Cambridge for teachers

Getting started with ‘Excellence for All’

Guide to Cambridge teaching materials and support for Board Examination System (BES) schools
Welcome to University of Cambridge International Examinations. We are delighted that you and your school are now part of the Cambridge community.

This guide gives teachers of Cambridge qualifications an overview of what is available to help you plan and teach our Cambridge IGCSE® or Cambridge International AS and A Level courses, and prepare learners for the exams.

Teachers and learners can choose Cambridge IGCSEs or Cambridge International AS and A Levels in a wide range of subjects.

We hope you find this guide useful and we look forward to working with you.

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Our programmes and qualifications

### Cambridge Primary (5–11 years*)
- Optional programme: Cambridge Primary Checkpoint (available in English, mathematics and science)
- ICT Starters

### Cambridge Secondary 1 (11–14 years*)
- Optional programme: Cambridge Checkpoint (available in English, mathematics and science)
- ICT Starters

### Cambridge Secondary 2 (14–16 years*)
- Cambridge IGCSE®

### Cambridge Advanced (16–19 years*)
- Cambridge International AS and A Level
- AICE Diploma

*Age ranges are for guidance only

The following subjects are available for BES schools:

<table>
<thead>
<tr>
<th>Cambridge IGCSE® subjects</th>
<th>Cambridge International AS Level subjects</th>
<th>Cambridge International A Level subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic – Foreign Language (US)</td>
<td>Art and Design (US)</td>
<td>Art and Design (US)</td>
</tr>
<tr>
<td>Art and Design (US)</td>
<td>Art and Design (US)</td>
<td>Art and Design (US)</td>
</tr>
<tr>
<td>Biology (US)</td>
<td>Biology (US)</td>
<td>Biology (US)</td>
</tr>
<tr>
<td>Chemistry (US)</td>
<td>Chemistry (US)</td>
<td>Chemistry (US)</td>
</tr>
<tr>
<td>Computer Studies (US)</td>
<td>French Language and Literature (US)</td>
<td>French Language and Literature (US)</td>
</tr>
<tr>
<td>Coordinated Sciences (US)</td>
<td>French Language (US)</td>
<td>French Language (US)</td>
</tr>
<tr>
<td>Drama (US)</td>
<td>French Literature (US)</td>
<td>French Literature (US)</td>
</tr>
<tr>
<td>Economics (US)</td>
<td>Economics (US)</td>
<td>Economics (US)</td>
</tr>
<tr>
<td>English – First Language (US)</td>
<td>English Language (US)</td>
<td>English Language (US)</td>
</tr>
<tr>
<td>English – Second Language (US)</td>
<td>English Literature (US)</td>
<td>English Literature (US)</td>
</tr>
<tr>
<td>Literature (English) (US)</td>
<td>English Language and Literature (US)</td>
<td>English Language and Literature (US)</td>
</tr>
<tr>
<td>French – Foreign Language (US)</td>
<td>French Language (US)</td>
<td>French Language (US)</td>
</tr>
<tr>
<td>German – Foreign Language (US)</td>
<td>French Literature (US)</td>
<td>French Literature (US)</td>
</tr>
<tr>
<td>Global Perspectives (US)</td>
<td>Global Perspectives (US)</td>
<td>Global Perspectives (US)</td>
</tr>
<tr>
<td>Greek – Foreign Language (US)</td>
<td>Geography (US)</td>
<td>Geography (US)</td>
</tr>
<tr>
<td>History (US)</td>
<td>History (US)</td>
<td>History (US)</td>
</tr>
<tr>
<td>American History (US)</td>
<td>History (US)</td>
<td>History (US)</td>
</tr>
<tr>
<td>Mandarin Chinese – Foreign Language (US)</td>
<td>Mathematics (US)</td>
<td>Mathematics (US)</td>
</tr>
<tr>
<td>Mathematics (US)</td>
<td>Additional Mathematics (US)</td>
<td>Additional Mathematics (US)</td>
</tr>
<tr>
<td>Additional Mathematics (US)</td>
<td>Music (US)</td>
<td>Music (US)</td>
</tr>
<tr>
<td>Music (US)</td>
<td>Physics (US)</td>
<td>Physics (US)</td>
</tr>
<tr>
<td>Physics (US)</td>
<td>Spanish Language (US)</td>
<td>Spanish Language (US)</td>
</tr>
<tr>
<td>Spanish – First Language (US)</td>
<td>Spanish Literature (US)</td>
<td>Spanish Literature (US)</td>
</tr>
<tr>
<td>Spanish – Foreign Language (US)</td>
<td>Spanish Literature (US)</td>
<td>Spanish Literature (US)</td>
</tr>
</tbody>
</table>
Planning your teaching

Cambridge produces several resources to help you plan and teach these courses. All these materials are available from our secure website Cambridge Teacher Support. For more details, see page 13.

Syllabus
The syllabus is the most important document you will use. You should refer to your syllabus frequently, as it explains exactly what your learners need to know, what they must be able to do and how they will be assessed at the end of the course. Most Cambridge IGCSE and Cambridge International AS and A Level syllabuses are structured in a similar way with the following sections.

Assessment at a Glance
This section gives you an overview of the various assessments that a learner must take in order to gain a qualification in the subject. For most Cambridge qualifications, learners need to take several assessments, referred to as components or papers. These may be examination papers, assignments completed during the course, or tests of practical or performance skills.

In some Cambridge IGCSE subjects, there are choices to be made that affect the components and grades that are available to the learner. In some Cambridge IGCSE subjects, core and extended versions of the curriculum are available for learners performing at different ability levels. Learners following the extended curriculum take different components from learners following the core curriculum. The ‘Assessment at a Glance’ section explains the choices that are available.

Some subjects also have a coursework component, which specifies a particular task, or tasks, to be completed by learners. Coursework is assessed by you, the teacher, following detailed assessment criteria provided by Cambridge. Once assessed, a sample of work from your school is sent to Cambridge, so it can be checked. This ensures that standards have been applied correctly and consistently, across schools and over time.

When you enter your learners for their final assessment, you will need to choose the appropriate combination of components, as explained in the ‘Assessment at a Glance’ section in each syllabus.

Goals
This section of the syllabus provides a brief overview of the benefits that learners should gain from studying this subject. It gives you an idea of the general flavour of the syllabus, and outlines its broader educational goals.
Assessment objectives

Assessment objectives (AOs) describe the focus of the assessment. For example, in the sciences, you will see that learners will be assessed not only on their knowledge and understanding, but also on their ability to handle information and solve problems, and on their experimental skills. The assessment objectives describe what learners are expected to do with the subject knowledge listed in the curriculum content section of the syllabus.

Each question and part question in an examination paper, or each task in a coursework assignment, addresses one or more of these assessment objectives directly. It is important that you understand them fully.

Every syllabus has assessment objectives which describe the focus of the assessment.

3.2 Assessment objectives
The three assessment objectives in Cambridge IGCSE Biology are:

A: Knowledge with understanding
B: Handling information and problem solving
C: Experimental skills and investigations

A description of each assessment objective follows.

A: Knowledge with understanding
Candidates should be able to demonstrate knowledge and understanding of:

1. scientific phenomena, facts, laws, definitions, concepts, theories
2. scientific vocabulary, terminology, conventions (including symbols, quantities and units)
3. scientific instruments and apparatus, including techniques of operation and aspects of safety
4. scientific quantities and their determination
5. scientific and technological applications with their social, economic and environmental implications

Syllabus content defines the factual material that candidates may be required to recall and explain. Candidates will also be asked questions which require them to apply this material to unfamiliar contexts and to apply knowledge from one area of the syllabus to knowledge of a different syllabus area.

Questions testing these objectives will often begin with one of the following words: define, state, describe, explain (using your knowledge and understanding) or outline (see Glossary of terms).

3.4 Weightings
This section of the syllabus tells you the percentage of marks in the examination that are assigned to each assessment objective. It also tells you which assessment objectives are assessed in each component.

For example, in Cambridge IGCSE Biology, the syllabus shows that 50 per cent of the marks are for the first assessment objective, 30 per cent for the second and 20 per cent for the third. You should use this information to help you plan the course for your learners, as you will need to ensure that they develop skills in all three areas.

In some cases, different assessment objectives are assessed in different components of the examination. For example, in Cambridge IGCSE History, the first and second assessment objectives are assessed in all components, but the third is only assessed in components 2, 3 and 4.

<table>
<thead>
<tr>
<th>Assessment objective</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Knowledge with understanding</td>
<td>50% (not more than 25% recall)</td>
</tr>
<tr>
<td>B: Handling information and problem solving</td>
<td>30%</td>
</tr>
<tr>
<td>C: Experimental skills and investigations</td>
<td>20%</td>
</tr>
</tbody>
</table>

Teachers should note that there is an equal weighting of 50% for skills including handling information, solving problems, practical, experimental and investigative skills and for knowledge and understanding.

Teachers’ schemes of work and the sequence of learning activities should reflect this balance, so that the aims of the syllabus may be met, and the candidates fully prepared for the assessment.

### Weighting Details

<table>
<thead>
<tr>
<th>Assessment objective</th>
<th>Paper 1 (marks)</th>
<th>Papers 2 or 3 (marks)</th>
<th>Papers 4, 5 or 6 (marks)</th>
<th>Whole assessment (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Knowledge with understanding</td>
<td>25 - 30</td>
<td>48 - 52</td>
<td>0</td>
<td>47 - 64</td>
</tr>
<tr>
<td>B: Handling information and problem solving</td>
<td>10 - 15</td>
<td>27 - 32</td>
<td>0</td>
<td>26 - 33</td>
</tr>
<tr>
<td>C: Experimental skills and investigations</td>
<td>0</td>
<td>0</td>
<td>40</td>
<td>20</td>
</tr>
</tbody>
</table>

Tables in the syllabus explain the percentage of the marks available for each assessment objective.
Curriculum content
This is often the largest part of the syllabus, and in some subjects this is the part that you will find yourself using most regularly as you teach. It sets out the knowledge and understanding that learners need to gain during their course, and which will be tested in the assessments.

It is very important to remember that learners need to study all the curriculum content, unless the syllabus clearly states that some of it is optional, or that you can make choices. The examination questions test a wide range of the curriculum content in each examination series. In some Cambridge IGCSE subjects, the curriculum content is divided into core and extended (or supplement).

Learners who study the core curriculum content can achieve up to and including a grade C. For most subjects, learners who study the extended curriculum content can achieve a grade from A* to E. You can find details of the grades learners are eligible for in the Assessment at a Glance section of the syllabus. This section also shows you if there are different assessment components for core and extended learners.

In some subjects, the curriculum content is not divided into core and extended, and all learners take the same assessment components. The grade awarded is determined by the levels of the responses that the learner gives to the questions on the examination papers.

<table>
<thead>
<tr>
<th>1. Number—Core curriculum</th>
<th>1. Number—Extended curriculum</th>
<th>Notes / Exemplars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Knowledge of: natural numbers, integers (positive, negative, and zero), prime numbers, square numbers, rational and irrational numbers, real numbers. Use of symbols: =, ≠, &lt;, &gt;.</td>
<td>1.1 Knowledge of: natural numbers, integers (positive, negative, and zero), prime numbers, square numbers, rational and irrational numbers, real numbers. Use of symbols: =, ≠, &lt;, &gt;.</td>
<td>Understand that the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a non-zero rational number and an irrational number is irrational.</td>
</tr>
<tr>
<td>1.2 Use of the four operations and parentheses.</td>
<td>1.2 Use of the four operations and parentheses.</td>
<td>Applies to integers, fractions, and decimals.</td>
</tr>
<tr>
<td>1.3 Multiples and factors, including, greatest common factor, least common multiple.</td>
<td>1.3 Multiples and factors, including, greatest common factor, least common multiple.</td>
<td>GCF and LCM will be used and knowledge of prime factors is assumed.</td>
</tr>
<tr>
<td>1.4 Ratio and proportion.</td>
<td>1.4 Ratio and proportion.</td>
<td>Includes reverse percentages.</td>
</tr>
<tr>
<td>1.5 Language and notation of fractions, decimals, and percentages; recognize equivalences between decimals, fractions, ratios, and percentages and convert between them.</td>
<td>1.5 Language and notation of fractions, decimals, and percentages; recognize equivalences between decimals, fractions, ratios, and percentages and convert between them. Order quantities given in different forms by magnitude, by first converting into same form.</td>
<td></td>
</tr>
<tr>
<td>1.6 Percentages, including applications such as interest</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Coursework Guidance
This section is where you will find detailed guidance about devising, setting and assessing coursework assignments for your learners. Most syllabuses also include a set of forms to record your assessment of your learners’ work. For each school, at least one teacher must be accredited to mark coursework in an individual subject. For details of accreditation, please refer to section 3 of the Cambridge Administrative Guide which you can find at www.cie.org.uk/examsofficers

Grade Descriptions
This part of the syllabus outlines the standards a learner must meet in order to achieve a particular grade.

Other sections and appendices
Syllabuses in some subjects contain other important information that applies specifically to examinations in that subject. For example, in the sciences, there is a section on practical assessment, and appendices covering the terminology, units and symbols used in the examination papers. In Cambridge IGCSE Drama there is a glossary of dramatic and theatrical terms, and in language syllabuses there are marking instructions for speaking assessments.

Resources
This section lists some of the textbooks and other materials that Cambridge recommends for use when teaching the syllabus. You will find a fuller and regularly updated Resources section on our secure website Cambridge Teacher Support at http://teachers.cie.org.uk
Schemes of work

A scheme of work is a medium-term course plan that is available in many subjects. It provides suggestions about how you might divide your course into units, and ideas about how you might teach particular topics.

Teacher Guides

Some subjects also have a Teacher Guide, which provides further guidance on planning and delivering the course.

Textbooks and resources from publishers

On the secure website Cambridge Teacher Support you will find up-to-date lists of publishers’ resources that are available to support your teaching of a syllabus.

Some of these resources are ‘endorsed’, which means they have been carefully quality checked by Cambridge and judged to match the syllabus content particularly well. There may also be recommended CD-ROMs or websites.
Planning your course

This chart suggests how you could use the various documents to help you in planning your course.

<table>
<thead>
<tr>
<th>Stage in planning the course</th>
<th>Documents to help you</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose your course</td>
<td>Syllabus</td>
</tr>
<tr>
<td>If Cambridge IGCSE, decide whether you will teach only the core, or both core and extended.</td>
<td>Syllabus – What is the curriculum content for core and extended? What grades do the core and extended provide access to? Past papers – to get an idea of the overall approach taken.</td>
</tr>
<tr>
<td>Decide which assessment components you will prepare your learners to take.</td>
<td>Syllabus – What choices of assessment are there? For Cambridge IGCSE, what grade ranges do they provide access to? Will your learners be doing coursework?</td>
</tr>
<tr>
<td>Create an overall course plan. How many units will you divide the curriculum content into?</td>
<td>Syllabus – In what sequence will you cover the curriculum content? How will you help students to develop the required skills? How can you fit all of this into the time available? Scheme of work – Are there ideas here that you can use for developing your own scheme of work? Resource lists – Are there Cambridge-endorsed textbooks available?</td>
</tr>
<tr>
<td>Develop medium-term plans. What precisely will you cover each school term and how will that be scheduled?</td>
<td>Schemes of work – Are there activities suggested here suitable for use with your learners? Cambridge Teacher Support website: Resources list – Are there Cambridge-endorsed and recommended resources? Community resources – Are there lesson plans and/or activities recommended by other teachers of the syllabus?</td>
</tr>
<tr>
<td>Develop plans for individual lessons.</td>
<td></td>
</tr>
</tbody>
</table>
Preparing for the exams

Cambridge provides past examination papers, mark schemes and detailed information about past performance to help you prepare students effectively for the exams.

Following each examination series, Cambridge publishes the complete set of past papers in each subject, together with details about how they were marked. There is also a report from the principal examiner in charge of marking the papers. These papers are made available on the secure website Cambridge Teacher Support, where they remain for several years. There are many resources available on the website for teachers to use.

Examination papers

Examination papers contain a number of questions that learners answer. In some subjects, they must answer all of the questions on the paper. In others, there is a choice of questions. It is extremely important that you give learners experience of these examination papers before their final examinations. They need to become familiar with the styles of questions asked, to know where they should write their answers, and to understand whether or not they have to make choices about which questions to answer.

Each part of an examination question addresses a particular assessment objective (AO) and a particular part of the curriculum content. Over the whole set of examination papers, the marks allocated to the assessment of each AO match the weightings set out in the syllabus.

Mark schemes

The mark scheme gives a detailed breakdown of how points are awarded for each part of each question on the examination paper.

Mark schemes give you insight into what the examiners are looking for when they mark a learner’s answers. In some subjects you will see the exact response and level of detail that is required to gain a mark. You will also notice what is not required. For example, in Cambridge IGCSE Chemistry, you will see that no marks are awarded for spelling or grammar.

For subjects where learners’ responses involve extended writing, mark schemes have descriptors that define different levels or ‘bands’ of performance. These levels have different marks. In the example below, taken from Cambridge IGCSE English, you can see that marks are awarded according to which band description applies to the learner’s response.

You should use the information in the mark schemes to help you prepare your learners for their examinations. Good examination technique can help your learners to achieve their best possible final result.

An example mark scheme defining different levels of performance.

<table>
<thead>
<tr>
<th>Band</th>
<th>Mark Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9–10</td>
<td>Sentences are fluent and there is a fairly wide range of vocabulary. Overall structure is good and sentences generally follow in sequence. Most full stops are correct and errors are infrequent and minor. An appropriate register is established.</td>
</tr>
<tr>
<td>2</td>
<td>7–8</td>
<td>Sentences are correct, though relatively simple. Vocabulary is adequate and correctly used. There are some sentence separation errors and quite frequent other errors, although minor. There are some hints of an appropriate register.</td>
</tr>
<tr>
<td>3</td>
<td>5–6</td>
<td>Sentence structures and vocabulary are simple, but meaning is never in doubt. The order is reasonable. Error may be frequent, but it does not blur meaning. There may be an inconsistent attempt at an appropriate register.</td>
</tr>
<tr>
<td>4</td>
<td>3–4</td>
<td>The answer is very simply written and there are occasional examples of blurring meaning. This structure can usually be followed. Some error is serious, affecting meaning.</td>
</tr>
<tr>
<td>5</td>
<td>1–2</td>
<td>The answer is difficult to understand. The extent of grammatical error seriously impairs meaning.</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>The answer cannot be understood.</td>
</tr>
</tbody>
</table>
Principal examiner’s report
Following each examination series, the principal examiner for each paper writes a detailed report. This describes learners’ overall performance on each part of each question. The report will give you insight into common misconceptions shown by learners, which you can address in your teaching.

It also gives you more information about exactly what the examiners were looking for in the answers to particular questions. Extracts from a typical question paper, mark scheme and examiner report are shown above.

Grade thresholds
This document is made available shortly after the learners’ grades have been published. It details the minimum number of marks that learners needed to achieve on each paper in order to be awarded a particular grade.

Note that these grade boundaries may change from year to year. To ensure standards are kept at a consistent level over time, grade boundaries may be adjusted to allow for small differences in the difficulty of one paper compared with another.
Example Candidate Responses (Standards Booklets)

These booklets are available for most subjects. They are produced for our international syllabuses and can also be used with BES syllabuses. They contain examples of examination questions and candidates’ answers at different levels of performance. They also include a commentary from an examiner on why an answer achieved the number of marks or grade that it was awarded.

You can use the example candidate responses to help you guide your learners in how to write good answers to particular styles of examination questions.

Example candidate response

Examiner comment

This answer gives a number of valid explanations as required by this type of question at this level, making it a good response. The candidate does not waste time on a general introduction but moves immediately into explanation, giving three valid explanations. There is always a variety of material from which the responses can be selected and used to advantage as this candidate shows. To gain the additional mark, the candidate could have developed issues relating to what Clemenceau wanted in relation to the Rhineland and the Saar.

Mark awarded = 6 out of 7
**Preparing learners for examinations**

This chart suggests how you could use the various documents to help you in preparing your learners to achieve their best in the examinations.

<table>
<thead>
<tr>
<th>Preparing learners for examinations</th>
<th>Documents to help you</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiarise learners with the examination requirements by using past examination questions during the course.</td>
<td>Past examination papers and mark schemes</td>
</tr>
</tbody>
</table>
| Ensure that learners are familiar with the command words used in examination questions (for example: describe, discuss or evaluate). | Syllabus
Past examination papers and mark schemes |
| Ensure that learners understand how to answer questions that meet the assessment objectives. | Past examination papers and mark schemes
Example Candidate Responses (standards booklets)
Principal Examiner Reports |
| Build up learners’ understanding of what is required to reach a particular grade. | Example Candidate Responses (standards booklets)
Past examination papers, mark schemes and grade thresholds |
When learners have taken the appropriate assessments, their responses are either assessed or checked by Cambridge, and then their marks are converted to a grade. The grade the learner receives reflects a level on a scale of performance. For Cambridge IGCSE qualifications the scale is from A* to G. For Cambridge International AS Level the scale is from A to E, and for A Level the scale is from A* to E. When grades have been determined, your school will receive a statement of results listing the grades achieved by each of your learners. After a period allowed for enquiries about results, your school will be sent a final certificate for each of your learners.

Feedback reports
Your school will also receive reports providing more detailed information on your candidates’ performance including:

- the marks and/or grades your candidates achieved for each syllabus, examination paper and item (question)
- summary reports comparing average performance of your learners with averages for the district, state and USA.
Where to find support materials from Cambridge

All support materials described in this guide can be found on the secure website Cambridge Teacher Support at http://teachers.cie.org.uk

This secure website is only for Cambridge schools and teachers, and is password protected. Your teacher support coordinator can set up an account and password for you.

If you would like to order printed copies of materials, these are available as listed in the publications catalogue. A copy of the catalogue is sent to schools annually, and it is also available on our public website at www.cie.org.uk/profiles/teachers/orderpub

Each year, schools are also sent current syllabuses and the most recent past papers and examiner reports on DVD.
More help and guidance

Cambridge Professional Development
Cambridge provides a wide range of training opportunities to support your teaching, both face-to-face and online.

Training is usually divided into:

Stage 1 courses, which provide an introduction for teachers new to the syllabus;

Stage 2 intermediate courses, which focus on teaching strategies aimed at improving learner performance.

To see which training courses are currently available in your region, see www.cie.org.uk/events

‘Ask the examiner’ seminars
Following the publication of examiners’ reports (in March and September), online seminars are held, run by Cambridge examiners. These allow discussion, questions and answers on the most recent examination session, and provide an excellent opportunity to discover more about the examination process for your subject.

Subject communities and discussion forums
On the secure website Cambridge Teacher Support there are more than 50 subject communities and discussion forums. Teachers of a syllabus or subject can use these to share their own ideas and resources.

Ask CIE
Ask CIE provides online answers to frequently asked questions about Cambridge examinations and services. The next time you have a question about Cambridge examinations, just go to Ask CIE.

Simply type your question into the search box, or use the menu to guide you. There is also a noticeboard on the Ask CIE homepage, which will alert you to important announcements. You can find Ask CIE at www.cie.org.uk/help

Customer services
You can email us via international@cie.org.uk, or call us on +44 1223 553554.