

Key Stage 4 (IGCSE)

CURRICULUM GUIDE 2026-28

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Darren Jones - Headmaster

Welcome from the Headmaster

In Years 7 to 9 all pupils follow the same curriculum, designed to provide an introduction to a range of subjects and areas of knowledge. In Year 10 a degree of choice is introduced to allow pupils to develop their individual interests and talents in greater depth. Even then the curriculum is designed to provide a broad and balanced range of courses and allow pupils access to a wide variety of learning and teaching styles. The curriculum is adapted by staff to ensure that it is relevant, stimulating and truly international.

These adaptations ensure that our pupils are suitably well qualified to enter universities around the world after completing their education at Ardingly Astana at the end of Year 13.

Making the right choices

Few 14-year-olds know exactly what they want to do when they leave school, and the career aspirations that they now have may well change over the next few years. According to research, the average person should expect to change their career 3 or more times, and their employer or job many more times. It is important that pupils make choices now that will keep open as many career paths as possible. For this reason, pupils are strongly advised to take a broad and balanced selection of IGCSE subjects. We would encourage pupils to take a humanities and a creative subject, for instance. Choosing three options will allow pupils to study 7 or 8 IGCSE subjects, which is more than sufficient to meet the demands of universities anywhere in the world. Support is available from a number of staff to help pupils and their parents to make the right choices.

Independence and initiative

The English Curriculum places increasing emphasis on pupils becoming independent learners able to use their own initiative. There is less emphasis on what pupils know – after all, with modern technology, it is possible to find the answer to most questions using a mobile phone – than on the higher level skills of communicating knowledge, as well as understanding, analysing and evaluating evidence, and the sources of this evidence.

There is a temptation for pupils to want to know the 'right' answer and to rely upon tutors to drill this into them, but education is more than tutoring. All IGCSE subjects are taught by highly qualified members of staff who will guide their pupils throughout the course. They are adept at teaching the skills and attitudes required for successful independent learning beyond school and throughout life. Should a pupil find a particular aspect of a course difficult, then their teachers will be able to help and advise pupils and their parents. I strongly encourage pupils to build up a dialogue with teachers and to ask for help as soon as an issue arises – knowing when to ask for help, not being afraid to admit that advice is required, is a sign of strength and an important life skill.

Beyond the classroom

Academic study provides the tools for pupils not only to further their education at university, but also an education for life, which requires far more than just book work. Whether in the Art Department, on the stage or on the playing field, our very talented secondary pupils happily balance a heavy academic load with a range of after school activities. The stimulus that these activities provide prepares pupils for the wider world and for university.

Ardingly Astana works with families to ensure that pupils have high academic expectations, achieve success in public examinations, and discover interests that will stay with them for life. We continue to be proud to teach our pupils to learn, to think independently, to challenge and to discuss, rather than be treated as empty vessels to be filled with facts. Our academic success speaks for itself!

Darren Jones - Headmaster

A Guide to the English National Curriculum and Key Stages

The majority of schools in England follow a National Curriculum that is divided into Year Groups and Key Stages. Ardingly Astana follows the Cambridge Curriculum, which is similar to the English National Curriculum, but adapts and develops it to meet the needs of our talented, multi-lingual, international minded pupils.

The table below outlines the way in which the school and the curriculum are divided.



Age on 31 August	Year	Curriculum Stage (Examination Course)	School Division
5	1	Key Stage 1	Primary School
6	2		
7	3	Key Stage 2	
8	4		
9	5		
10	6		
11	7	Key Stage 3	Secondary School
12	8		
13	9		
14	10	Key Stage 4 (IGCSE)	
15	11		
16	12	Key Stage 5 (A Levels)	Secondary School (6th Form)
17	13		

In Britain, education is compulsory for all children between the ages of 5 and 18 although clear provision is made for pupils between the ages of 3 to 5. Children are placed in Year Groups based on their age on 31st August of each academic year. Year Groups are based upon chronological age, and progress between Year Groups is usually automatic, although pupils may be out of their age group for exceptional reasons. Year Groups are clustered into Key Stages and a defined curriculum is produced for each Key Stage. Throughout each Key Stage, there are clear assessments to monitor and track each child's academic progress.

Pupils study IGCSE subjects over the two years of Key Stage 4, from the age of 14. All pupils study a compulsory core of English, Mathematics and Science plus a number of optional subjects. Pupils normally take 7 or 8 IGCSE courses. The IGCSE examinations are a formal assessment of a child's ability in each of the subjects they have studied. Those who wish to go to university will continue into Year 12 and Year 13 (Key Stage 5, also known as Sixth Form); to follow two-year Advanced Level courses. GCSE and IGCSE are internationally recognised academic standards and used, alongside Advanced Levels, as part of the academic selection process for entry into the top universities around the world.

The IGCSE programme

What are GCSEs and IGCSEs?

GCSE stands for General Certificate of Secondary Education. GCSE examinations are taken by the vast majority of pupils in England and Wales.

IGCSE stands for the International General Certificate of Secondary Education. It is at least of the same standard as, and in many cases, is higher than the GCSE. For many subjects, it is more suited to pupils in international schools where the courses and examinations will have an international flavour rather than being grounded in British situations and settings.

Examination boards

There are many examination boards to choose from. Ardingly Astana currently uses Cambridge Assessment International Education (CAIE), based in England.

Grades available

The grade range for IGCSE examinations is A*– G. The bottom grade is U (for an ungradable performance). In some subjects the A* – G range of grades may be split into two; A*– E for the extended level course and C – G for the core level course. The grades that pupils can obtain will, therefore, depend on what courses they follow and what examinations they sit. This will be decided later on during the courses.

Exams

Most subjects will be examined; however, PE, PSHE, and Kazakh will not be examined.

Pupils will sit most of their final exams in the third term of year 11. Year 11 pupils will take 'mock' examinations early in term 2 of year 11. These give pupils valuable examination practice and enable them to see 'real' IGCSE papers and crucially allow pupils to see which aspects of the course they need to work hardest on before the real examinations in May and June.

After the final exams

Pupils obtaining grades A*, A, B or C are considered to have done extremely well and passed their IGCSEs. Achieving these grades in five or more subjects opens up the option for advanced qualifications.

Pupils wishing to attend an overseas university will need to study at school for a further two years. They will need a good set of grades (five A* – C grades) at IGCSE level to be accepted into the 6th Form.

Examination costs

There are costs involved in all examination courses and the school passes on all charges to the pupils.

Core / Compulsory Subjects

- **English**
Pupils will either take IGCSE First language English and IGCSE English Literature or English as a Second Language (ESL).
- **Mathematics**
There are many examination boards to choose from. Ardingly Astana currently uses Cambridge Assessment International Education (CAIE), based in England.
- **Science**
Pupils have a choice of taking up to three separate sciences – Biology, Chemistry and Physics. It is recommended that pupils follow two sciences.
- **Kazakh Language, Literature and History**
All pupils have four 50 minute lessons each week, but this is not taken as an IGCSE.
- **Physical Education**
All pupils have one 50 minute lesson each week, but this is not taken as an IGCSE.
- **Personal, Social and Health Education (PSHE)**
All pupils have one 50 minute lesson each week, but this is not taken as an IGCSE.

Optional IGCSE Subjects

Pupils also choose up to three subjects and one reserve subject from the list below. Each option choice is allocated two lessons in the timetable. Pupils should read this booklet carefully and only make choices after careful consideration and discussion with their parents, teachers and other knowledgeable parties; this does not include external educational consultants, from which the school has great concerns about the quality of advice pupils will be given.

The final option blocks will be generated once all pupils have made their choices. If a particular subject is oversubscribed, it may be possible to add an additional class although this will not always be possible. However, some subjects which are offered may not run if numbers are not sufficient.

Optional Subjects:

Art & Design	Business Studies	Computer Science	Business Studies
Information and Communication	Technology	Global Perspectives	English Literature
Foreign Language Chinese			

Whom do I contact for further details?

Please contact any of the following people for further help and assistance:

✉ Mr Darren Jones Headmaster jones.d@ardingly.edu.kz

✉ Ms Shagufta Khan Key Stage 3 Coordinator s.khan@ardingly.edu.kz

CORE SUBJECTS

English

English is vital for communicating with others in school and in the wider world, and is fundamental to learning in all curriculum subjects. By studying English, pupils develop skills in speaking, listening, reading and writing. They learn to express themselves creatively and imaginatively, and to communicate with others confidently and effectively. All pupils follow either IGCSEs in First Language English and English Literature or IGCSE English as a Second Language.

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IGCSE English as a First Language

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0500

Textbooks: IGCSE First Language English, Collins, Cambridge First Language English

• Syllabus Aims:

This course is designed for learners whose mother tongue is English. The course allows learners to:

- ✓ develop the ability to communicate clearly, accurately and effectively when speaking and writing
- ✓ learn how to use a wide range of vocabulary, and correct grammar, spelling and punctuation
- ✓ develop a personal style and an awareness of the audience being addressed
- ✓ enable candidates to understand and respond to what they hear, read and experience
- ✓ enable candidates to communicate accurately, appropriately, confidently and effectively
- ✓ encourage candidates to enjoy and appreciate the variety of language
- ✓ complement candidates' ability to work with information and ideas in other areas of study; for example, by developing the skills of analysis, synthesis and the drawing of inferences
- ✓ promote candidates' personal development and an understanding of themselves and others

Specifically, pupils will be taught how to:

AO1: Reading

R1 demonstrate understanding of explicit meanings/ R2 demonstrate understanding of implicit meanings and attitudes/ R3 analyse, evaluate and develop facts, ideas and opinions/ R4 demonstrate understanding of how writers achieve effects/ R5 select information for specific purposes.

AO2: Writing

W1 articulate experience and express what is thought, felt and imagined/ W2 sequence facts, ideas and opinions/ W3 use a range of appropriate vocabulary/ W4 use register appropriate to audience and context/ W5 make accurate use of spelling, punctuation and grammar.

AO3: Speaking and Listening

SL1 articulate experience and express what is felt, thought and imagined/ SL2 present facts, ideas and opinions in a sustained, cohesive order/ SL3 communicate clearly, fluently and purposefully as an individual and in dialogue with other speakers/ SL4 use register appropriate to audience and context/ SL5 listen to and respond appropriately to the contributions of others.

• Prior Learning

Candidates who wish to take this course should have a level of English ability that is similar to someone who speaks English as their First Language.

• Progression

Candidates who are awarded grades A* to C in IGCSE First Language English are well prepared to follow courses leading to AS and A Level English Language.

• Assessment at a glance

At Ardingly Astana candidates study the following components of the course: Paper 2, and Component 4.*

IGCSE English as a First Language

Paper 1 2 hours Reading 50% 80 marks Structured and extended writing questions Questions will be based on three reading texts Externally assessed	50%
and	
Paper 2 2 hours Directed Writing and Composition 50% 80 marks Extended writing question and a composition task Externally assessed	50%
or	
Coursework Portfolio 50% 80 marks Three extended writing assignments Internally assessed and externally moderated	50%

IGCSE English Literature

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0475

Textbooks: Songs of Ourselves, Poetry Anthology, Volume 1

I'm the King of the Castle, Susan Hill

An Inspector Calls, J B Priestly

• Cambridge IGCSE Literature (English) aims to develop learners who:

- ✓ enjoy the experience of reading literature
- ✓ understand and respond to literary texts in different forms and from different periods and cultures
- ✓ communicate an informed personal response appropriately and effectively
- ✓ appreciate different ways in which writers achieve their effects
- ✓ experience literature's contribution to aesthetic, imaginative and intellectual growth
- ✓ explore the contribution of literature to an understanding of areas of human concern

Specifically, pupils will be taught how to:

AO1:

show detailed knowledge of the content of literary texts in the three main forms (drama, poetry and prose), supported by reference to the text.

AO2:

understand the meanings of literary texts and their contexts, and explore texts beyond surface meanings to show deeper awareness of ideas and attitudes.

AO3:

recognise and appreciate ways in which writers use language, structure and form to create and shape meanings and effects.

AO4:

communicate a sensitive and informed personal response to literary texts.

• Prior Learning

We recommend that candidates who are beginning this course should have previously studied English at Key Stage 3 or equivalent national educational frameworks.

• Progression

Candidates who are awarded grades A* to C in IGCSE English Literature are well prepared to follow courses leading to AS and A Level English Literature.

• Assessment at a glance

IGCSE English Literature candidates take Components 1, 3, 4 & 5.

IGCSE English Literature

Components	Weighting
Paper 1 1 hour 30 minutes Poetry and Prose (Open text) 50% 50 marks Candidates answer two questions: one from Section A and one from Section B. Section A Poetry: answer one question from a choice of two on each set text. The poems will be printed in the paper. Section B Prose: answer one question from a choice of two essay questions on each set text. Externally assessed	50%
And either	
Paper 2 2 hours Drama and Unseen (Open text) 50% 50 marks Candidates answer two questions: one from Section A and one from Section B. Section A Drama: answer one question from a choice of two on each set text – one passage-based and one essay question. Section B Unseen: answer one question from a choice of two, one based on a poem and one on a prose extract. Externally assessed	50%
or	
Component 3 Coursework Coursework 50% 50 marks Candidates submit two essays: Comparing texts: write an essay comparing two complete texts. One text must be drama, the second text may be drama or prose. Approximately 1500 words. 30 marks. Comparing poems: write an essay comparing two poems. These may be poems studied for Paper 1. Approximately 1000 words. 20 marks. Internally assessed and externally moderated marks	50%

English as an Additional Language

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0472

Textbooks: Cambridge IGCSE English as a Second Language Coursebook

Cambridge IGCSE English (as an Additional Language) – Course Summary

• Course Overview

Cambridge IGCSE English (as an Additional Language) (0472) is designed for learners whose first language is not English. The course develops practical communication skills in English for everyday, academic and work-related contexts. It is suitable for learners aged 14–16 and is assessed through four equally weighted language skills.

• Course Aims

- ✓ Develop effective communication skills in English
- ✓ Increase awareness of cultures and communities where English is spoken
- ✓ Build confidence in listening, speaking, reading and writing
- ✓ Encourage positive attitudes towards other languages and cultures
- ✓ Prepare students for further study, work and international contexts

• Content Overview

The syllabus is organised around five broad topic areas which provide contexts for language learning:

- ✓ Everyday activities
- ✓ Personal and social life
- ✓ The world around us
- ✓ The world of work
- ✓ The international world

• Assessment Overview

Component	Skill	Duration	Weighting	Assessment
Paper 1	Listening	50 minutes	25%	Externally assessed
Paper 2	Reading	1 hour	25%	Externally assessed
Paper 3	Speaking	10 minutes	25%	Internally assessed, externally moderated
Paper 4	Writing	1 hour	25%	Externally assessed

• Grading

Candidates are awarded grades from A* to G. All four components contribute equally to the final grade.

CORE SUBJECTS

Mathematics

At Ardingly Astana, all pupils in Years 10 and 11 must study IGCSE Mathematics. This is a two-year course leading up to two examinations in May/June of Year 11.

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IGCSE Mathematics

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0580

• Course outline

Cambridge IGCSE Mathematics encourages the development of mathematical knowledge as a key life skill, and as a basis for more advanced study. The syllabus aims to build pupils' 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. Pupils also gain an understanding of how to communicate and reason using mathematical concepts.

• Prior learning

We recommend that learners who are beginning this course will have previously studied mathematics in Key Stage 3 or similar curriculum.

• Progression

Candidates who are awarded grades A* to C IGCSE Mathematics curriculum are well prepared to follow courses leading to AS and A Level Mathematics.

The table below shows the topics which are studied at IGCSE.

Number	Trigonometry
Algebra and graphs	Vectors and transformation
Geometry	Probability
Mensuration	Statistics
Coordinate geometry	

• Assessment at a glance

All pupils take two written papers.

Candidates who follow the Core curriculum take Papers 1 and 3 and are eligible for grade C to G.

Candidates who follow the Extended curriculum take Papers 2 and 4 and are eligible for grades A* to E.

IGCSE Mathematics

Components	Weighting
Paper 1 (Core) 1 hour 30 minutes Short-answer questions based on the Core curriculum. Use of a calculator is not allowed Externally marked 80 marks	50%
Paper 2 (Extended) 2 hours Short-answer questions based on the Extended curriculum. Use of a calculator is not allowed Externally marked 100 marks	50%
Paper 3 (Core) 1 hour 30 minutes Structured questions on the Core curriculum. A scientific calculator is required Externally marked 80 marks	50%
Paper 4 (Extended) 2 hours Structured questions on the Extended curriculum. A scientific calculator is required Externally marked 100 marks	50%

CORE SUBJECTS

Science

In Year 10, those pupils who have shown exceptional ability in science in Year 9 may continue to study all three sciences as separate IGCSE courses. However, it is recommended that most pupils only study two sciences. The final decision about two or three sciences will be made by the Head of Key Stage 3 and the Headmaster based on recommendations from the science department and assessment data held on each pupil.

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IGCSE Biology

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0610

Textbooks: Essential Biology for Cambridge IGCSE (2nd Edition)

• Course outline

IGCSE Biology is accepted by universities and employers as proof of essential knowledge and ability within the field of biology. This syllabus enables learners to increase their understanding of the technological world and take an informed interest in scientific matters. It guides learners to recognise the usefulness (and limitations) of scientific method, and how to apply this to other disciplines and in everyday life and to develop relevant attitudes, such as a concern for accuracy and precision, objectivity, integrity, enquiry, initiative and inventiveness. Learners also develop an interest in, and care for, the environment and global matters surrounding this and gain a better understanding of the influence and limitations placed on scientific study by society, economy, technology, ethics, the community and the environment. Learners also develop an understanding of the scientific skills essential for both further study and everyday life.

• Prior learning

Learners beginning this course will have normally have completed the KS3 Science curriculum or similar course.

• Progression

Candidates who are awarded grades A* to C for this qualification are well prepared to follow courses leading to AS and A Level Biology.

• Syllabus content at a glance

The course covers a range of topics over the duration, ranging from introductory molecular biology and enzymes, through to more specific plant and human anatomy, immunology, and human and plant physiology. In addition to this variation, genetics, evolution and environmental impacts are also covered over the duration.

• Assessment at a glance

All candidates will study and be prepared for the extended level examination, but a final discussion about the options for Core or Extended components can be held after the year 11 mock exams. Candidates who are expected to achieve a grade C or above are usually entered for the extended papers, and candidates who are expected to achieve a grade D or below are usually entered for the core paper.

There are three main categories for assessment in the IGCSE Biology syllabus, AO1, AO2 and AO3. The former focusing more on knowledge with understanding. The AO2 category focuses more on handling information and problem solving, whilst the third AO3 category focuses on assessing learners experimental skills and investigations. Scientific subjects are, by their nature, experimental. It is therefore important that an assessment of a candidate's knowledge and understanding of biology should contain a practical component, and at Ardingly Astana pupils are entered for Paper 6, the Alternative to Practical written exam, but are taught the necessary practical skills and are assessed by teachers throughout the duration of the course.

IGCSE Biology

The table below shows the topics which are studied at IGCSE.

Core candidates take:		Extended candidates take:	
Paper 1 45 minutes A multiple-choice paper consisting of 40 items of the four-choice type. 40 marks This paper will be weighted at 30% of the final total mark.		Paper 2 45 minutes A multiple-choice paper consisting of 40 items of the four-choice. 40 marks This paper will be weighted at 30% of the final total mark.	
and		and	
Paper 3 1 hour 15 minutes A written paper consisting of short-answer and structured questions. 80 marks This paper will be weighted at 50% of the final total mark.		Paper 4 1 hour 15 minutes A written paper consisting of short-answer and structured questions. 80 marks This paper will be weighted at 50% of the final total mark.	
All candidates take:			
either		or	
Paper 5 1 hour 15 minutes Practical Test Questions will be based on the experimental skills in Section 4. The paper is structured to assess grade ranges A*–G. 40 marks This paper will be weighted at 20% of the final total mark.		Paper 6 1 hour Alternative to Practical Questions will be based on the experimental skills in Section 4. The paper is structured to assess grade ranges A*–G. 40 marks This paper will be weighted at 20% of the final total mark.	

IGCSE Chemistry

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0620

Textbooks: Essential Chemistry for Cambridge IGCSE (2nd Edition)

• Course outline

IGCSE Chemistry is accepted by universities and employers as proof of essential knowledge and ability within the field of chemistry. This syllabus enables learners to increase their understanding of the technological world and take an informed interest in scientific matters. It guides learners to recognise the usefulness (and limitations) of scientific method, and how to apply this to other disciplines and in everyday life and to develop relevant attitudes, such as a concern for accuracy and precision, objectivity, integrity, enquiry, initiative and inventiveness. Learners also develop an interest in, and care for, the environment and global matters surrounding this and gain a better understanding of the influence and limitations placed on scientific study by society, economy, technology, ethics, the community and the environment. Learners also develop an understanding of the scientific skills essential for both further study and everyday life.

• Prior learning

Learners beginning this course will have normally have completed the KS3 Science curriculum or similar course.

• Progression

Candidates who are awarded grades A* to C for this qualification are well prepared to follow courses leading to AS and A Level GCE Chemistry.

• Syllabus content at a glance

This course covers a range of topics over the duration, ranging from the particulate nature of matter to acids, bases and salts through to experimental techniques, the periodic table, atoms, elements and compounds, and metals. The course also includes content on stoichiometry, air and water, electricity, energetics, and organic chemistry throughout the duration of the course.

• Assessment at a glance

All candidates will study and be prepared for the extended level examination, but a final discussion about the options for Core or Extended components can be held after the year 11 mock exams. Candidates who are expected to achieve a grade C or above are usually entered for the extended papers, and candidates who are expected to achieve a grade D or below are usually entered for the core paper.

There are three main categories for assessment in the IGCSE Chemistry syllabus, AO1, AO2 and AO3. The former focusing more on knowledge with understanding. The AO2 category focuses more on handling information and problem solving, whilst the third AO3 category focuses on assessing learners experimental skills and investigations. Scientific subjects are, by their nature, experimental. It is therefore important that an assessment of a candidate's knowledge and understanding of biology should contain a practical component, and at Ardingly Astana pupils are entered for Paper 6, the Alternative to Practical written exam, but are taught the necessary practical skills and are assessed by teachers throughout the duration of the course.

IGCSE Chemistry

The component options for IGCSE Chemistry learners are outlined below:

Core candidates take:		Extended candidates take:	
Paper 1 45 minutes A multiple-choice paper consisting of 40 items of the four-choice type. 40 marks This paper will be weighted at 30% of the final total mark.		Paper 2 45 minutes A multiple-choice paper consisting of 40 items of the four-choice. 40 marks This paper will be weighted at 30% of the final total mark.	
and		and	
Paper 3 1 hour 15 minutes A written paper consisting of short-answer and structured questions. 80 marks This paper will be weighted at 50% of the final total mark.		Paper 4 1 hours 15 minutes A written paper consisting of short-answer and structured questions. 80 marks This paper will be weighted at 50% of the final total mark.	
All candidates take:			
either		or	
Paper 5 1 hour 15 minutes Practical Test Questions will be based on the experimental skills in Section 4. The paper is structured to assess grade ranges A*–G. 40 marks This paper will be weighted at 20% of the final total mark.		Paper 6 1 hour Alternative to Practical Questions will be based on the experimental skills in Section 4. The paper is structured to assess grade ranges A*–G. 40 marks This paper will be weighted at 20% of the final total mark.	

IGCSE Physics

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0625

Textbooks: Essential Physics for Cambridge IGCSE (2nd Edition)

• Course outline

IGCSE Physics is accepted by universities and employers as proof of essential knowledge and ability within the field of physics. This syllabus enables learners to increase their understanding of the technological world and take an informed interest in scientific matters. It guides learners to recognise the usefulness (and limitations) of scientific method, and how to apply this to other disciplines and in everyday life and to develop relevant attitudes, such as a concern for accuracy and precision, objectivity, integrity, enquiry, initiative and inventiveness. Learners also develop an interest in, and care for, the environment and global matters surrounding this and gain a better understanding of the influence and limitations placed on scientific study by society, economy, technology, ethics, the community and the environment. Learners also develop an understanding of the scientific skills essential for both further study and everyday life.

• Prior learning

Learners beginning this course will have normally have completed the KS3 Science curriculum or similar course.

• Progression

Candidates who are awarded grades A* to C for this qualification are well prepared to follow courses leading to AS and A Level GCE Physics.

• Syllabus content at a glance

The course covers a range of topics over the duration, ranging from general wave properties and motion, to light, mass and weight, electromagnetic spectrum, density, sound, forces, simple phenomena of magnetism, and momentum. In addition to this, electrical quantities, energy, work and power, electric circuits, pressure, digital electronics, simple kinetic molecular model of matter, dangers of electricity, along with thermal properties and temperature, electromagnetic effects, thermal processes, and nuclear atoms and radioactivity are also covered.

• Assessment at a glance

All candidates will study and be prepared for the extended level examination, but a final discussion about the options for Core or Extended components can be held after the year 11 mock exams. Candidates who are expected to achieve a grade C or above are usually entered for the extended papers, and candidates who are expected to achieve a grade D or below are usually entered for the core paper.

There are three main categories for assessment in the IGCSE Physics syllabus, AO1, AO2 and AO3. The former focusing more on knowledge with understanding. The AO2 category focuses more on handling information and problem solving, whilst the third AO3 category focuses on assessing learners experimental skills and investigations. Scientific subjects are, by their nature, experimental. It is therefore important that an assessment of a candidate's knowledge and understanding of physics should contain a practical component, and at Ardingly Astana pupils are entered for Paper 6, the Alternative to Practical written exam, but are taught the necessary practical skills and are assessed by teachers throughout the duration of the course.

IGCSE Physics

The component options for IGCSE Physics learners are outlined below:

Core candidates take:		Extended candidates take:	
Paper 1 45 minutes A multiple-choice paper consisting of 40 items of the four-choice type. 40 marks This paper will be weighted at 30% of the final total mark.		Paper 2 45 minutes A multiple-choice paper consisting of 40 items of the four-choice. 40 marks This paper will be weighted at 30% of the final total mark.	
and		and	
Paper 3 1 hour 15 minutes A written paper consisting of short-answer and structured questions. 80 marks This paper will be weighted at 50% of the final total mark.		Paper 4 1 hours 15 minutes A written paper consisting of short-answer and structured questions. 80 marks This paper will be weighted at 50% of the final total mark.	
All candidates take:			
either		or	
Paper 5 1 hour 15 minutes Practical Test Questions will be based on the experimental skills in Section 4. The paper is structured to assess grade ranges A*–G. 40 marks This paper will be weighted at 20% of the final total mark.		Paper 6 1 hour Alternative to Practical Questions will be based on the experimental skills in Section 4. The paper is structured to assess grade ranges A*–G. 40 marks This paper will be weighted at 20% of the final total mark.	



OPTIONAL SUBJECTS

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IGCSE Art and Design

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0400

• Course outline

Cambridge IGCSE Art & Design encourages pupils to develop creativity, independence, confidence and critical thinking through practical art-making. Pupils explore a wide range of materials and techniques while learning how artists and designers develop ideas through observation, research and experimentation.

The course values personal response, encouraging pupils to follow their interests, take creative risks and develop their own visual language while building strong technical skills. Pupils are expected to complete regular sketchbook and portfolio work both in and out of lessons, including photographing and recording ideas, researching artists and designers, and reflecting on their progress through short written annotations.

Through practical problem-solving and independent decision-making, pupils build resilience, confidence and strong visual communication skills. These skills provide excellent preparation for A Level Art & Design, creative career pathways, and any future route that values independent thinking and adaptability.

• What Pupils Will Learn

Throughout the course, pupils will:

- Record ideas through drawing, photography, painting, making and digital processes
- Experiment with a wide range of materials and techniques
- Research and respond to artists, designers and cultural influences
- Develop ideas from initial investigation to final outcomes
- Reflect on their work and make improvements
- Build a portfolio that shows creative growth over time

Pupils may work in areas such as:

- ✓ Painting and drawing
- ✓ Graphic design
- ✓ Sculpture and 3D design
- ✓ Textiles and fashion
- ✓ Photography and digital media

IGCSE Art and Design

• How the Course Is Assessed

The IGCSE Art & Design course has two assessed components, both externally marked by Cambridge.

Over the two-year course, pupils build a coursework portfolio for Component 1. In Year 11, they also respond to a theme set by Cambridge (such as Identity, Structures or Movement) as part of their final assessment and Component 2.

All candidates take:	and:
Component 1 Portfolio — 60% 60 marks (weighted to 90) Candidates research, develop and present a portfolio. The portfolio comprises: a selection of work that demonstrates how candidates have explored and developed their ideas over the duration of the course and how they have met the assessment objectives. Externally assessed	Component 2 Externally Set Assignment — 40% 8 hours 60 marks Candidates respond to the theme set by Cambridge. The externally set assignment comprises: supporting studies that culminate in a final outcome, produced during a supervised test of 8 hours' total duration. Externally assessed

• Assessment Objectives

All work is assessed using four skills:

1. Recording – drawing, photography, research and observation 8
2. Exploring – experimenting with materials and techniques
3. Developing – refining ideas and making connections
4. Presenting – producing personal, well-resolved final outcomes

Assessment objective	Weighting in components %	
	Component 1	Component 2
AO1 Record	25	25
AO2 Explore	25	25
AO3 Develop	33	25
AO4 Present	17	25
Total	100	100

Pupils are rewarded for progress, originality, and decision-making, not just technical ability.

IGCSE Business

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0450

Textbooks: IGCSE Business Studies

In Business you will be expected to take an interest in local and global business events and issues. The subject requires quite extensive reading and writing in response to business problems. An ability to handle numerical data is also required. It is unlikely that you will have studied the subject before, and this is not a requirement as the course assumes that you have no previous knowledge.

In general, those pupils who are the most successful have a good grasp of the English language and are sound mathematicians – not daunted by graphs or other numerical data. A willingness to work hard and to take an interest in current events is obviously an essential requisite of success. Business Studies complements most other subjects and is a useful field of study for those interested in a career in business, management, finance, banking, accounting, and law.

• Course outline

IGCSE Business is accepted by universities and employers as proof of an understanding of business concepts and techniques across a range of different types of businesses. Successful Cambridge IGCSE Business learners will be able to:

- ✓ understand different forms of business organisations, the environments in which businesses operate and business functions such as marketing, operations and finance
- ✓ appreciate the role of people in business success. They will also gain lifelong skills, including:
- ✓ the ability to calculate and interpret business data
- ✓ communication skills needed to support arguments with reasons
- ✓ the ability to analyse business situations and reach decisions or judgements

• Prior learning

Learners beginning this course are not expected to have studied Business previously.

• Progression

Candidates who are awarded grades A* to C in IGCSE Business are well prepared to follow courses leading to AS and A Level Business Studies, or the equivalent.

IGCSE Business

• Syllabus content at a glance

The table below shows the topics which are studied at IGCSE

Business activity	Marketing strategy
Classification of businesses	Costs, scales of production and break-even analysis
Enterprise, business growth and size	Achieving quality production
Types of business organisation	Location decisions
Business objectives and stakeholder objectives	Business finance: needs and sources
Motivating workers	Cash-flow forecasting and working capital
Organisation and management	Income statements
Recruitment, selection and training of workers	Balance sheets
Internal and external communication	Analysis of accounts
Marketing, competition and the customer	Government economic objectives and policies
Market research	Environmental and ethical issues
Market mix	Business and the international economy
Production of goods and services	

IGCSE Business

• Assessment at a glance

All pupils take two written papers, Paper 1 and Paper 2. Both question papers will draw on topics from the whole of the syllabus content. All candidates are eligible for grades A* to G.

Component	Weighting
Paper 1 1 hour 30 minutes Written examination consisting of four questions requiring a mixture of short answers and structured data responses. Candidates answer all questions. Externally assessed. 80 marks	50%
Paper 2 1 hour 30 minutes Written examination consisting of four questions based on a case study, provided as an insert with the paper. Candidates answer all questions. Externally assessed. 80 marks.	50%

IGCSE Chinese (Mandarin) – Foreign Language

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0547

Textbooks: Easy Steps to Chinese (1-8) and Cambridge IGCSE™ Mandarin as a Foreign Language Coursebook (Cambridge International IGCSE)

• Course outline

IGCSE Chinese (Mandarin) is accepted by universities and employers as proof of linguistic ability and understanding. The course encourages learners to develop lifelong skills, including:

- the ability to use a foreign language as a means of practical communication
- insight into the culture and civilisation of countries where the language is spoken
- a positive attitude towards language learning, towards the speakers of other languages, and towards other cultures and civilisations
- techniques which can be applied to other areas of learning, such as analysis and memory skills
- a sound foundation for progression to employment or further study

• Prior learning

We recommend that learners who are beginning this course should have previously studied this language as part of the Key Stage 3 curriculum or similar curriculum.

• Progression

Candidates who are awarded grades A* to C in IGCSE Chinese (Mandarin) are well prepared to follow courses leading to AS and A Level Chinese.

• Syllabus content at a glance

The syllabus content is organised around five broad topic areas which provide contexts for the acquisition of vocabulary and the study of grammar and structures. Through the study of these topic areas, candidates gain insight into target language countries and communities. The topic areas are:

- ✓ Everyday activities
- ✓ Personal and social life
- ✓ The world around us
- ✓ The world of work
- ✓ The international world

IGCSE Chinese (Mandarin) – Foreign Language

• Assessment at a glance

All candidates take the following four components:

Component	
Paper 1 Listening approximately 40 minutes Candidates listen to a number of recordings and answer multiple-choice and matching questions. Externally assessed 30 marks	25%
Paper 2 Reading 1 hour 15 minutes Candidates read a number of texts and answer multiple-choice and matching questions as well as questions requiring short answers. Externally assessed 40 marks	25%
Paper 3 Speaking* approximately 10 minutes Candidates complete one role play and conversations on two topics. Internally assessed and externally moderated 40 marks	25%
Paper 4 Writing 1 hour 15 minutes Candidates complete one form-filling task, one directed writing task and one task in the format of an email/letter or article/blog. Externally assessed 40 marks	25%

IGCSE Computer Science

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0478

Textbooks: IGCSE Computer Science - Hodder Education

• Course outline

IGCSE Computer Science learners study the principles and practices of computing and gain confidence in computational thinking and programming. They learn to program by writing computer code and they develop their understanding of the main principles of problem-solving using computers.

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

Studying IGCSE Computer Science helps learners appreciate current and emerging computing technologies and the benefits of their use. They also learn to recognise the ethical issues and potential risks when using computers. IGCSE Computer Science is an ideal foundation for further study in Computer Science. Understanding the principles of Computer Science provides learners with the underpinning knowledge required for many other subjects in science and engineering, and the skills learnt can also be used in everyday life.

Cambridge IGCSE Computer Science helps learners develop an interest in computational thinking and an understanding of the principles of problem-solving using computers. They apply this understanding to create computer-based solutions to problems using algorithms and a high-level programming language. Learners also develop a range of technical skills, and the ability to effectively test and evaluate computing solutions.

Studying Cambridge IGCSE Computer Science helps learners appreciate current and emerging computing technologies, the benefits of their use and recognise their potential risks. It provides an ideal foundation for progression to Cambridge International AS & A Level and is valuable for other areas of study and everyday life.

• Prior learning

Learners who are beginning this course would normally have followed an ICT and computing course within the Key Stage 3 curriculum

• Progression

Candidates who are awarded grades A* to C are well prepared to follow courses leading to AS and A Level Computer Science/Computing.

IGCSE Computer Science

• Syllabus content at a glance

Sections	Topics
Section 1 Theory of Computer Science Computer systems	Data representation Communication and Internet technologies Hardware and software Security Ethics 1 Data representation 2 Data transmission 3 Hardware 4 Software 5 The internet and its uses 6 Automated and emerging technologies
Section 2 Practical Problem-solving and Programming Algorithms, programming and logic	Algorithm design and problem-solving Programming Databases 7 Algorithm design and problem-solving 8 Programming 9 Databases 10 Boolean logic

• Assessment at a glance

For Cambridge IGCSE Computer Science, candidates take two components: Paper 1 and Paper 2.

Component	
Paper 1 Theory 1 hour 45 minutes Computer Systems 75 marks Short-answer and structured questions Questions will be based on Topics 1–6 of the subject content All questions are compulsory No calculators are permitted Externally assessed	Paper 2 Problem-solving and Programming 1 hour 45 minutes Algorithms, Programming and Logic 75 marks Short-answer and structured questions and a scenario-based question Questions will be based on Topics 7–10 of the subject content All questions are compulsory No calculators are permitted Externally assessed
50%	50%

IGCSE Global Perspectives

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0457

Textbooks: Oxford University Press: Complete Global Perspectives for Cambridge IGCSE & O Level
ISBN 978-0-19-836681-2

• Course outline

IGCSE Global Perspectives provides opportunities for enquiry into, and reflection on, key global issues from a personal, local/national and global perspective.

Young people globally face unprecedented challenges in an interconnected and information-heavy world, not least in how they will gain a sense of their own active place in the world and cope with changes that will impact on their life chances and life choices.

Pupils will have opportunities to acquire and apply a range of skills, including:

- ✓ gathering, synthesising and communicating information.
- ✓ collaborating with others to achieve a common outcome.
- ✓ analysing and evaluating planning, processes and outcomes.
- ✓ developing and justifying a line of reasoning.

Pupils will explore stimulating topics that have global significance. They will assess information critically and explore lines of reasoning. They will learn to collaborate with others from another culture, community or country, directing much of their own learning and developing an independence of thought.

The syllabus emphasises the development and application of skills rather than the acquisition of knowledge. Pupils will develop transferable skills that will be useful for further study and for young people as active citizens of the future.

IGCSE Global Perspectives encourages awareness of global problems and offers opportunities to explore possible 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 great complexity of the world and of human thought and opening hearts to the diversity of human experience and feeling.

• Prior learning

We recommend that candidates who are beginning this course should have previously studied English Language.

• Progression

Candidates who are awarded grades C to A* in IGCSE Global Perspectives are well prepared to follow courses leading to AS and A Level 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

Candidates choose from the following topics: It is not intended for candidates to study all of the topics listed below, rather teachers should choose a range of topics that has the most relevance to their pupils. Learners should show evidence of research in at least three topics listed.

IGCSE Global Perspectives

Belief Systems	Language and Communication
Biodiversity and Ecosystem Loss	Law and Criminality
Climate Change	Poverty and Inequality
Conflict and Peace	Sport and Recreation
Disease and Health	Technology and the Economic Divide
Education for All	Trade and Aid
Employment	Tradition, Culture and Identity
Family and Demographic Change	Transport and Infrastructure
Fuel and Energy	Urbanisation
Humans and Other Species	Water, Food and Agriculture

• Assessment at a glance

All candidates take the following three components:

Component	Weighting	Nature of assessment
1 Written Paper 1 hour 15 minutes The Written Paper consists of compulsory questions based on a range of sources provided with the paper. Sources will present global issues from a range of perspectives.	25%	External Individual
2 Individual Research Candidates carry out research based on two topic areas and submit an Individual research report on each topic.	30%	External Individual
3 Group Project The Group Project comprises two elements: Group Element. Candidates collaborate to produce a plan and carry out a group project based on research into one topic area. The topic area must be different from the topics studied for the Individual Research. Individual Element. Candidates evaluate the plan, process and outcome of the group project as well as their individual contributions to the project. Candidates report on what they have learnt from cross-cultural collaborations.	35%	Internal Group 33% Individual 67%

IGCSE Information and Communication Technology

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0417

Textbooks: Cambridge IGCSE ICT Coursebook - Second Edition - Hodder Education

• Course outline

Computers are shaping our world in a way that no one would have thought possible. Information and Communication Technology covers a variety of topics to help pupils increase their awareness of the way computers are used around them. Balancing theory, philosophy, and practical work, pupils will enhance their basic knowledge and understanding of how computers function, how to use different types of applications to create documents, organizing and analysing data in databases, and programming simple algorithms for games.

Students develop an understanding of the implications of technology in society and the ways Information and Communication Technology (ICT) can help at home, work and the wider world. Through practical and theoretical studies, students solve problems using a variety of common software such as word processors and interactive presentation software.

Learners will analyse, design, implement, test and evaluate ICT systems, making sure that they are fit for purpose. There is an emphasis on developing lifelong skills, which are essential across the curriculum and their future career.

IGCSE Information and Communication Technology encourages learners to develop lifelong skills, including:

- ✓ Knowledge of ICT including new and emerging technologies
- ✓ Autonomous and discerning use of Information and Communication Technology
- ✓ Skills to enhance work produced in a range of contexts
- ✓ Skills to analyse, design, implement, test and evaluate ICT systems
- ✓ Skills to consider the impact of current and new technologies on methods of working in the outside world and on social, economic, ethical and moral issues
- ✓ ICT-based solutions to solve problems
- ✓ The ability to recognise potential risks when using ICT, and safe, secure and responsible practice

• Prior learning

Learners who are beginning this course would normally have followed an ICT and computing course within the Key Stage 3 curriculum.

• Progression

Candidates who are awarded grades C to A* IGCSE Information and Communication Technology are well prepared to follow courses leading to AS and A Level Applied Information and Communication Technology.

IGCSE Information and Communication Technology

The table below shows the topics which are studied at IGCSE

1. Types and components of computer systems
2. Input and output devices
3. Storage devices and media
4. Networks and the effects of using them
5. The effects of using ICT
6. ICT applications
7. The systems life cycle
8. Safety and security
9. Audience
10. Communication
11. File management

12. Images
13. Layout
14. Styles
15. Proofing
16. Graphs and charts
17. Document production
18. Databases
19. Presentations
20. Spreadsheets
21. Website authoring

• Assessment

For IGCSE Information and Communication Technology, candidates take three components: Paper 1 Theory, Paper 2 Document Production, Data Manipulation and Presentations and Paper 3 Data Analysis and Website Authoring.

Component	Weighting
Paper 1 Theory 1 hour 30 minutes 80 marks Questions will be based on sections 1–21 of the subject content All questions are compulsory Externally assessed	40%
Paper 2 2 hours 15 minutes Document Production, Databases and Presentations 70 marks This test assesses the practical skills needed to use the applications covered in sections 17, 18 and 19 of the subject content Candidates must demonstrate the practical skills relevant to sections 11–16 All tasks are compulsory Externally assessed	30%
Paper 3 2 hours 15 minutes Spreadsheets and Website Authoring 70 marks This test assesses the practical skills needed to use the applications covered in sections 20 and 21 of the subject content Candidates must demonstrate the practical skills relevant to sections 11–16 All tasks are compulsory Externally assessed	30%

IGCSE Additional Mathematics

Examination Board: Cambridge Assessment International Education

Syllabus Code: 0606

Textbooks: Oxford University Press: Complete Global Perspectives for Cambridge IGCSE & O Level
ISBN 978-0-19-836681-2

• Course outline

IGCSE Additional Mathematics is intended for pupils with a high ability in mathematics who are likely to achieve Grades A* or A in the IGCSE Mathematics examination.

Pupils gain lifelong skills including

- ✓ The further development of mathematical concepts and principles.
- ✓ The extension of mathematical skills and their use in more advanced techniques.
- ✓ An ability to solve problems, present solutions logically and interpret results.
- ✓ A solid foundation for further study.

• Prior learning

We recommend that learners who are beginning this course should be projected to achieve an A* or A grade in Mathematics. pupils will be expected to sit a written assessment before being accepted onto this IGCSE.

• Progression

Candidates who are awarded grades A* to C IGCSE Additional Mathematics curriculum are well prepared to follow courses leading to AS and A Level Mathematics.

The table below shows the topics which are studied at IGCSE

Functions	Circular measure
Quadratic functions	Trigonometry
Factors of polynomials	Permutations and combinations
Equations, inequalities and graphs	Series
Simultaneous equations	Vectors in 2 dimensions
Logarithmic and exponential functions	Calculus
Straight-line graphs	
Coordinate geometry of the circle	

IGCSE Additional Mathematics

• Assessment at a glance

All pupils take two written papers. Candidates are eligible for grades A* to E. Grades F and G will not be available. Candidates who do not achieve the minimum mark for grade E will be unclassified.

Component	
Paper 1 2 hours Candidates answer all questions. 10–12 questions of various lengths. Use of a calculator is not allowed Externally assessed 80 marks	50%
Paper 2 Reading 2 hours Candidates answer all questions. 10–12 questions of various lengths. Scientific calculators are required. Externally assessed 80 marks	50%



Key Stage 4 (IGCSE)

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