



INTERNATIONAL BACCALAUREATE

Joint IB Diploma Programme
2009 to 2011

The Mission Statement of the International Baccalaureate

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the IB works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

The IB Learner Profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

All IB learners should strive to be:

Inquirers	They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.
Knowledgeable	They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.
Thinkers	They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.
Communicators	They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.
Principled	They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.
Open-minded	They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.
Caring	They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.
Risk-takers	They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.
Balanced	They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.
Reflective	They give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.

The International Baccalaureate at the Sherborne Schools

An Introduction

We are delighted that since October 2006, the two Schools, Sherborne and Sherborne Girls, have been authorised by the International Baccalaureate to offer its Diploma Programme for both Sixth Forms.

This dual authorisation is unique among the more than 2000 IB schools worldwide and the 100 or so in the United Kingdom. We are attracted both by the high academic standards that the IB maintains and by the all-round education that the Diploma Programme offers. The principles on which it is founded are closely reflected in the values that we cherish and in the rich and varied experience that our boarding environments provide.

Among the schools offering the Diploma Programme, we have a distinctive contribution to make. One of the principal characteristics of the IB is the range of subjects that every student has the opportunity to tackle. Through the collaboration of our two Schools we have been able, from the outset, to provide a wide choice of subjects which students will find very appealing. We have collaborated in areas of our Sixth Form teaching for some years; offering a combined IB programme is a natural extension of our academic co-operation.

High academic standards, learning to work independently, the development of initiative and powers of analysis, an emphasis on internationalism and on the ability to relate to points of view which may seem very different from our own: this is indeed an education which prepares an individual for the world's challenges. The International Baccalaureate will enrich our Schools and those who teach and study here and we view the future with excitement.

The opportunity to study for the IB Diploma is an option now available to boys and girls at both Schools. Not everyone is suited to the IB and it is important that the Sixth Form choice is properly informed and that it follows advice from the Schools.

We wish you the best of luck with your discussions and planning for what will be an exciting and fulfilling Sixth Form experience.



Simon Eliot
Headmaster



Jenny Dwyer
Headmistress



SHERBORNE



Contents

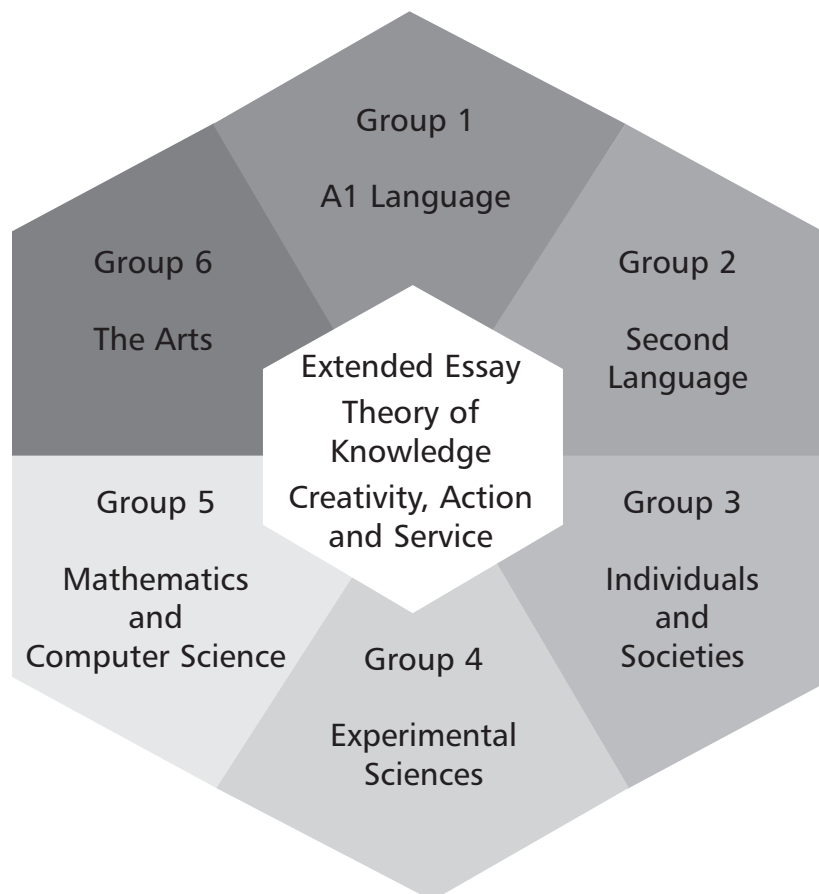
The Mission Statement of the International Baccalaureate	i
The IB Learner Profile	ii
The International Baccalaureate at the Sherborne Schools	iii
The IB Diploma Programme	1
The Award of the Diploma	2
The Core Programme:	
The Extended Essay	3
Theory of Knowledge	4
Creativity, Action and Service	4
The Six Areas of Knowledge and Subjects Available	5
Course descriptions	
English	7
Modern Languages (Language B)	8
Italian (ab initio)	9
Mandarin (ab initio)	10
Latin/Classical Greek	11
Economics	13
Environmental Systems and Societies	14
Geography	15
History	16
Philosophy	17
Group 4 Science	18
Biology	19
Chemistry	20
Design Technology	21
Physics	22
Mathematics	23
Music	25
Visual Arts	27

The IB Diploma Programme

IB Diploma students are required to study six subjects (one taken from each of the groups) concurrently over two years. Of the six subjects, at least **three** must be taken at Higher Level (HL) and a maximum of **three** at Standard Level (SL). Students are not advised to tackle more than 3 subjects at Higher Level. Within a broad curriculum subject choices are as flexible as possible, offering a breadth of disciplines, whilst Higher Level subjects encourage study in depth. This deliberate combination of breadth and depth equips students with the skills and attitudes demanded in a world of international mobility and global communications.

In addition to this, pupils must satisfy **three core components**:

- follow a course in **Theory of Knowledge (TOK)**
- submit an **Extended Essay (EE)** on a topic of their choice
- take part in the **Creativity, Action and Service (CAS)** programme.



External written examinations take place at the end of Upper Sixth only. There are also specialised forms of assessment, appropriate to the nature of a given subject, and some internal assessment, which usually counts for 20 – 30% of the final mark for a subject.

The Award of the Diploma

The Diploma is internationally understood and respected and is highly valued by universities in the UK and in many other countries. There is some internal assessment for all subjects but externally marked examinations always form the greater part of the assessment. The grading system is criterion-based (that is, results are determined by performance against set standards, not by a student's position with regard to other candidates).

A maximum of 7 points is awarded for each subject. A score of 6 or 7 is generally considered to equate to a grade A in A Level.

In addition, up to 3 points are awarded for the combined performance in the Extended Essay and Theory of Knowledge components. An acceptable standard must be achieved in both of these elements for the overall Diploma to be awarded. In addition, although no points are given for the CAS component, this must be satisfactorily completed for the award to be made.

The minimum number of points required for the Diploma to be awarded is 24 out of the maximum of 45, although there are other requirements to be met, including an average score of 4 points at Higher Level and 3 points at Standard Level, with no score of 1 point in any subject.

As all examinations are usually taken at the end of the two-year course, there is no question of re-sitting subjects during the course, or of being examined in individual units of subjects, though re-sits of subjects in later sessions are possible.

The Core Programme

The Core is in no sense an 'extra' and it must be approached as a very important part of the Diploma Programme. A Diploma cannot be awarded without successful completion of the Core.

(i) The Extended Essay

Every student must submit an Extended Essay. The essay is defined as an in-depth study of a limited topic within a subject and its purpose is to provide candidates with an opportunity to engage in independent research. The upper word limit of the essay is 4000 words (excluding abstract, bibliography, maps etc.) and it should be written in a clear, correct and formal style.

The IB attaches importance to the formal presentation of the essay. Of the marks available, two-thirds are awarded for this formal structure and the School will support students in understanding the appropriate requirements.

It is essential that the essay is a student's own work and that any research sources are appropriately acknowledged.

The subject of the essay is a student's own choice, with help in defining the choice of essay title being provided by a Supervisor with appropriate experience.

The essay provides an exciting opportunity for students to explore a subject which is of real interest to them in more detail than is usually possible.

It is expected that students will begin work on the essay in the February of the Lower Sixth year and complete it by the end of September of the first Upper Sixth term.

Support with writing the essay:

- **Supervisor** The main support for individual students with the **subject matter** of the essay will come from a student's Supervisor, who will also help to ensure that the student meets all deadlines for the essay.
- **The Librarian** will be a major source of support with **research** skills and accessing relevant material. She will also give advice about referencing and evaluating materials, about documentation and citation, and about meeting the IB requirements for presentation.

(ii) Theory of Knowledge

The Theory of Knowledge (TOK) requirement is central to the educational philosophy of the Diploma Programme.

It offers students and their teachers the opportunity to:

- reflect critically on diverse ways of knowing and on areas of knowledge
- consider the role and nature of knowledge in their own culture, in the cultures of others, and in the wider world.

In addition, it prompts students to:

- be aware of themselves as thinkers, encouraging them to become more acquainted with the complexity of knowledge.
- recognise the need to act responsibly in an increasingly interconnected but uncertain world.

Assessment

The assessment of the Theory of Knowledge component is two-fold. The internal assessment is based on a presentation dealing with the application to a real-life situation of some aspect of knowledge and given individually or in groups; the external assessment is an essay of 1200–1600 words on a topic chosen from a list provided by the IB. The presentations and the writing of the essays are likely to take place in October and November respectively of the Upper Sixth year.

(iii) Creativity, Action and Service (CAS)

According to the IB CAS handbook, 'CAS is a framework for experiential learning, designed to involve students in new roles. The emphasis is on learning by doing real tasks that have real consequences and then reflecting on these experiences over time.' CAS is a fundamental part of each student's programme and the emphasis is on learning through participation in either a variety of different activities or a single extended project. The Creativity element might, for example, include a language club, debating, drama, participation in projects run by Sherborne's many-sided twinning association, or working on a school magazine; Action might take the form of a new sporting activity or, for instance, outward-bound or team-building activities; Service might involve teaching or running a club in a primary school, work with Amnesty International or even participation in an overseas community-based project. A wide range of appropriate activities can be followed in our Schools and it should be easy for each student to construct a balanced programme which covers all three of the categories. A minimum of 50 hours in each area over the two-year period is to be devoted to these activities. A CAS diary will be used to record and monitor activities together with written self-reflections.

The Six Areas of Knowledge and Subjects Available

GROUP 1 (First Language)

- **English**

A broad range of texts are offered for study as part of the IB's policy of encouraging students to maintain strong ties to their own cultures. Through this area of knowledge, students should ideally 'develop strong written and oral skills, respect for the literary heritage of their first language, and an international perspective'. One of the explicit aims of this group is to 'engender a lifelong interest in literature and a love for the elegance and richness of human expression.'

GROUP 2 (Second Language)

- **Classical Greek***
- **French**
- **German***
- **Italian (ab initio)****
- **Latin**
- **Mandarin (ab initio)****
- **Spanish**

Second language courses develop students' powers of expression and bring them into ways of thought that may differ from their own. The principal aim for the courses in Group 2 is to 'enable students to use the language in a range of contexts and for many purposes'. The focus is on written and spoken communication.

** Subject to sufficient demand*

*** Italian and Mandarin (ab initio) are only available at Standard Level*

GROUP 3 (Individuals and Societies)

- **Economics**
- **Environmental Systems and Societies***
- **Geography**
- **History**
- **Philosophy**

**Environmental Systems and Societies may be studied in either Group 3 or Group 4. It satisfies the requirements of both groups, thus making possible the choice of an extra subject from another group.*

GROUP 4 (Experimental Sciences)

- **Biology**
- **Chemistry**
- **Design Technology**
- **Environmental Systems and Societies***
- **Physics**

Experimental Science subjects 'promote an understanding of the concepts, principles and applications of the respective disciplines, together with an appreciation of the methodology of the Experimental Sciences in general.'

** See note to Group 3 on page 5*

GROUP 5 (Mathematics)

- **Mathematics**
- **Mathematical Studies***

Each course aims to deepen a student's understanding of mathematics as a discipline and to promote confidence.

** Mathematical Studies is a Standard Level course suitable for students who will not need Mathematics to support their future studies. It emphasises the application of Mathematics to real-world situations.*

GROUP 6 (The Arts)

- **Music**
- **Visual Arts**

An emphasis is placed on 'practical production by the student and exploration of a range of creative work in a global context.'

In Group 6 it is possible to study, instead of Visual Arts or Music, a second subject from Groups 2 – 4. This adds important flexibility to the programme and will mean that a student's programme can include another science, humanity or language.

English A1

The broad aim of the programme is to enable students to study their literary and cultural heritage within an international perspective, and the course is designed to develop writing and oral skills through the study of diverse literary texts. Students will be encouraged to engage in rigorous literary criticism and to be clear, concise and exact in the written and oral expression of their ideas. A central objective is to broaden students' global perspective by extending their awareness of literary works from other cultures via the World Literature components of the course.

Assessment

A. Written component (70%):

- (i) Coursework (20%) on World Literature: this is assessed via a 1000 – 1500 word comparative essay on links between two or three of the chosen texts written originally in a language other than English: HL candidates complete a second task offering opportunity for an imaginative or creative response;
- (ii) External Assessment by examination (50%): there are two externally assessed examination components, each worth 25% of the final mark.

Paper 1 tests the candidate's ability to write an analytical commentary on an unseen extract from a literary text.

Paper 2 tests the candidate's knowledge of texts studied in Part 3, *Groups of Works*.

B. Oral component (30%):

- (i) an individual oral commentary on an extract from one of the texts studied;
- (ii) an individual oral presentation followed by a discussion.

Note: It is our policy for all our students to offer English A1.

Modern Languages (Language B)

The Course

The languages currently offered are French, German and Spanish.

The course builds on the work done towards the GCSE examination. It seeks to develop the linguistic skills and knowledge which are necessary for conveying ideas – both in speech and in writing – clearly, accurately and coherently. Higher Level students will be expected to show a wider knowledge and greater linguistic depth and level of control than Standard Level students. All students are required to develop awareness of register and of different styles of writing, such as those appropriate to personal and formal letters, articles, reports, advertisements and brochures. They will also be expected to use the spoken language in a range of tasks, including conversations, debates, formal reports and speeches. By the end of the course they should have developed a good level of oral and written competence.

The course should prove an enjoyable one, with the emphasis on practical communication in speech and in writing. A particularly attractive feature is its flexibility, which will give us the opportunity to cover some interesting and original material. In class, a broad selection of resources will be used; these will include written and recorded texts of all kinds, such as film extracts, television programmes and ICT-based material. Teachers will give students advice on the independent research and study that they should undertake. Students will be expected to tackle regular reading (with active note-taking) of magazines, newspapers, books and to make appropriate use of the ICT facilities and the Internet to develop language knowledge and skills, as well as knowledge of the cultures related to the language. Students are also strongly encouraged to spend some time in the country of the language being studied.

IB students will try to see the links between their language studies and other subjects and aspects of the programme. They will benefit greatly from identifying how they can make use in their language work of what they have learnt and experienced in other disciplines and activities. At all times students are expected to use the target language in class, think, ask questions and develop skills of coherent and logical argument.

Assessment

A. Written component (70%):

- (i) a range of linguistic exercises based on a number of written texts;
- (ii) written task (essay, letter, article etc.) of at least 400 words (Higher Level) or 250 words (Standard Level).

B. Oral component (30%):

- (i) individual oral: a presentation with follow-up questions and a general conversation; this is recorded and sent off to be marked;
- (ii) class activity, marked by the teacher. The mark for the student's best performance in a number of activities is submitted.

Italian (ab initio)

The Course

The work done in this Standard Level course deals with everyday situations and aspects of Italian culture related to them. Considerable emphasis is placed on communication. The following broad topics are studied:

- The individual
- Education and work
- Towns and services
- Food and drink
- Leisure and travel
- The environment
- Health and emergencies

A good command of grammatical structures is necessary in order to be able to carry out communicative tasks but the emphasis is firmly on practical skills. A wide range of resources will be used, and the learning of the language will be set clearly in the context of contemporary Italian society. A stay in Italy is strongly recommended.

Assessment

External Assessment

Written component (70%)

- Paper 1* (text handling)
- Paper 2* (two writing tasks: one short, one extended)

Internal Assessment

Oral component (30%)

- Individual oral*
- Interactive oral activity*

Mandarin (ab initio)

The Course

This Standard Level course is for beginners, designed to be followed over two years by students who have no previous experience of learning Mandarin. The main focus of the course is on the acquisition of language required for purposes and situations usual in everyday social interaction. Both the aims and assessment of this course focus on communication through the use of Mandarin. All students are required to develop awareness of register and of different styles of writing, such as those appropriate to personal and formal letters, articles, reports, advertisements and brochures. They will also be expected to use the spoken language in a range of tasks, including conversations and speeches. The course will be divided into a series of units, each of which involves a variety of exercises which aim to develop some of these skills as well as to enable students to handle different kinds of reading and text-based activities. The course is only available at Standard Level.

A wide range of texts and materials will be studied, chosen so as to develop students' linguistic competence in various contexts (units will include: the individual; education and work; the environment) and also in order to form an introduction to the cultures of China and Chinese-speaking countries. The focus will be constantly on the use of language in a Chinese context. Students will develop accuracy and fluency to engage in various everyday conversations, and to read and write in Chinese scripts in Pinyin (the Romanized scripts) and in the written characters. The acquisition of the tones will be specially emphasized throughout the courses.

Assessment

Assessment throughout the course will consist of a variety of tasks, both written and spoken. Tasks involving a written response will be characterised by the integration of reading and writing skills. The students will have to carry out a variety of writing tasks and be able to manipulate past, present and future tenses. Oral tasks will include presentation, discussion and various interactive activities, which will be such as to permit the assessment of listening skills.

Latin/Classical Greek

The Course

This course builds on the work done towards the GCSE examination. It seeks to develop linguistic resources, including vocabulary and grammar, and to give students insights into the enormous influence that the Romans had upon our culture or the influence of Greek thought and ideals on modern civilisations. This insight will be gained by the study of the literature, both prose and verse, of surviving texts in the original form, as well as in translation. By reading the set texts and prescribed classical authors, students will develop good linguistic skills and will gain a direct understanding of the language and thought processes of the ancient civilisation, and, through their ability to understand and translate texts, will acquire a direct appreciation of the different perspective of the people in that culture. Students' knowledge may be further broadened by study of the texts in translation when they will explore the historical development and wider cultural achievements of ancient peoples, whose political, religious and legal principles still have an impact on the world today.

The study of a classical language develops powerful linguistic, literary and analytical skills and combines well with many other arts subjects, as well as the sciences and mathematics. It is a challenging and exciting subject that provides the student with a useful and highly valued qualification for anyone hoping to study arts, languages, literature or law at university, among many other choices.

Students are expected to develop an ability to appreciate and analyse the techniques and styles of various authors, and further to construct a clear argument supported by relevant examples. A range of texts will be studied so as to develop students' linguistic competence in a variety of writing styles (epic, oratory, history). Some of the texts will complement each other and provide insight into the culture that produced them. The focus will be mainly on the language itself but also on the society and politics of the times.

Assessment throughout the course will consist of a variety of tasks, including interactive grammar and vocabulary drills and individual and group preparation of unseen translation passages. In their written work, students will be expected to exploit the full range of material studied and their cultural knowledge.

There are three parts:

Part I – Study of the Language (Latin: grammatical work and study of Livy; Classical Greek: grammatical work and study of Xenophon)

Part II – Topics (Latin: Roman Epic and Roman Love Poetry; Ancient Greek: Greek Epic and Oratory)

Part III – Individual Study (research dossier on a classical topic or an oral presentation of text selection).

Assessment

- (i) *Paper 1 – Momentum Translation* (externally assessed – 40%): an extended passage is set, most of which is accompanied by a parallel translation; a specified part is left untranslated, and the candidate is required to produce a translation of that part. The passage is followed by questions on its content. 35 marks are awarded for the translation and 5 marks for the questions. The use of dictionaries is permitted.
- (ii) *Paper 2 – Set Texts* (externally assessed – 40%): this paper is a test of the understanding of the set text, and of literary appreciation, response to and knowledge of the cultural and historical background. For each of the prescribed topics, questions are set on two extracts from the prescribed texts studied in the original language. Candidates also write a short essay on one of the two prescribed topics studied.
- (iii) *Individual Study* (internal assessment – 20%): assessment is based on the final research dossier, oral presentation or composition, using appropriate descriptors.

Economics

The Course

What will happen to house prices in the future?

Why do some countries with huge natural resources have a low standard of living?

Should 4x4s be charged more than other cars to drive in towns?

These are some of the questions that could be looked at over the two years. The course does not expect or require any previous academic study in the subject. It seeks to develop the ability to analyse and evaluate events going on in the world today from a scientific point of view. The course will act as a great starting point for topical discussions and any number of careers. The topics below give a general idea of the content that will be covered. The content becomes interesting and relevant because practical applications of the theory, such as those above, are in the media daily.

Topics

Introduction to economics – foundation of economics, definitions of growth and development, scarcity, choice and rationing systems.

Microeconomics – demand, supply and elasticity, firms and when markets fail.

Macroeconomics – national income, macroeconomic models, demand side and supply side policies, unemployment, inflation and distribution of income.

International issues – reasons for trade, protectionism, economic integration, WTO, balance of payments, exchange rates, balance of payment problems, terms of trade.

Development economics – sources of economic growth and development, consequences of growth, barriers to growth and/or development, and evaluation of growth and development strategies.

Assessment

External Assessment

Written Papers (4 hrs – 80% at HL, 3 hours - 75% at SL)

- (i) *Paper 1* – 1 hour (extended responses)
- (ii) *Paper 2 (HL only)* – 1 hour (short answers)
- (iii) *Paper 3* – 2 hours (data response)

Internal Assessment

Portfolio – (20% at HL, 25% at SL) Four commentaries.

Typical articles to base the commentary on could be:

'Banana war leaves Caribbean a casualty' (*The Observer*, UK, 24 November 2002)

'Hewitt calls for higher alcopop tax' (*Yahoo*, UK, 27 October 2006)

'Speculators buy up drought-hit wheat crops to earn their daily bread'
(*The Guardian*, UK, 28 October 2006)

Environmental Systems and Societies

The Course

This subject combines the techniques and knowledge associated with an experimental science with those relating to a Group 3 subject (“Individuals and societies”). It is offered at Standard Level only. It seeks to provide students with a clear sense of the interrelationships between environmental systems and societies which will enable them to make an informed personal response to a wide range of environmental issues. There will be constant emphasis on the decisions that they have to make in their own lives. Practical work in the laboratory and in the field will play an important part in the course.

The course divides into seven sections:

- Systems and models
- The ecosystem
- Human population, carrying capacity and resource use
- Conservation and biodiversity
- Pollution management
- The issue of global warming
- Environmental value systems

Assessment

External Assessment (two papers) (80%)

(i) *Paper 1* (short-answer and data-based questions)

(ii) *Paper 2* (analysis of data relating to a case study and also two structured essay questions)

Internal Assessment

(based on practical work) (20%)

This subject may also be studied in Group 4.

Geography

The Geography course aims to develop an understanding of the interrelationships between people, place and the environment. It provides a global perspective and generates a sense of world interdependence in its investigation of contemporary world issues. Students are led to recognise the need to plan and manage the world's resources for present and future generations. Students are encouraged to ask Where? How? and Why? in their study of the differences in human distribution and people's use of the Earth in time and space. There is recognition of the interaction between humans and their environment and, through technology, the increasing ability of people to modify that environment.

Throughout the two year course the interrelated themes of population, resources and development provide the core of the syllabus. In addition there are units on physical and human topics including ecosystems, drainage basins and their management, settlements and productive activities. The topics are illustrated with case studies from a wide range of global locations to demonstrate the social, economic and political interdependence of peoples in an international context. Geographical skills related to location, maps, graphs and statistics and the use of geographical terminology will be integral parts of all components.

Higher Level students study the core and four other units. Standard Level students study the core and two other units. All students will also participate in fieldwork investigations within the local environment to practise techniques relevant to geographical enquiry. The primary data collected, together with appropriate secondary data, will be presented and analysed to reach conclusions relevant to the original aim of the enquiry. This enquiry is presented as coursework and comprises 25% of the Higher and 20% of the Standard Level examinations.

The Geography course will appeal to students who enjoy studying a subject that is relevant to their own lives and experiences, enjoy finding out about new people, places, landscapes and events, have an interest in environmental issues and are concerned about global questions. While studying Geography they will also gain a variety of transferable skills including communication, application of number, information technology and analysis of data.

History

The Course

The course builds on the work done towards the GCSE examination. It seeks to offer both breadth and depth and to develop key skills of source criticism, essay-writing, critical understanding of argument and interpretation and confidence in self-expression through both the written and spoken word. It also hopes to foster an interest in History itself and the discipline of History in general: the nature and diversity of its sources, methods and interpretations. It also hopes to reflect on the role of the historian in the very process of creating 'History'.

All the topics covered at Standard Level are inter-linked around the central theme of the emergence of USA as a world power in the 20th century and its conflict with other powers in the ideological struggle which dominated international relations in the second half of the century, the Cold War. Care will be taken to ensure that the Cold War is studied in a variety of regions, especially the Americas, Europe and East and South-East Asia and that there is the opportunity to appreciate all viewpoints and traditions. Coursework (the Historical Investigation) will deal with topics such as the Vietnam conflict, the Spanish Civil War and civil rights in the USA. We intend to offer a medieval option at Higher Level, involving a comparison between developments in England, Europe and the Islamic world in the tenth to thirteenth centuries. This will include, for example, the study of the Crusades and of the Norman Conquest. It is hoped that the course might provide opportunities to draw on our existing international contacts in Western and Eastern Europe, the Americas and East Asia.

Assessment

Assessment will consist of a variety of tasks, mainly written but also in the form of student presentations, both class seminars and class discussions, since the latter can play a key part in the cultivation of awareness of historical debate. Students will be expected to read in private about twenty to thirty pages of academic text a week and there will be regular essays. Tasks involving written response will, as appropriate, integrate various skills of judgement, sustained argument, analysis and source-criticism. There will be a significant element of personal research, not least in preparation for the Historical Investigation.

(i) *Paper 1* – Examination of one hour. Structured questions and source evaluation.

HL 20% SL 30%

(ii) *Paper 2* – Examination of one hour thirty minutes. Two essays must be attempted.

HL 25% SL 45%

(iii) *Paper 3 (HL only)* – Examination of two hours thirty minutes. Candidates must attempt three essays out of a choice of twenty five questions.

HL 35%

Coursework

Internally marked but externally moderated Historical Investigation of 1500 – 2000 words.

HL 20% SL 25%

Philosophy (Higher and Standard Levels)

The Course

The study of Philosophy combines the rigorous study to timeless, universal concepts applied to contemporary issues, along with a critical approach of modern cultural practices. Importantly, the course puts less emphasis on the acquisition of philosophical ideas and theories, for their own sake, than on the student's personal engagement and creative interaction with the most fundamental problems of classical and modern philosophy. The course is divided into sections:

- **Core Theme: *What is a 'Human' Being?***
What is a 'person'? and *What constitutes 'human nature'?* are the two fundamental questions lying at the heart of all philosophical enquiry about our human condition.
- **Two Optional Topics: *The Worlds of Ethics and Culture***
 - (i) A wide range of classical and modern ethical theories are studied under the topic *Theories and Problems of Ethics*.
 - (ii) The Philosophy of Culture, lately renamed *People, Nations and Cultures*, is a unique opportunity to analyse and evaluate a variety of past and present cultural movements.

Both Core Theme and Optional Topics are examined in a 1¾ hour [SL] or a 2½ hour [HL] paper [50% or 40%]

- **Prescribed Text(s): *The Ethics of Authenticity* and *The Genealogy of Morals***
 - (i) The SL prescribed text is Charles Taylor's acclaimed *Ethics of Authenticity*. The Canadian philosopher's critical study of modern Western democratic societies addresses many ethical and cultural issues raised in the course.
 - (ii) The HL prescribed text is Nietzsche's *Genealogy of Morals*, a modern classic of philosophy which questions and shakes the very foundations of Western ethical and cultural values.

The study of the prescribed texts will be integrated into the investigations of both the Core and Optional Themes.

The above section is examined in a one-hour (SL) or two-hour (HL) paper [30% or 40%]

- **Internally Assessed Coursework:**
The 1600 – 2000 word internal assessment exercise takes the form of a philosophical analysis of non-philosophical material, which allows students to be rewarded for doing philosophy under ordinary conditions, without the time constraints associated with written examinations.
- **Unseen text – exploring philosophical activity (Higher Level only):**
The purpose of the unseen text in the paper 3 examination is to allow students to demonstrate an understanding of philosophy as an activity by means of a holistic application of the philosophical skills, knowledge and ideas they have developed throughout the course.

Group 4 Science

An Introduction

A common curriculum model applies to all the Diploma Programme Group 4 subjects except Environmental Systems and Societies. A core of material is studied by both Higher Level and Standard Level students, and this is supplemented by the study of options. Higher Level students also study additional Higher Level (AHL) material. Higher Level (HL) students and Standard Level (SL) students both study two options.

Through studying any of the Group 4 subjects, students should become aware of how scientists work and communicate with each other. While the 'scientific method' may take on a wide variety of forms, it will generally involve the formation, testing and modification of hypotheses through observation and measurement, under the controlled conditions of an experiment. It is this approach that distinguishes the experimental sciences from other disciplines and characterises each of the subjects within Group 4.

For Environmental Systems and Societies see page 14.

Assessment

External Assessment (76%)

Paper	Question type	Standard level	Higher Level
Paper 1	Multiple choice	20%	20%
Paper 2	Structured questions	32%	36%
Paper 3	Options questions	24%	20%
	Total	76%	76%

Internal Assessment (24%)

The internal assessment (IA) requirements are the same for all Group 4 subjects with the exception of Design Technology. The IA consists of a mixture of short-and long-term investigations (such as practicals and subject-specific projects) and an interdisciplinary project. Student work is internally assessed by the teacher and externally moderated by the IB. The performance in IA at both Higher Level and Standard Level is judged against assessment criteria each consisting of achievement levels 0 – 3. In their application of scientific methods, students develop an ability to:

- design experiments
- collect and process data
- conclude and evaluate
- synthesise scientific information.

The Group 4 project is an interdisciplinary activity in which all Diploma Programme Science students must participate. The intention is that students analyse a topic or problem which can be investigated in each of the science disciplines offered by a school. It is also an opportunity for students to explore scientific solutions to global questions. The exercise should be a collaborative experience where the emphasis is on the **processes** involved in scientific investigation rather than the **products** of such investigation.

Biology

The course aims to develop a general broad understanding of the principles of the subject, taught through four basic biological concepts:

- structure and function
- universality versus diversity
- equilibrium through systems
- evolution.

These concepts serve as themes that unify the topics that make up the three sections of the course: the core, the additional Higher Level material and the options.

The material will be taught as a series of 6 topics for the core (including the study of cells, cell processes, genetics, ecology and evolution), a further 8 for the additional Higher Level material (including respiration, photosynthesis, human reproduction and nerves, muscles and movement) plus the option material. Each of these sections will aim to ensure that students develop:

- a body of biological knowledge and terminology, and an understanding of this information
- experimental and investigative skills and an awareness of the biological methods within a global context
- an ability to communicate and to collaborate effectively during biological studies
- information technology skills appropriate to the biological sciences
- an ability to hypothesise, analyse, evaluate and synthesise information
- an appreciation of the possibilities and limitations associated with science
- an awareness of the moral, ethical, social, economic and environmental implications of using biological techniques.

The above will be achieved by providing a variety of learning opportunities, such as biological experiments, fieldwork, open-ended investigations, information research projects and presentations to the group, discussions, data analysis etc.

Chemistry

Chemistry is an increasingly relevant discipline for today's society, yet it is frequently misunderstood and its achievements are taken for granted. Without chemistry, there would be no understanding of the role of the life-giving pathways of biological systems, no easy route for the manufacture of plastics, textiles and life-saving pharmaceuticals, no design of new technology that will help to preserve the planet and limit the impact of man on the environment. Chemistry occupies the central position within the scientific community: the interface between the physical world and the biological sphere.

The Diploma Programme course will lead you through a considerable variety of material: a stimulating study in its own right, but also a course that will appeal to both the mathematically minded and the biologically oriented. It will train you in methods of scientific thought and investigation and will challenge you to think about the nature of chemical knowledge and experimentation. A considerable part of the course is taught through investigation ('wet' chemistry) that will largely be individual practical work.

- First-year teaching will follow the traditional route of first considering the fundamental properties of atoms and molecules, their interactions and the trends, patterns and relationships in reactivity of the chemical elements and their derivatives.
- An introduction to the discipline of organic and synthetic chemistry follows this, with a study of reaction mechanisms and the use of chemical 'tricks' to aid the manufacture of essential materials such as alcohols, plastics, pharmaceuticals, antiseptics, perfumes and dyes.
- The insight on reaction mechanisms gained previously will be reinforced by a more mathematical analysis of the kinetics and dynamics of chemical processes.
- A revisit to organic chemistry is supplemented by a synopsis of spectroscopic analysis, which deals with instrumental techniques such as infrared and ultraviolet photometry, mass spectrometry and nuclear magnetic resonance (also known as magnetic resonance imaging, MRI). Practical work by this point is focusing on more complete syntheses of useful molecules such as anaesthetics and dyestuffs.
- The vital reactions of the transition elements (*e.g.* industrial and nano-scale catalysis) is treated in a study of redox chemistry before the course rounds off with an advanced look at chemical equilibria, acid/base reactions and the energetical changes associated with reactions.

The DP course is intellectually rigorous but follows on naturally from both the IGCSE and GCSE specifications. The subject fits in well with Mathematics, Physics or Biology, and combines sensibly with Geography and Economics. The mathematical content of the course should not be a deterrent: the techniques required are straightforward.

Design Technology

The Course

The core of the programme is the design cycle and the course looks at the nature of designing and the role of the designer. It may be studied at Higher level or Standard Level. This subject is distinctive among those in Group 4 in that it places considerable emphasis on a major project.

The topics studied at both Standard and Higher Level are:

- Design process
- Product innovation
- Green design
- Materials
- Product development
- Product design
- Evaluation

Higher Level students also cover

- Energy
- Structures
- Mechanical design
- Advanced manufacturing techniques
- Sustainable development

In addition, all students study one of a range of options.

Assessment

Written papers (64%)

- Multiple-choice questions*
- One data-based question and one extended-response question*
- Short-answer and extended-response questions*

Internal Assessment (36%)

- Investigations and Group 4 project*
- Design project*

Physics

The course aims to build on the work studied for I/GCSE Physics or Double Science examination.

At **Standard Level** it will be delivered as a series of eight topics:

Core

Atomic and Nuclear Physics
Electricity and Magnetism
Mechanics
Physics and Physical Measurement
Thermal Physics
Waves

Options

Mechanics Extension
Quantum Physics and Nuclear Physics

The course will develop the physical knowledge, technical vocabulary, mathematical and graphical skills of the students. Approximately a quarter of the course is based on practicals and research, which will allow plenty of opportunity to develop experimental techniques and encourage the analysis, synthesis and evaluation of scientific information. The department has much computing and data logging equipment which will be utilised in the delivery of the course to show how ICT is relevant to the physical sciences.

At **Higher Level** the course will be delivered as a series of fourteen topics:

Core

Atomic and Nuclear Physics
Electricity and Magnetism
Mechanics
Physics and Physical Measurement
Thermal Physics
Waves

Additional Higher Level

Electromagnetism
Measurement and Uncertainty
Mechanics
Quantum Physics and Nuclear Physics
Thermal Physics
Wave Phenomena

Options

Astrophysics
Relativity

The points made above about Standard Level also apply to Higher Level, but the Higher Level course has much greater breadth and depth and is more challenging in terms of mathematical techniques and volume of technical vocabulary. Mathematical concepts on the Higher Level only include: radians, exponentials, logarithms to base e and simultaneous linear equations involving two variables.

Mathematics

Mathematics is a key subject in the IB programme and all students must study it. With this in mind, and recognising the different abilities of the students, four different mathematics programmes have been devised by the IB and three will be offered by the Mathematics Departments; Higher Level Further Mathematics will not be offered.

In each of these programmes, the aims of the course are to enable students to:

- develop mathematical knowledge, concepts and principles
- develop logical, critical and creative thinking
- employ and refine their powers of abstraction and generalisation.

Students are also encouraged to appreciate the international dimensions of mathematics and the multiplicity of its cultural and historical perspectives.

Each course is designed to meet the needs of a particular group of students and so great care should be taken to select the course that is most appropriate for an individual student. All three courses that we offer have an element of portfolio work that is attempted throughout the two-year programme. In addition, all three courses require the use of the Graphical Display Calculator.

Mathematics Higher Level

Only one Higher Level Mathematics course is offered and this should be considered by students who have gained a high grade at GCSE or IGCSE and show talent in Mathematics. The course is long and demanding, requiring students to study a broad range of mathematical topics through a number of different approaches and to varying degrees of depth. It focuses on Pure / Core Mathematics and Statistics, leaving the study of Mechanics within the Physics element of the Diploma. Students are required to develop their understanding of the following topics; Algebra, Functions and Equations, Circular Functions and Trigonometry, Matrices, Vectors, Statistics and Probability, and Calculus. In addition they will cover an optional area, which will be chosen when the relative strengths and areas of interest of the relevant students become clearer.

Students embarking on this course should be intellectually equipped to appreciate the links between parallel structures within the different topic areas of Mathematics. The majority of students taking HL will be expecting to include Mathematics as a major component of their university studies.

Mathematics Standard Level

The Mathematics SL course caters for students who already possess knowledge of basic mathematical concepts, and who are equipped with the skills needed to apply simple mathematical techniques correctly. The majority of these students will expect to need a sound mathematical background as they prepare for future studies in areas such as Chemistry, Economics and Psychology. It should be stated that this course does not have the depth found in the Mathematics HL course. Students wishing to study subjects with a high degree of mathematical content should therefore opt for the Mathematics HL course rather than this one.

There is some degree of overlap with the Mathematical Studies course (see below) but most topics are studied in greater depth. In addition, Calculus is introduced into this course and forms a significant part of the teaching programme.

Emphasis is placed on the use of the Graphical Display Calculator and computer packages as solvers and modelling tools.

The expectation is that students will learn how to select and use appropriate mathematical strategies and techniques throughout this course, and also how to recognise patterns and structures in a variety of situations and be able to form generalisations.

Mathematical Studies

Offered only at the Standard Level, this course is aimed at students not requiring Mathematics in their future studies. It emphasises applying mathematics to real-world situations. Its core consists of:

- Financial Mathematics
- Functions
- Geometry and Trigonometry
- Number and Algebra
- Sets and Logic
- Statistics and Probability

The course aims to build confidence and encourage an appreciation of Mathematics in students, and for many students this course will be their final experience of being taught formal Mathematics.

Building on a knowledge of GCSE Mathematics, the course covers the same topics in a little more detail along with areas such as sets, logic and financial mathematics. The Probability and Statistics component of this course includes the study of the Chi-squared Distribution and Regression and often forms the basis of the project that all students attempt. It is important to note that, although this course does involve differential calculus, it might not be acceptable for some Further Education courses, particularly abroad.

Music

The course aims to explore a wide range of music drawn from many different traditions throughout the world, both familiar and unfamiliar. It aims to instil listening skills, so that students are able to recognise, speculate, analyse, identify, discriminate and hypothesise about music they listen to, and to use suitable technical language with which to describe it. It aims, too, to give students an historical perspective and understanding of how music exists and is learnt in different sorts of society. In addition, it aims for students to develop in individual ways as performers and composers, opening up for them a wide range of directions and influences, giving them confidence in their own musical decisions and developing a critical faculty as well as a healthy respect for other cultures and traditions.

Higher Level

Students will work on three different areas during the course: Listening, Composition and Performance.

A. Listening

As an introduction to the course, pupils will listen to a wide range of short examples from Western classical music, world music and popular music, discussing melody, rhythm, harmony, texture, form, timbre, the classification of instruments and voices, different scale types and tuning and the position of music and musicians in different societies. The rest of the course deals with wider topics, such as Beethoven's Vienna, The Music of the Pygmies of the Ituri Forest, The History of Popular Music, Music in Renaissance England, The Music of the Andes, etc.

Students will write a *Musical Investigation*, which is externally assessed. This is an independent investigation into the relationships between two different musical genres, focusing on one or more pieces from each genre, in the form of a media script of up to 2000 words.

B. Composing

Students will work at a range of topics over 5 terms, such as *a monody for unaccompanied melody instrument* (using experimental techniques), *a canon over a ground bass* (in order to learn the essentials of counterpoint), *a percussion piece* (looking at African techniques or experiments in 20th century music), *serialism* and/or *minimalism*. In the fifth term, students make final versions of 3 contrasting compositions, together lasting between 5 and 15 minutes, write a commentary on them and record them.

C. Performance

Over the first 4 terms, candidates will prepare for one or more recitals, totalling approximately 20 minutes, helped and guided by an individual instrumental or singing teacher and a full-time member of the music staff. Recordings will be made over all the first 5 terms, the best chosen in the 5th.

Assessment

Listening Paper [2 ½ hours] 30%

Section A based on the set work [1 question]

Section B based on 4 musical extracts [4 questions]

Musical Investigation 20%

An independent investigation into the relationships between two different musical genres, focusing on one or more pieces from each genre, in the form of a media script of up to 2000 words.

Solo Performance 25%

The presentation of one or more recitals totalling approximately 20 minutes.

Composing 25%

The presentation of 3 contrasting compositions, recorded and with a written statement, lasting 5 – 15 minutes.

Standard Level

Students will work at two different areas during the course: Listening and either Composition or Solo Performance or Group Performance.

A. Listening [as Higher Level]

B. Composing [as Higher Level]

C. Solo Performance

Over the first 4 terms, candidates will prepare for one or more recitals, totalling approximately 15 minutes, helped and guided by an individual instrumental or singing teacher and a full-time member of the music staff. Recordings will be made over all the first 5 terms, the best chosen in the 5th.

Or C. Group Performance

Over the first 4 terms, candidates are expected to be active participating members of an ensemble which performs on 2 or more occasions. At least two public performances will be recorded, lasting 15 – 30 minutes.

Visual Arts (Higher and Standard Levels)

The Course

The Visual Arts course allows participants to develop a collection of personal creative work for assessment. Starting from the detailed consideration of complementary works from different periods and national contexts, course participants will be encouraged to formulate wholly individual research interests and approaches to studio work through independent tutorial discussion. Of the primary works, one must be an example from recent practice, one must be an historical example and one must be drawn from outside the western canon. The primary works of art will be initially identified according to individual interests and the possibility of first-hand encounter through study visits. These will be researched and investigated in terms of their cultural and historical contexts. The works will be considered via competing approaches to art history, criticism and aesthetics; such as formalist, structuralist, post-structuralist visual culture studies, connoisseurship, iconographic, dialectic, new historicist and psychoanalytic. Primary, secondary and tertiary sources will be considered and their roles in object interpretation discussed. Course participants will be encouraged to articulate their approaches to studio work in relation to their understanding of artist practitioner utterances, critics' interpretations and curatorial emphasis as well as through direct observation of art works in the cultural landscape. Gallery and museum exhibits will be a basic resource.

Fundamental questions such as: 'Can we know anything of the art of the past?', 'Can the art of the present be beautiful?', 'What right has the artist to a political stance?' and 'Is originality possible?', will be considered in detail throughout the course.

Review, modification and refinement in the progress of studio work will be encouraged through individual tutorial engagement and group critical forum. These processes, along with work book annotation, will be the primary means by which course participants will articulate and reflect on the intentions and the communicability of their practice. The context of galleries and museums and other virtual exhibition spaces, such as locomotive media, site specificity, internet and intermedia will be addressed as the contexts in which artistic meaning is negotiated and expressed.

Assessment

External

(70%) studio work (Higher Level 12 – 18 works, Standard Level 8 – 12 works), exhibition, research workbooks (Higher Level 40 pages, Standard Level 30 pages), discussion of studio work and research workbooks with an examiner.

Internal

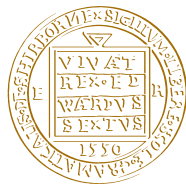
(30%) studio work and research notebooks.

Candidate record booklets

All students will complete a record booklet to be seen as part of the assessment procedure. This material will be sent to the external moderator prior to the moderation visit. The record booklet will consist of: a personal statement, photographs of studio work and photocopied workbook pages.



SHERBORNE GIRLS, BRADFORD ROAD, SHERBORNE, DORSET DT9 3QN
T. +44 (0)1935 812245 E. enquiry@sherborne.com
www.sherborne.com



SHERBORNE

SHERBORNE SCHOOL, ABBEY ROAD, SHERBORNE, DORSET DT9 3AP
T. +44 (0)1935 810512 E. psuch@sherborne.org
www.sherborne.org