



International General Certificate of Secondary Education Curriculum

IGCSE English

Designed for students for whom English is their first language, IGCSE First Language English develops the ability to communicate clearly, accurately and effectively in both speech and writing. Students learn how to employ a wide-ranging vocabulary, use correct grammar, spelling and punctuation, and develop a personal style and an awareness of the audience being addressed. Students are also encouraged to read widely, both for their own enjoyment and to further their awareness of the ways in which English can be used. IGCSE First Language English also develops more general analysis and communication skills such as synthesis, inference, and the ability to order facts and present opinions effectively.

Syllabus content

Reading

- Understanding and collating explicit meanings
- Understanding, explaining and collating implicit meanings
- Summarizing, paraphrasing, re-expressing
- Understanding how writers achieve effects

Writing

- Articulating experience and expressing thoughts, emotions and imaginations
- Ordering and presenting facts, ideas and opinions
- Understanding and using a range of appropriate vocabulary
- Using language and register appropriate to audience and context
- Making accurate and effective use of paragraphs, grammatical structures, sentences, punctuation and spelling

Speaking and Listening (assessment optional)

- Presenting facts, ideas and opinions
- Communicating clearly and fluently
- Using language and register appropriate to audience and context
- Listening and responding appropriately to the contributions of others

Curriculum and Assessment in English Language requires students in the area of reading to understand and collate explicit and implicit meanings, select, analyze and evaluate what is relevant to specific purpose, and understand how writers achieve effects. In writing, students must articulate experience and express what is thought, felt and imagined, and order and present facts, ideas, and opinions.

Students are assessed on their ability to understand and use a range of appropriate vocabulary, to use language and register appropriate to audience and context, and make accurate and effective use of paragraphs, grammatical structures, sentences, punctuation and spelling. In the areas of speaking and listening, students must understand order and be able to present facts, ideas, and opinions. They must communicate clearly and fluently using language and register appropriate to audience and context and listen to and respond appropriately to the contributions of others.

Curriculum and Assessment in English Literature requires students show detailed knowledge of the content of literary texts in the form of drama, poetry, and prose. They must understand the meanings of literary texts and their contexts, and show deeper awareness of ideas and attitudes. The course requires students to recognize the ways in which writers use language, structure, and form to create and shape meanings and effects. Specific skills students must demonstrate in drama, prose, and poetry for the class and exams include recall, summarization, paraphrasing, distinguishing viewpoint, exploring theme and motivation, analyzing plot and characterization, evaluation and interpretation, and integrating apposite quotation and comment.

Further information may be found on this website:

<http://www.cie.org.uk/docs/qualifications/igcse/56162%20IGCSE%20english%20brochure.pdf>



IGCSE Mathematics

IGCSE Mathematics is a fully examined course which encourages the development of mathematical knowledge as a key life skill, and as a basis for more advanced study. The syllabus aims to build students' confidence by helping them develop a feel for numbers, patterns and relationships, and places a strong emphasis on solving problems and presenting and interpreting results. Students also learn how to communicate and reason using mathematical concepts.

The examinations test the ability of candidates to know and apply concepts from the whole course. Students will develop the ability to:

- Solve problems by applying combinations of mathematical skills and techniques, using investigation, analysis, deduction and an appropriate strategy;
- Recognize patterns and structures and form generalizations;
- Draw logical conclusions from information and understand the significance of statistical results;
- Use the concepts of mathematical modeling to describe a real-life situation and draw conclusions;
- Organize, interpret and present information in written, tabular, graphical and diagrammatic forms, using the correct notation and terminology;
- Use statistical techniques to explore relationships in the real world;
- Make effective use of technology.

Syllabus content

<p style="text-align: center;">Number</p> <ul style="list-style-type: none">• Number, set notation and language• Different types of number• Use of an electronic calculator• Vulgar and decimal fractions and percentages• Ordering• Standard form• The four rules• Estimation• Measures• Ratio, proportion, rate• Personal and household finance	<p style="text-align: center;">Algebra, functions and graphs</p> <ul style="list-style-type: none">• Graphs in practical situations• Algebraic representation, formulae and manipulation• Indices• Solutions of equations and inequalities• Graphs of functions• Vectors in two dimensions• Linear programming• Matrices• Functions
<p style="text-align: center;">Space</p> <ul style="list-style-type: none">• Geometrical terms and relationships• Geometrical constructions• Symmetry• Angle properties• Locus• Mensuration (geometrical measurements)• Trigonometry• Transformations	<p style="text-align: center;">Statistics and probability</p> <ul style="list-style-type: none">• Statistics• Probability

Ninth grade IGCSE (pre-AICE) mathematics, Pure Math 1, is equivalent in content to a full year of Advanced Algebra with some geometry applications and an introduction to pre-calculus.

Tenth grade IGCSE (pre-AICE) mathematics, Pure Math 2, consists of trigonometry, statistics and pre-calculus.

In both courses, students are required to organize, interpret and present information accurately in written, tabular, graphical and diagrammatic forms. They must perform calculations by suitable methods including the use of an electronic calculator and use mathematical and other instruments to measure and to draw to an acceptable degree of accuracy. Interpreting, transforming and making appropriate use of mathematical statements expressed in words or symbols are required. Students must solve problems using special relationships in two and three dimensions, solve problems by applying combinations of mathematical skills and techniques, and respond to a problem relating to a relatively unstructured situation by translating it into an appropriately structured form. In this course, students analyze a problem, select a suitable strategy and apply an appropriate technique to obtain its solution.

Students who are not currently enrolled in Geometry will need to take Geometry concurrently with Pure Math 1. This will replace an elective choice.

Further information may be found on this website:

[http://www.cie.org.uk/docs/qualifications/igcse/IGCSE Maths SO web.pdf](http://www.cie.org.uk/docs/qualifications/igcse/IGCSE_Maths_SO_web.pdf)

IGCSE History

The History IGCSE syllabus examines some of the major international issues of the twentieth centuries, as well as covering the history of particular regions in more depth. The emphasis is on both historical knowledge and on the skills required for historical research. Students learn about the nature of cause and effect, continuity and change, similarity and difference and find out how to use and understand historical evidence as part of their studies. IGCSE History will stimulate any student already interested in the past, providing a basis for further study, and also encouraging a lifelong interest in the subject. Specific skills students must demonstrate include recall, and selecting, organizing and deploying knowledge of the syllabus content. Students must comprehend, interpret, evaluate and use a range of sources as evidence in their historical context.

Further information may be found on this website:

http://www.cie.org.uk/qualifications/academic/middlesec/igcse/subject?assdef_id=864

(Choose 2013 syllabus.)



UNIVERSITY of CAMBRIDGE International Examinations

IGCSE Global Perspectives

Meeting government ministers, organizing a local river clean-up project and writing to the United Nations about climate change, are just a few of the activities some students pursue through the Cambridge IGCSE Global Perspectives course. Cambridge IGCSE Global Perspectives is a groundbreaking new course that is cross-curricular, stretching across traditional subject boundaries. It taps into the way students of today enjoy learning including group work, using technology, creating projects, and working with other students around the world. The emphasis is on developing the ability to think critically about a range of global issues where there is always more than one point of view.

The AICE Thinking Skills curriculum is designed to prepare students for higher education in a wide range of careers including law, scientific research, social sciences, journalism, medicine, business, accounting, and engineering. This course consists of problem solving and critical thinking. The problem-solving component is designed to assess a student's ability to analyze numerical and graphical information in the context of real life situations and apply appropriate numerical techniques in order to find new information or derive solutions. Students gain skills in the areas of data management, reading, modeling and logic and reasoning. Students must apply simple mathematics to new situations in order to demonstrate an ability to manipulate numerical and graphical data. They extract and use relevant data and find methods of using information in order to reach conclusions. Students are required to recognize how the same data may be presented in different forms. Students must be able to think critically about information, evaluate possible reasons for unexpected variations and be able to use information for informed decision making. Central to critical thinking is the notion of argument. Students learn to recognize a reasoned argument as distinct from quarreling, disputing, reporting, or explaining. Students are required to understand the common characteristics of reasoning and argument and the use of reasons to support conclusions. The main focus of this course includes analysis, evaluation, and construction of argument. We are not offering this class but are integrating these skills into all of our other classes.

Further information may be found on this website:

http://www.cie.org.uk/docs/qualifications/new_qualifications/global_pers/Syllabus%20outline%20new.pdf



IGCSE Biology and IGCSE Physics

In addition to a focus on biology and physics, the IGCSE Biology, with an emphasis on human biology, and IGCSE Physics curriculum enable students to better understand the technological world in which they live, and take an informed interest in science and scientific developments. Students learn about the basic principles of biology and physics through a mix of theoretical and practical studies. Students also develop an understanding of the scientific skills essential for further study at A Level, which are useful in everyday life. As they progress, students learn how science is studied and practiced, and become aware that the results of scientific research can have both good and bad effects on individuals, communities and the environment.

Curriculum and Assessment of IGCSE Biology requires students be able to demonstrate knowledge and understanding of scientific phenomena, facts, laws, definitions, concepts, theories, vocabulary, instruments and apparatus, scientific quantities and their determination. Students must handle information and solve problems in oral, written, symbolic, graphical, and numerical form. Students must locate, select, organize and present information from a variety of sources. This course requires students to translate information from one form to another, manipulate numerical and other data, to use information to identify patterns, and draw inferences. Presenting reasoned hypotheses are also required. Additionally students must solve problems of a quantitative nature. Students must demonstrate experimental and investigation skills by their use of apparatus and materials, recording observations and measurements, interpreting and evaluating experimental observations and data, planning and carrying out investigations and evaluating methods.

Biology curriculum content includes the nature of science (matter, energy, and chemical life processes), cells (reproduction, biology, and communication), levels of organization (classification and taxonomy), evolution (biological selection, adaptations, and changes through time), structure, function and reproduction (plants, animals, and micro-organisms), ecology (interdependence of organisms, humans, and the environment).

Physics curriculum content includes the study of the properties and nature of matter (density, pressure, molecular modeling, radioactivity, and melting and boiling), the different forms of energy and ways in which matter and energy interact in the world (electrical circuitry, conductors, dangers of electricity, light and sound, waves, mechanical forces, power and work). Curriculum incorporates both the practical and theoretical understanding of physics.

Further information may be found on this website:

<http://www.cie.org.uk/docs/qualifications/igcse/56161%20IGCSE%20science%20brochure.pdf>