



# **Newton International Academy, Barwa**

## **Key Stage 4 (Year 10 and 11)**

### **Options Booklet 2023 - 2025**





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## **Dear Year 9 Students**

In Key Stage 3 (Year 7 to Year 9) all students follow a broad and balanced curriculum, designed to introduce them to all the main subject areas and to provide them with the skills to build a solid foundation for further studies.

In Key Stage 4 (Year 10 & Year 11), all students must continue to follow a set of core subjects - this is a legal requirement of the National Curriculum. Beyond these core subjects, there is choice so that individual interests and talents can be developed.

You are coming to an extremely important moment in your school life as you approach the end of KS3 and begin to think about KS4 courses. This is also an exciting opportunity for you to have a direct say in what you want to study for the next two years.

The decisions you make now could well have an effect on decisions you will make later – whether staying on into the Sixth Form, taking up training or going off to college. It is very important, therefore, that you choose wisely and leave yourself as many avenues open as possible for the future.

This booklet has been put together to give you a good understanding of what courses are on offer at Newton International Academy over the next two years. You will find details of what each course covers to help you in making your choices.

Various people will also be talking to you about the choices you will have to make. Your parents will naturally be interested, teachers will talk to you about their subjects, your form tutors will be available for advice and I'm sure that you will talk with your friends about what you will all be doing next. You are welcome to make an appointment with any subject teacher for advice or just to discuss your choices. Do remember that the decision should be yours and it should be made for the right reasons.

Some advice:

- Please show this booklet to your parents and discuss your thoughts and possible choices with them.
- Talk to as many people as possible about your ideas for the future and how you think you'll get there.
- Check through your reports to see how you're doing and what your strong points are.

When you make your choices, it is very important that you also have reserve choices of subjects in case we cannot arrange the exact combination of subjects you are seeking. Remember that final decisions about options will only be taken when we are all sure they are the right ones.

Good luck with your thinking and planning over the next week – next year really marks the start of the adult phase of your education so you need to make mature and sensible decisions now.

## **Options 2023 - 2025**



### **How will I spend my time in school in Years 10 and 11?**

Over a 35 period week your time will be spent like this:

English	5 lessons
Mathematics	5 lessons
Option 1	3 lessons
Option 2	3 lessons
Option 3	3 lessons
Option 4	3 lessons
Option 5	3 lessons
Option 6	3 lessons
Option 7	3 lesson
PE	1 lessons
Islamic Studies/Citizenship	2 lessons
Tutor Period	1 lesson

### **Where Do I Start?**

- Listen to advice from all your teachers
- Read this booklet carefully
- Talk with your parents
- Fill in your Option Form and hand it in to your form tutor

### **Do I have some choice about what I do?**

Yes, so try to choose subjects:

- ✓ that you think you will enjoy and feel you are good at.
- ✓ that you may need for your future education and/or career.
- ✓ that you are most likely to work enthusiastically and succeed at.
- ✓ that provide a balance and variety. By keeping a balance at this stage, you will not close off future options.

### **Dos and Don'ts**

- DO talk to parents, subject teachers, form tutors—they are all here to help.
- DO read the subject details in this booklet carefully and ask if you need to know more.
- DO opt for a balanced choice of subjects to keep open future careers and study options.
- DO be realistic about your ability—do not choose subjects you may find too hard.
- DON'T choose a subject just because you like a particular teacher (or avoid a subject because you dislike a teacher - you may well have a different teacher next year).
- DON'T choose a subject because your friends are choosing it. You are deciding about your future and they probably will not be in the same group as you.
- DON'T be misled by the title of a subject into thinking you need it for a career. For example, you do not need Business Studies to work in business.



# Newton International Academy, Barwa

## Key Stage 4

## Subject Outlines

Block A	Block B	Block C	Block D	Block E	Block F	Block G
Biology	Art	Biology	Physics	Chemistry	ICT	Environmental Management
Design & Technology	Geography	Arabic	ICT	Design & Technology	Business	Economics
Business	Chemistry	Global Citizenship	Computer Science	Human Biology	Physics	History
IGCSE PE			Arabic	Statistics	French/Sing le Science	





# English

Pupils will complete either the English First Language or the English Second Language IGCSE Course. English is a compulsory core subject and the English Department will take the final decision as to who is sufficiently proficient to sit the First or Second Language Examinations. English First Language and Second Language are both examined by Cambridge Examination Board.

## **English Second Language:**

Pupils who study this IGCSE are not native speakers and they are studying English as a Second Language or as an Additional Language. This course enables pupils to live in an English speaking country. The two year course comprises a reading and writing language exam, a listening exam and students sit a speaking examination. The emphasis is on understanding both written and spoken discourse. Pupils who are unable to make sufficient progress on the Extended Tier will be moved to the Core Tier. These moves are at the discretion of the English Department and are not negotiable.

## **English First Language:**

Pupils who study this IGCSE also study a compulsory Literature IGCSE. This subject is examined as fast track at the end of Year 10. Pupils need to have accurate language skills and be confident readers and lateral thinkers to cope with English First Language. The two courses enable pupils to take English Language or English Literature at A Level, and to then study at an English medium university.

The two IGCSE courses are run as Literature in Year 10 and Language in Year 11. English First Language course comprises a reading and a written language exam. The Literature course consists of critical analysis of literary texts in the form of a Poetry, Modern Prose, Modern Drama and a Literary Heritage Text. Pupils will be required to write two examinations testing their understanding of these texts showing personal interpretation, critical analysis and reflection. Pupils who do not make sufficient progress in English First Language or they will be moved to English Second Language if they are second language or additional language speakers. These moves are at the discretion of the English Department and they are not negotiable.



# Mathematics

## IGCSE Mathematics

Mathematics is a core subject and is compulsory for all students in KS4. Mathematics equips students with uniquely powerful ways to describe, analyse and change the world. A degree in Mathematics can lead to a career in Education, Engineering, Medicine, Finance & Accountancy, Local Government and Banking.

### Which course is for me?

Students in Year 10 and 11 follow the certificated Edexcel Syllabus (4MA1). As Mathematics is a core subject, 5 lessons per week are devoted to covering the 2 year course leading to an IGCSE (International General Certificate in Secondary Education) at the end of this time.

### How can I achieve success?

Lessons are topic based and students are encouraged to revise regularly. Emphasis is placed on homework and it is the student's responsibility to complete the weekly assignment. In IGCSE they are tested on Number & Algebra (60%), Geometry (20%) and Statistics (20%). They also develop skills such as planning, independent thinking, reasoning and questioning.

### How can the school help?

The school will help by regular assessment. During the mid and end of each term, throughout Years 10 and 11, the exams are set using questions from past examination papers. This gives the student an insight into what might be asked in their final year of the course. In January of Year 11 the students sit a mock exam giving an idea of how they may perform in their IGCSE. Once the course has been completed, practice is started on Past Papers to ensure success in the subject.

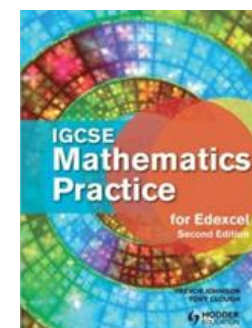
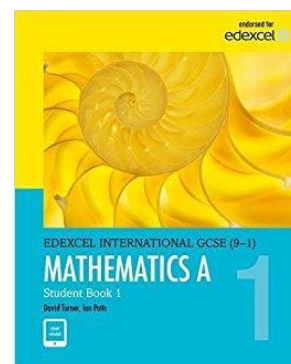
## GCSE Statistics

This is a course which will be taught simultaneously with iGCSE Mathematics and examined externally at the end of Year 10. It is a separate GCSE qualification and a compulsory part of Mathematics in KS4. The Pearson GCSE (9–1) in Statistics ensures that students develop the confidence and competence with statistical techniques to enable them to apply those techniques flexibly to solve statistical problems through a practical programme of study. This will focus on representing and analysing data and probability. It consists of two externally-examined papers. Both 1 hour and 30 minutes and weighting at 50% each.

Students will be examined at the end of year 10 in the May/June series.

### What next?

Success at IGCSE with a grade 7 or above guarantees acceptance onto the AS course in Year 12.



# Science

## iGCSE BIOLOGY

### **Qualification Aims and Objectives:**

- learn about unifying patterns and themes in biology and use them in new and changing situations
- acquire knowledge and understanding of biological facts, terminology, concepts, principles and practical techniques
- apply the principles and concepts of biology, including those related to the applications of biology, to different contexts
- evaluate biological information, making judgements on the basis of this information
- appreciate the practical nature of biology, developing experimental and investigative skills based on correct and safe laboratory techniques
- analyse, interpret and evaluate data and experimental methods, drawing conclusions that are consistent with evidence from experimental activities and suggesting possible improvements and further investigations
- recognise the importance of accurate experimental work and reporting scientific methods in biology

### **Qualification content**

Section 1: The nature and variety of living organisms  
Section 2: Structure and functions in living organisms  
Section 3: Reproduction and inheritance  
Section 4: Ecology and the environment

## iGCSE CHEMISTRY

### **Qualification Aims and Objectives**

learn about unifying patterns and themes in chemistry and use them in new and changing situations

- acquire knowledge and understanding of chemical facts, terminology, concepts, principles and practical techniques
- apply the principles and concepts of chemistry, including those related to the applications of chemistry, to different contexts
- evaluate chemical information, making judgements on the basis of this information
- appreciate the practical nature of chemistry, developing experimental and investigative skills based on correct and safe laboratory techniques
- analyse, interpret and evaluate data and experimental methods, drawing conclusions that are consistent with evidence from experimental activities and suggesting possible improvements and further investigations

### **Qualification content**

Section 1: Principles of chemistry  
Section 2: Inorganic chemistry  
Section 3: Physical chemistry

# iGCSE PHYSICS

## Qualification Aims and Objectives

- acquire knowledge and understanding of physical facts, terminology, concepts, principles and practical techniques
- apply the principles and concepts of physics, including those related to the applications of physics, to different contexts
- evaluate physical information, making judgements on the basis of this information
- appreciate the practical nature of physics, developing experimental and investigative skills based on correct and safe laboratory techniques
- analyse, interpret and evaluate data and experimental methods, drawing conclusions that are consistent with evidence from experimental activities and suggesting possible improvements and further investigations
- recognise the importance of accurate experimental work and reporting scientific methods in physics

## Qualification content

Section 1: Forces and motion

Section 2: Electricity

Section 3: Waves

Section 4: Energy resources and energy transfers

Section 5: Solids, liquids and gases

Section 6: Magnetism and electromagnetism

Section 7: Radioactivity and particles

Section 8: Astrophysics

## How I will be assessed?

Edexcel Examination Board has the follows the same assessment criteria for **iGCSE Biology, Chemistry and Physics**

Component	Weighting	Examination	Total marks
Paper 1	61.1%	2 hours	110
Paper 2	38.9%	1 hour 15 minutes	70

# IGCSE HUMAN BIOLOGY

## Qualification Aims and Objectives:

- Learn about human body systems and how they interact to support the healthy functioning of an individual
- Acquire knowledge and understanding of human biological facts, terminology, systems and practical techniques
- Appreciate the practical nature of human biology, developing experimental and investigative skills based on correct and safe laboratory techniques



### Qualification content

- Cells and tissues
- Biological molecules
- Movement of substances in and out of cells
- Bones, muscles and joints
- Coordination
- Nutrition and energy
- Respiration
- Gas Exchange
- Internal transport
- Homeostatic mechanisms
- Reproduction and heredity
- Disease

### How I will be assessed?

Edexcel Examination Board has the follows the assessment criteria below for **IGCSE Human Biology**

Component	Weighting	Examination	Total marks
Paper 1	50%	1 hour 45 minutes	90
Paper 2	50%	1 hour 45 minutes	90

# Geography



## What will I learn?

**Geography IGCSE** is a very interesting course as it looks at the relationship between people and the environment.

Students have the opportunity to study exciting environments throughout the world from the cities of Europe to the Amazon rainforest. Also, there is a strong practical element to the course.

## Is Geography the right subject for me?

**Geography IGCSE** inspires students to become global citizens by exploring their own place in the world, their values and responsibilities to other people, to the environment and to the future of our planet. It develops enquiry skills and critical thinking.

## How will I be assessed?

Edexcel Examination Board has the following important assessment objectives for Geography:-

- 1) Recall, select and communicate an understanding of places, environments and concepts.
- 2) Apply knowledge and understanding in familiar and unfamiliar areas.
- 3) Select and use a variety of skills, techniques to investigate, analyse and evaluate questions and issues.

## Careers in Geography

A question students often ask themselves and their teachers is “What can I do with geography?” While it is easy to understand getting excited about maps, different cultures and environments, and even being better citizens through geography, it is harder to see how geographic knowledge can lead to good jobs or meaningful careers. Some exciting geography careers include: travel agents, environmental managers, forestry technicians, park rangers, cartographer (computer mappers), surveyors, communications and transport planners, traffic manager, soil conservationist, teacher, etc.

*An international community of learners striving for excellence and celebrating success*

## Syllabus Summary

### **Natural Environment and People**

#### **Term 1- Hazardous environments**

Plate Tectonics

Case studies of volcanic eruptions

Recent earthquakes

Tropical storms

### **Natural Environment and People**

#### **Term 2- Coastal Environments**

Marine processes

Cosystems

Coastal conflict

Coastal management

### **People and their Environments**

#### **Term 3- Urban environments**

City growth

Land use in cities

City case study

Urban change/problems

#### **Investigation**

Students will undertake work inside and outside of the classroom that will develop skills such as measuring/recording, graph drawing, map interpretation and statistical analysis.

### **People and their Environments**

#### **Term 1- Rural environments**

Natural ecosystems

Varying types of ecosystems

Changes in ecosystems

How ecosystems adapt

Case studies

### **Global Issues**

#### **Term 2- Fragile environments and climate change**

Distribution and characteristics of fragile environments

Desertification and deforestation

Climate change

Technology use to limit the effects of desertification

Managing tropical rainforests

Global Warming

Case studies

Revision in term 3

### **Practical exercise**

Students will carry out fieldwork in the local area that will be analysed and presented in a written report.

### **Fieldwork**

Students will carry out a fieldwork investigation that will involve planning, data collection, analysis of results and the production of a written fieldwork report.

# History

History is a fascinating subject, filled with the triumphs and accomplishments of both men and woman alike. It is most suitable for students who have an active imagination, good reasoning skills and a firm grasp of the English language. Students who like to explore the reasons for the failures and triumphs of mankind and enjoy critically and objectively analysing some of the greatest movements which have helped define our generation, will thoroughly enjoy this subject.

## ***What will I learn?***

Students will learn to think objectively and critically on issues related to events from the past and their significance on the present day. A variety of resources will be studied and students will be required to think unilaterally when looking at sources such as cartoons, paintings, letters and other materials of that era. History has the ability of developing insight into world affairs, as well as developing skills that students can use throughout life. The Edexcel IGCSE in History enables students to:

- acquire knowledge and understanding of selected periods and aspects of history, exploring the significance of historical events, people, changes and issues
- use historical sources critically, in context, recording significant information and reaching conclusions
- organise and communicate their knowledge and understanding of history
- draw conclusions and make historical judgments.

## **Syllabus Summary**

### **Year 10**

#### **The Development of a Dictator: Hitler and the Nazi party 1918-1945**

- The Versailles Settlement
- The recovery of Germany, 1924–29
- International co-operation in the 1920s
- The breakdown of co-operation in the early 1930s
- Life in Germany under Nazi control
- Reasons for the outbreak of the Second World War
- The impact of the Second World War on Germany

#### **The Changes in Medicine: 1845- 1945**

- Medical knowledge and understanding in the mid- nineteenth century
- Changes in surgery and in understanding the causes of disease
- Changes in hospital treatment and the role of women in medicine
- Developments in public health provision
- The importance of the two world wars in bringing about change.

## **Year 11**

### **The Cold War: A world Divided - Superpower Relations**

- Tensions between the major powers following the end of WW2
- The division of Germany between the year 1945 -1962
- Communism vs. Capitalism

### **East Germany 1958-90**

- The Berlin Wall crisis, 1958–63
- Stabilisation and control: the GDR, 1962–87
- Life in the GDR – social change, 1962–87
- Ostpolitik – relations with the Federal Republic, 1969–87
- The Peaceful Revolution, 1987–90

### **How I will be assessed?**

EDEXCEL Examination Board is made up of five important assessment objectives.

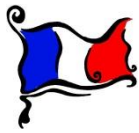
AO1: recall, select, organise and deploy knowledge of the specification content and communicate it through description, explanation and analysis of:

- the events, people, changes and issues studied
- the key features and characteristics of the periods, topics and societies studied

AO2: show that they understand and can analyse and interpret historical sources in context

AO3: show that they can comprehend, analyse and evaluate how and why events, people, situations and changes have been interpreted and represented in relation to the historical themes and periods studied





# IGCSE Languages

## Why learn another language?

- It puts you a step ahead of everyone else and makes you very attractive to universities and businesses all over the world.
- It will help to develop your language skills to a high level of competence.
- You will improve your English. By studying French you will enhance your understanding of the English language and improve your grammatical awareness.
  - These subjects will increase your knowledge of a wide range of issues and improve your cultural understanding.
- You could get a very valuable qualification leading to Higher Education and future employment

## Languages are an advantage in many careers including:

- Journalism
- Fashion
- Business
- Finance
- Law
- Retail
- Tourism (hotels/travel/restaurants)
- Engineering
- Teaching
- Health/Social care



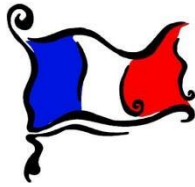
*Employers don't necessarily want people who are fluent in another language they may just want people who can introduce themselves and hold basic conversations.*

## Languages also help you to develop skills that will help you in any job:

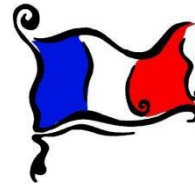
- communication
- team working
- interpersonal
- presentation
- problem solving
- organisational



You may not want to use your languages in the work place but think about whether you would like to travel when you are older. The best part of travelling is not necessarily seeing the sights. It can be meeting new people, making new friends and finding out about different ways of life.



# IGCSE French



## ▪ Edexcel

IGCSE French will build on the knowledge you have gained in Key Stage 3. The course covers a variety of topics (listed below) and aims to develop your skills in the four key areas (Speaking, Listening, Reading and Writing). As you study the different topics, you will also extend your knowledge of tenses and other grammatical structures.

<b>Paper 1: Listening</b>	25% of the total International GCSE
<b>Content summary</b> This paper assesses listening skills across five topic areas. <ul style="list-style-type: none"><li>• Home and abroad</li><li>• Education and employment</li><li>• Personal life and relationships</li><li>• The world around us</li><li>• Social activities, fitness and health.</li></ul>	
<b>Assessment:</b> Assessment is through a 30-minute examination paper set and marked by Pearson, plus five minutes' reading time. The total number of marks for the paper is 40.	

<b>Paper 2: Reading and Writing</b>	50% of the total International GCSE
<b>Content summary</b> This paper assesses reading and writing skills in separate sections across five topic areas. <ul style="list-style-type: none"><li>• Home and abroad</li><li>• Education and employment</li><li>• Personal life and relationships</li><li>• The world around us</li><li>• Social activities, fitness and health.</li></ul>	
<b>Assessment:</b> Assessment is through a 1-hour and 45-minute examination paper set and marked by Pearson.  The total number of marks for the paper is 80, with 40 marks for reading and 40 marks for writing.	

<b>Paper 3: Speaking</b>	25% of the total International GCSE
<p><b>Content summary</b></p> <p>This paper assesses speaking skills across five topic areas, however sub-topics A3, C3, C5, D2 and E4 will not be assessed in this paper. The examination is made up of three tasks (A, B and C). Students will present and answer questions on a picture. They will also discuss two <b>different</b> topics, chosen at random by Pearson from the following.</p> <ul style="list-style-type: none"> <li>• Home and abroad</li> <li>• Education and employment</li> <li>• Personal life and relationships</li> <li>• The world around us</li> <li>• Social activities, fitness and health.</li> </ul> <p><b>Assessment:</b> Total assessment time is 8-10 minutes. The total number of marks for the paper is 40.</p>	

## Listening

Students must be able to:

- identify and note main points
- deduce the meaning of words from context
- extract specific details
- identify points of view
- show some understanding of unfamiliar language
- recognise attitudes, emotions and opinions.

This paper will feature questions drawn from a variety of sources, which all relate to the topics. These sources should be considered as different contexts in which students can write and understand French. Specialist and/or technical French vocabulary or detailed specialist knowledge of the topics are not required.

## Reading

Students must be able to:

- identify and note main points
- deduce the meaning of words from context
- extract specific details
- identify points of view
- show some understanding of unfamiliar language
- recognise attitudes, emotions and opinions.

## Writing

This section will consist of two writing tasks and a third grammar-based task:

- 1) The first writing task is short, and the student will be asked to write 60–75 words, including four prescribed words or short phrases.
- 2) The second writing task is longer than the first and contains an element of choice. The student will be able to choose from three questions that are drawn from different topics, and they will need to write between 130 and 150 words in response to the question, addressing four bullet points.
- 3) In the third grammar-based task students will be asked to change:
  - the words in brackets so that they correctly fit the sentences. This will involve the need to manipulate, for example, verbs and adjectives, into their correct word form
  - grammatical accuracy, punctuation and spelling will be assessed in this section of the paper.

## Speaking

Students must be able to:

- describe the contents of a picture
- describe possible past or future events related to people in the picture
- respond to questions about the picture and its related topic
- take part in a spontaneous conversation on two further topics.

In **each** conversation students must develop their responses, show initiative, express and justify points of view and refer to past, present and future events.



**IGCSE** – Expressing and Understanding writing and reading. All Arab nationals at NIA must study iGCSE Arabic as 1<sup>st</sup> language (iGCSE Arabic as 2<sup>nd</sup> language is also available for all non-native speakers)

### **Content summary:**

- Section A: Reading
- Section B: Expressing and writing

### **Aims**

The aims are to:

- Enable students to communicate accurately, appropriately and effectively in writing;
- Enable students to understand and respond appropriately to what they read;
- Encourage students to enjoy and appreciate the variety of language;
- Promote the students' personal development and an understanding of themselves and others.

## **Assessment objectives**

### **Reading**

Candidates are assessed on their ability to:

R1: Understand and collate explicit meanings

R2: Understand, explain and collate implicit meanings and attitudes

R3: Select, analyze and evaluate what is relevant to specific purposes

R4: Understand how writers achieve effects.

### **Writing**

Candidates are assessed on their ability to:

W1: Articulate experience and express what is thought, felt and imagined W2:

Order and present facts, ideas and opinions

W3: Understand and use a range of appropriate vocabulary

W4: Use language and register appropriate to audience and context

W5: Make accurate and effective use of paragraphs, grammatical structures, sentences, punctuation and spelling.



## Assessment

### Paper 1 – 2 hours

**Dictionaries may not be used in the examination.**

Questions relate to two passages of approximately 600–700 words each, linked by a common theme. These passages are printed on the question paper.

#### Question 1 (25 marks)

This question is divided into a series of sub-questions requiring answers of different lengths. The sub-questions are based on Passage 1 and test the following Reading Objectives (20 marks):

R1 Understand and collate explicit meanings

R2 Understand, explain and collate implicit meanings and attitudes

R3 Select analyses and evaluate what is relevant to specific purposes

R4 Understand how writers achieve effects.

In addition, 5 marks are available for the accuracy of the language in which answers are expressed.

#### Question 2 (25 marks)

Candidates write a summary of 200–250 words based on Passage 1 and Passage 2.



The question tests the following Reading Objectives (15 marks):

R1 Understand and collate explicit meanings

R2 Understand, explain and collate implicit meanings and attitudes

R3 Select analyses and evaluate what is relevant to specific purposes

In addition, 10 marks are available for Writing (5 marks for Style and Organization and 5 marks for Accuracy of Language).

## **Paper 2 – 2 hours**

**Dictionaries may not be used in the examination.**

This paper is divided into two sections, as detailed below. Candidates are required to write **two** compositions, one from each section.

### **Section 1 – Discussion and Argument (25 marks)**

Four argumentative/discursive titles are set, from which candidates choose one.

### **Section 2 – Description and Narration (25 marks)**

Four titles are set (two descriptive and two narratives), from which candidates choose one. Candidates are required to write between 350 and 500 words for each of their answers.



## Is ICT the right subject for me?

ICT IGCSE syllabus encourages students to develop lifelong skills, it is a chance to develop a whole new understanding of how ICT impacts our lives, from our iPhone, washing machine, school and business environments. Learn how to master a variety of programs and combine theoretical understanding with practical application.

## What will I learn?

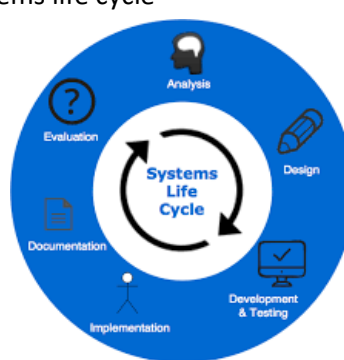
- The ability to understand and implement new and emerging technologies within a business environment
- How to analyse, design, implement, test and evaluate Information and Communication Technology (ICT) systems
- Considering the impact which new technologies will have on ways of working and the social, economic and ethical issues associated with them
- Awareness of the ways ICT can help in practical and work-related scenarios.



## How I will be assessed?

40% - assessment will be theory and assessed in one written examination. (2 hours)

60% - assessment is practical, assessed over two examinations in computer labs. (2 hours 15 mins)

CIE IGCSE ICT (0417)	
Year 10	Year 11
<b>Theory</b> Main Areas of Study <ul style="list-style-type: none"> <li>• Types and component of computer systems</li> <li>• Input and output devices</li> <li>• Storage devices and media</li> <li>• Networks and the effects of using them</li> <li>• The effects of using IT</li> <li>• ICT applications</li> <li>• Safety and security</li> <li>• Audience</li> <li>• Communication</li> </ul>	<b>Theory</b> Main Areas of Study <ul style="list-style-type: none"> <li>• The systems life cycle</li> </ul> 

<b>Practical</b> Main Areas of Study <ul style="list-style-type: none"> <li>· Word processing</li> <li>· Databases</li> <li>· Presentation</li> </ul>	<b>Practical</b> Main areas of study <ul style="list-style-type: none"> <li>· Spreadsheets</li> <li>· Web authoring</li> </ul>
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## Computer Science

### CIE IGCSE Computer science (0478):

Computer science is the study of the foundational principles and practices of computation and computational thinking and their application in the design and development of computer systems. Learning computational thinking involves learning to program, that is to write computer code.

Computer Science enables learners further to develop their interest in computing and to gain confidence in programming. They will also understand some of the main principles of problem-solving using computers.

Learners apply their understanding to develop computer-based solutions using algorithms and a high-level programming language such as Python. They also develop a range of technical skills, as well as the ability to test effectively and to evaluate computing solutions.

Computer Science is an ideal foundation for further study in Computer Science. In addition understanding the principles of Computer Science provides learners with the underpinning knowledge required for many other subjects in science, technology, engineering and maths.

### Units

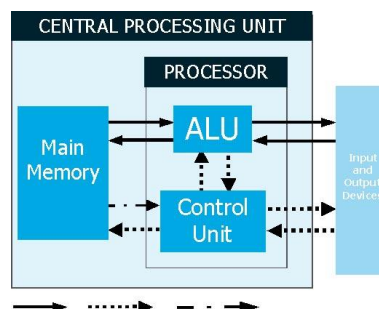
#### Section 1 – Computer systems

1. Data representation
2. Data transmission
3. Hardware
4. Software
5. The Internet and its uses
6. Automated and emerging technologies

#### Section 2 - Algorithms, programming and logic

7. Algorithm design and problem solving
8. Programming
9. Databases
10. Boolean Logic

### Assessment



#### CODE

```

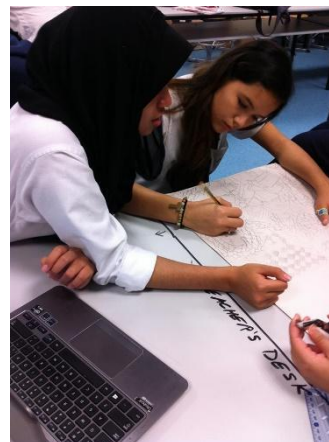
1 a = 1
2 b = 1
3 while a < 10:
4     print ("Loop",a)
5     a = a + 1
6     b = b + 1
7     if b == 4:
8         break
9 print ('loop terminated at condition')
```

Component	Weighting	Examination
Paper 1 Theory	60%	1 hour 45 mins
Paper 2 Problem-solving and programming	40%	1 hour 45 mins

# Art and Design

Cambridge's International GCSE in Art and Design is designed to encourage an adventurous and enquiring approach to the subject, focusing on the assessment of a visual language of communication.

In the context of Fine Art, candidates are required to work in at least one of the disciplines of painting, drawing, printmaking and/or sculpture. Further details of each are provided below. Fine art may be defined as work which is produced as an outcome of the candidates' personal experience, rather than that which is created exclusively for a practical function, or that which is the outcome of a tightly prescribed brief. It is a means by which ideas are explored, communicated and, through visual information and enquiry, translated into art outcomes.



Work produced for this specification will demonstrate the use of formal elements and creative skills, and give visual form to individual thoughts, feelings, observations and ideas. Candidates will show evidence of trying to extend their own and others' ways of seeing the world. They will use the visual language of the subject sensitively and thoughtfully to support their intentions.

## Assessment Objectives

Candidates will be assessed on their ability to

**AO1** record observations, experiences and ideas which are appropriate to intentions

**AO2** analyse and evaluate images, objects and artifacts, making informed connections with the work of others

**AO3** develop and explore ideas, using a variety of media and processes that are appropriate to intentions

**AO4** review and refine ideas, modifying work as it progresses, before presenting a coherent personal response.

The assessment objectives are equally weighted and form the basis of the course..

### Assessments:

Student led coursework (Starts Year 10 - December Year 11) : 50%

Externally set project (January Year 11 - April Year 11): 50%

Mock 2 & External Exam are both 8 hours split over two days.

*of learners striving for excellence and celebrating success*



# Business Studies

## IGCSE | EDEXCEL

Students will use real life examples exploring how businesses start, grow and thrive in an ever-changing global economy. After completing the two-year course students will have an understanding of the dynamics of business activity and the related considerations of ethics and sustainability.

### CONTENT:

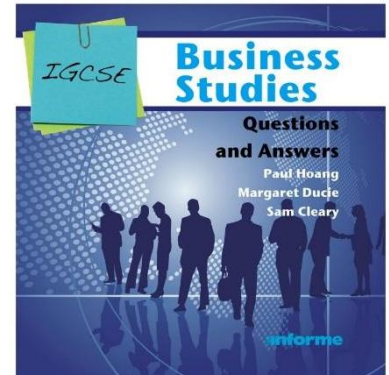
**Business activity:** Various objectives of a business, changing business environments and the criteria for judging success.

**People in business:** People in organisations, focusing on their roles, relationships and management in business.

**Business Finance:** Accounting and financial information as an aid to decision making.

**Marketing:** Identifying and satisfying customer needs in a changing and competitive international environment.

**Business operations:** The way organisations use and manage resources to produce goods and services.



## Assessment Summary:

### PAPER 1

Investigating small businesses

50% IGCSE

80 marks, 1h30mn

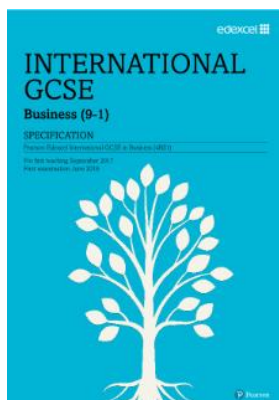
### PAPER 2

Investigating large businesses

50% IGCSE

80 marks, 1h30mn

Students should have a level 5 in English and Maths to take the subject.



# ECONOMICS

## IGCSE | EDEXCEL

The content is appropriate and relevant for progression, and is appropriate for international students, building understanding and awareness of economic theory and testing concepts in realistic contexts. It develops students' ability to participate effectively in global society as citizens, producers and consumers. The content in both Paper 1: Microeconomics and Business Economics and Paper 2: Macroeconomics and the Global Economy is engaging and accessible for all students.

### Paper 1: Microeconomics and Business Economics

All resources are scarce and therefore limited in supply. Consumers, firms and governments all have to make choices between different products and these choices will introduce the concept of opportunity cost. Students will learn about the supply and demand model. Having looked at how markets work, students will look at how they sometimes fail. Students will look at what is needed to produce goods and services, including land, labour, capital and enterprise. Students will study business costs, revenues and profits and will explore different types of businesses, from those that are competitive to single firms that we call monopolies, and also those industries with several large firms, which we call oligopolies. They will look at the alternative ways in which Government can affect markets, considering the benefits and drawbacks of each.

### Paper 2: Macroeconomics and the Global Economy

In macroeconomics students will look at all the markets combined in a country. They will look at the different objectives that governments will be concerned about. These include trying to achieve: low inflation; low unemployment; increases in economic growth; surpluses or equilibrium on the current account of the balance of payments; redistribution of income; environmental protection. For each objective, students will look at the issues and problems involved and how the government acts to improve the outcomes. Students will then look at the global economy. This will involve looking at the benefits and problems of increased integration between economies of the globe. Students will look at international trade and how countries come together as trading partners to boost growth. Exchange rates will also be looked at to consider how changes can affect an economy. Students will study both developing and developed economies.

#### Assessment Summary:

##### PAPER 1

Microeconomics and Business Economics

50% IGCSE

80 marks, 1h30mn

##### PAPER 2

Macroeconomics and the Global Economy

50% IGCSE

80 marks, 1h30mn

**Economics is the art  
to meet unlimited  
needs with scarce  
resources**

~ Laurence J. Peter ~

# GCSE PE



## SYLLABUS - Pearson Edexcel

The syllabus provides candidates with an opportunity to study both the practical and theoretical aspects of Physical Education.

### **Successful GCSE Physical Education students gain lifelong skills, including:**

- an ability to plan, perform, analyse and improve, and evaluate physical activities
- knowledge, skills and understanding of a range of relevant physical activities
- an understanding of effective and safe performance
- an understanding of the role of sport and physical activity in society and in the wider world
- an excellent foundation for advanced study
- an enjoyment of physical activity

### **CAREERS In Physical Education**

The Armed Force  
Sports Instructor  
Dietician / Nutritionist  
Physiotherapist  
Personal Trainer  
Athlete  
Sports Rehabilitation  
Police Officer

Sports Technologist  
Health and Fitness Instructor  
Sports Biomedical Scientist  
Sports Therapist  
Medical Researcher  
Sports Coach / Manager  
Teacher  
Sports and Exercise Scientist



## QUALIFICATION AT A GLANCE

### **Content and assessment overview**

The Pearson Edexcel Level 1/Level 2 GCSE (9–1) in Physical Education consists of two externally-examined papers and two non-examined assessment components.

Components 1 and 2 will be assessed in May/June in any single year. Components 3 and 4 may be assessed at any point during the course, with marks submitted by the centre prior to moderation. Moderation will take place in the same year as the written examinations.

<b>Component 1: Fitness and Body Systems (*Component code: 1PE0/01)</b>
Written examination: 1 hour and 45 minutes 36% of the qualification 90 marks
Content overview Topic 1: Applied anatomy and physiology Topic 2: Movement analysis Topic 3: Physical training Topic 4: Use of data
<b>Assessment overview</b> The assessment consists of multiple-choice, short-answer, and extended writing questions. Students must <u>answer</u> all questions. Calculators can be used in the examination.

<b>Component 2: Health and Performance (*Component code: 1PE0/02)</b>
Written examination: 1 hour and 15 minutes 24% of the qualification 70 marks
Content overview Topic 1: Health, fitness and well-being Topic 2: Sport psychology Topic 3: Socio-cultural influences Topic 4: Use of data
<b>Assessment overview</b> The assessment consists of multiple-choice, short-answer, and extended writing questions. Students must <u>answer</u> all questions. Calculators can be used in the examination.

<b>Component 3: Practical Performance (*Component code: 1PE0/03)</b>
Non-examined assessment: internally marked and externally moderated 30% of the qualification 105 marks (35 marks per activity)
Content overview Skills during individual and team activities General performance skills
<b>Assessment overview</b> The assessment consists of students completing three physical activities from a set list. One must be a <u>team activity</u> . One must be an individual activity. The final activity can be a free choice. Students must participate in three separate activities. Students will be assessed against set assessment criteria found in the <i>Pearson Edexcel Level 1/Level 2 GCSE (9–1) in Physical Education practical performance assessment criteria</i> . These will be assessed by the teacher and moderated by Pearson.

<b>Component 4: Personal Exercise Programme (PEP) (*Component code: 1PE0/04)</b>
Non-examined assessment: internally marked and externally moderated 10% of the qualification 20 marks
Content overview Aim and planning analysis Carrying out and monitoring the PEP Evaluation of the PEP
<b>Assessment overview</b> The assessment consists of students producing a Personal Exercise Programme (PEP), and will require students to analyse and evaluate their performance. These will be assessed by the teacher and moderated by Pearson.

## Physical activities

The list below contains the permitted team and individual activities that students must select from. This list has been set by the Department for Education.

TEAM ACTIVITIES	INDIVIDUAL ACTIVITIES
<b>Activity</b>	<b>Activity</b>
Association football	Amateur boxing
Badminton	Athletics
Basketball	Badminton
Canoeing	Canoeing
Cricket	Cycling
Dance	Dance
Gaelic football	Diving
Handball	Golf
Hockey	Gymnastics
Hurling	Equestrian
Lacrosse	Kayaking
Netball	Rock climbing
Rowing	Rowing
Rugby league	Sculling
Rugby union	Skiing
Squash	Snowboarding
Table tennis	Squash
Tennis	Swimming
Volleyball	Table tennis
<b>Specialist activity*</b>	Tennis
Blind cricket	Tramplining
Goal ball	<b>Specialist activity*</b>
Powerchair football	Boccia
Table cricket	<u>Polybat</u>
Wheelchair basketball	
Wheelchair rugby	





# Global Citizenship

This iGCSE is available for a fast track exam at the end of Year 10.

If politics, diplomacy and world events intrigue you, Global Citizenship is the subject for you. The aim of the subject is to broaden peoples' views when it comes to the different forms of governance and to take an honest look at some of the bigger issues facing people around the globe. These include the widening gap between the rich and the poor; the exploitation of child labour in various parts of the world and the destruction of the environment for the need of resources and personal wealth.

Students who enjoy debate, are open to philosophical discussions and feel the need to be a voice in an ever changing world, will enjoy this subject.

## **Key subject aims**

The Edexcel International GCSE in Global Citizenship qualification aims to:

- Introduce and develop student understanding of key issues affecting the global community
- Develop student's understanding of how communities interact locally, nationally and globally
- Enable students to participate in local community actions and understand its impact on a range of scales
- Develop student skills of analysis and evaluation of different perspectives in relation to global issues

Paper 1: Global Citizenship	100% of the total International GCSE
<p>Content summary</p> <p>This paper assesses knowledge and understanding of four key themes relating to global citizenship studies:</p> <ul style="list-style-type: none"><li>• Politics and Governance</li><li>• Economic Development and the Environment</li><li>• Culture and Community</li><li>• Technology</li></ul> <p>These themes are broken down into related subject areas, which enable students to explore a wide range of issues and ideas, with a specific focus on how they interrelate with being an effective citizen.</p>	

## Assessment

- Assessment is through a two-and-a-half-hour examination paper set and marked by Pearson.
- The assessments are separated into four sections:
  - Section A: Citizenship Community Action Project
  - Sections B & C: Politics and Governance, Economic Development and the Environment, Culture and Community, Technology. The combinations may change year on year
  - Section D: Synoptic assessment
- The total number of marks for the paper is 100.

○

## What students will learn

- 1) Key citizenship ideas and concepts in response to changing cultural identity (individual and global).
- 2) The relationship between rights and responsibilities of citizens and responses to cultural change/adaptation.
- 3) The effects of social and cultural change/development in response to migration, political devolution and other global and community changes.

### ○ *Paper 1: Global Citizenship*

Students are required to develop their understanding of Global Citizenship through consideration of a series of questions.

Students must be able to:

- identify main points and aspects of a citizenship community action project
- extract specific details and relate them to their choice of citizenship community action project and its expected, hypothesised or actual impact
- identify points of view and demonstrate understanding of global concepts, themes and issues
- show understanding of deeper questioning
- recognise attitudes and opinions
- demonstrate wider breadth, depth and understanding through synoptic assessment.



# Environmental Management

## Cambridge International Examinations (CIE)

This syllabus is centred around the concept of: **sustainable development**. This may be defined as

***Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'***

Two concerns are fundamentally tied to the process of sustainable development of the Earth's resources:

- The basic needs of humanity – for food, clothing, shelter and jobs – must be met.
- The limits to development are not absolute but are imposed by present states of technology and social organisation and by their impacts upon environmental resources and upon the biosphere's ability to absorb the effect of human activities. But technology and social organisation can be both managed and improved to make way for a new era of economic growth.



How will I be assessed?	<p>Single Tier assessment via 3 compulsory written papers set and marked by CIE.</p> <p>Targeted Grades – A* - G</p> <p>Paper:1 – 1 hour 30mins</p> <p>Paper:2 – 1 hour 45mins</p> <p>Paper:4 - 1 hour 30mins – Alternative to Coursework paper</p>
Objectives (Aims) of the Course	<p>Students will acquire :</p> <ul style="list-style-type: none"> <li>• knowledge of the functioning of the natural system which makes life possible on Earth;</li> <li>• an understanding that humankind is part of this system and depends on it;</li> <li>• an appreciation of the diverse influences of human activity on the natural system;</li> <li>• 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;</li> <li>• 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;</li> <li>• an understanding of how local environments contribute to the global environment;</li> <li>• 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;</li> <li>• an awareness of their own values concerning environmental issues;</li> <li>• an awareness of the values of others;</li> <li>• a willingness to review their own attitudes in the light of new knowledge and experiences</li> <li>• a sound basis for further study, personal development and participation in local and global environmental concerns.</li> </ul>
Brief outline of the Course	<ul style="list-style-type: none"> <li>• Lithosphere</li> <li>• Hydrosphere</li> <li>• Atmosphere</li> <li>• Biosphere</li> </ul>



# D&T Graphic Products

## Aims

The aims of the Cambridge IGCSE Design and Technology Graphic Products syllabus are to enable candidates to develop:

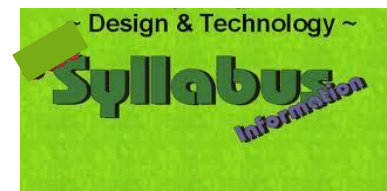
- awareness, understanding and expertise in those areas of creative thinking which can be expressed and developed through investigation and research, planning, designing, making and evaluating, working with media, materials and tools
- the ability to solve practical and technological problems using processes of analysis, synthesis and realisation
- a range of communication skills which are central to design, making and evaluation
- a range of making skills
- the desire to relate their work to their personal interests and abilities by learning and experimenting with materials in practical areas
- greater curiosity, enquiry, initiative, ingenuity, resourcefulness and discrimination
- improved technological awareness, attitudes of co-operation and social responsibility and abilities to enhance the quality of the environment
- the ability to make value judgments of an aesthetic, technical, economic and moral nature



This area of study aims to develop the skills that designers use within the context of their design activities in the design studio. It also aims to develop an awareness of the importance of communication and modeling techniques concerned with promotion and illustration of ideas and their interrelationship with all stages in commercial manufacture and promotion.

Students should refer to the role that graphic products have in one or more of the following or similar areas:

- |                          |                      |
|--------------------------|----------------------|
| • Packaging              | • Promotional design |
| • Display                | • Product design     |
| • Manuals                | • Transport          |
| • Architectural modeling | • Corporate identity |
| • Interior design        |                      |



## Assessment

**Paper 1** *Design* 1 hour 15 minutes

This is a compulsory paper. It tests design drawing, and 50 marks are available. **25% of total marks**

**Paper 2** *Graphic Product* 1 hour

Graphic products and 50 marks are available.

**25% of total marks**

**Project** - over 2 terms - The Project is compulsory and is a school-based assessment.  
100 marks are available for the project. **50% of total marks**