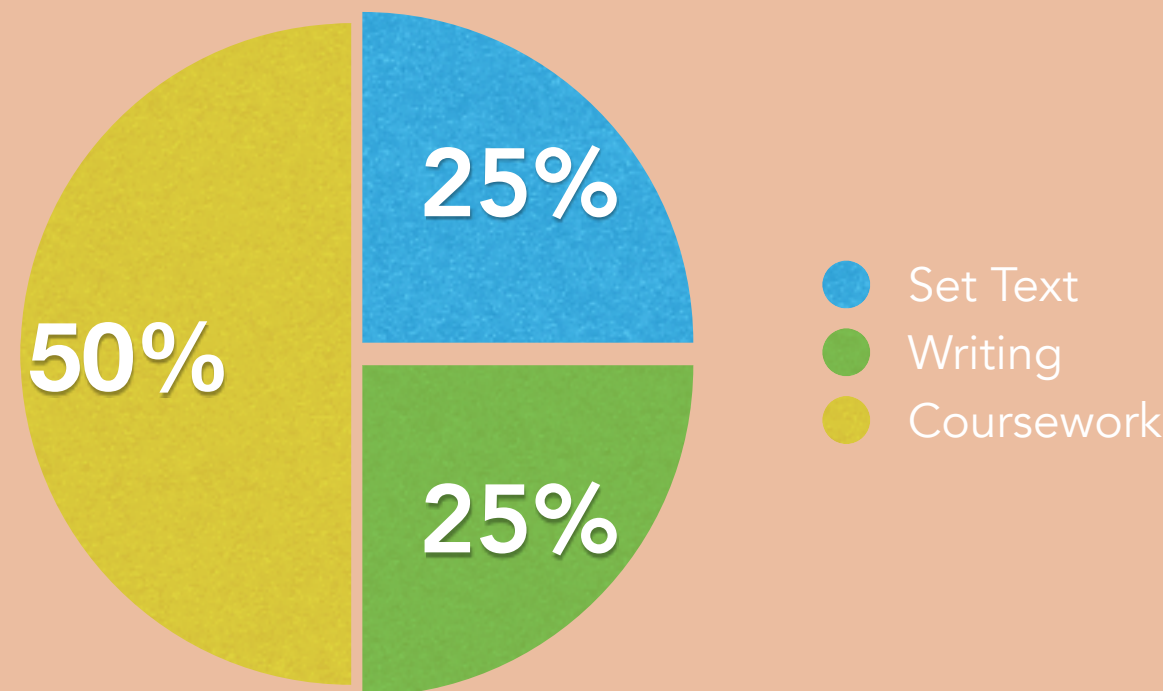
ABOUT

Cambridge IGCSE World Literature will be accepted by universities and employers as proof of real knowledge and understanding. Successful candidates gain lifelong skills, including the ability to:

- Read, interpret and evaluate literary texts from different countries and cultures
- Develop an understanding of literal and implicit meaning, relevant contexts and of the deeper themes or attitudes that may be expressed
- Present an informed, personal response to literary texts they have studied
- Explore wider and universal issues and gain skills of empathy, promoting students' better understanding of themselves and of the world around them.

This course is designed for 2 years.

ASSESSMENT



TOPICS

Unit 1:

Analyse Prose Metaphosis and Other Stories -Franz Kafka (Germany)

Unit 2:

Analyse Poetry - Sir Gawain and the Green Knight - Simon Armitage (England)

Unit 3:

Analyse Unseen Passages

Unit 4:

Analyse Modern Drama – A Doll’s House – Henrik Ibsen (Norway)

Unit 5:

Preparation for Oral Response - A Doll’s House – Henrik Ibsen (Norway)

SKILLS AND AIMS

The syllabus aims are to encourage and develop candidates' ability to:

1. Enjoy the experience of reading world literature
2. Understand and respond to literary texts in different forms and from different countries and cultures
3. Communicate an informed personal response appropriately and effectively
4. Appreciate different ways in which writers achieve their effects
5. Experience literature's contribution to aesthetic, imaginative, and intellectual growth
6. Explore the contribution of literature to an understanding of areas of human concern



WHY

This course provides students with a wider understanding of literature in different cultures, allowing students to broaden their horizons and enrich their knowledge of the literary canon. Students also learn to analyse, interpret and evaluate a variety of themes pertaining to humanity and the contemporary world. Candidates who are awarded grades A* to C in this programme are well prepared to follow courses leading to Cambridge International AS and A Level in English and/or other literatures, or the equivalent.







TIANJIN YINGHUA CAMBRIDGE INTERNATIONAL SCHOOL

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