

4



Interactive

Implementing the curriculum with Cambridge: A guide for school leaders

Chapter 4

Designing the
school curriculum

4 Designing the school curriculum

This chapter focuses on issues that need to be considered to successfully design and implement a school curriculum using Cambridge programmes and qualifications. It is relevant in cases where schools are basing their whole school curriculum on Cambridge courses, and in those instances where schools are combining Cambridge courses with other national or international qualifications. Models of how Cambridge programmes can be used to support the development of bilingualism are introduced. The structure of Cambridge programmes and qualifications is reviewed. The practical implications of introducing a curriculum, such as timetabling, are briefly considered.

Cambridge educational programmes and qualifications are deliberately designed to be flexible so that they can be used by schools and school systems in ways that best meet local needs.

The Cambridge Primary and Secondary 1 programmes are structured curriculum frameworks for a narrow range of subjects (English, English as a second language, mathematics and science). By their nature they are designed to provide part of the school curriculum and deliberately require considerable teacher creative input to make them relevant to the local context. Cambridge Secondary 2 builds on the foundations of Secondary 1 and provides a range of different courses and qualifications from which schools can select. Similarly, Cambridge Advanced builds on Secondary 2, offering a wide choice of courses. It is possible to construct the entire school curriculum around Cambridge courses at Secondary 1 and 2 levels if this is what a school decides. Alternatively, these qualifications can be combined with other local or national ones to form a blended school curriculum. No matter what option the school decides, certain design principles should be respected.

4.1 Balance

Chapter 1 highlighted the importance of deriving the curriculum from the school's mission, so that it reflects the values and educational aims the school wants to achieve. In one respect curriculum planning involves designing an educational programme based on a selection of what the community that the school serves values most. By definition this involves prioritisation as there are only a limited number of hours in the school day and days in the school year.

It is also important to recognise from the outset that quality is at least as important as quantity. Schools are often tempted to add more and more content to the curriculum with the noble intention of including as much valued learning as possible. The danger with this is that there is a potential trade-off between coverage and depth of understanding. Too much coverage does not allow time for depth of engagement. The curriculum also needs to allow for a balance of educational activities. Chapter 3 explored how the learner attributes could be nurtured through a curriculum which allowed teachers the space to use a variety of teaching strategies designed to develop learner self-awareness, research and enquiry skills. This requires time.

All schools will have to engage with the issue of balance, and there is no simple answer to how much or what to include. Societies have different expectations of schooling and cultural norms, so what might be considered an overloaded curriculum in one context will not be in another. Equally, when a school chooses to create a blended curriculum, combining national curricula with Cambridge qualifications, they will need to make their own informed judgement about the optimum balance and curriculum load.

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4.2 Coherence and consistency

The curriculum should be more than the sum of its parts. It should fit together in a way that makes sense for the developmental stage the learner is at. A balanced and coherent curriculum usually provides a wide range of different and complementary learning experiences that fit well together, particularly if the aim is to develop well-rounded citizens. While there may inevitably be a narrowing of the curriculum at the top end of secondary school, to allow for learners to gain the depth of knowledge and understanding needed for higher education, the school curriculum (supported by the co-curriculum) should still recognise the school's broader mission and educational aims.

An excellent school curriculum fits together in such a way that the content, teaching approaches, assessment practices and the culture in which it is embedded are in harmony and support each other. Chapter 3 briefly considered how it is possible to align disciplinary teaching in a way that can support interdisciplinary transfer and understanding. This is one good example of coherence in practice.

Consistency is concerned with progression from one stage to the next. Do the different stages align? Are learners appropriately prepared and challenged at each stage? It is reasonable to expect changes in emphasis and approach as learners become more mature? Consistency does not mean that the curriculum will stay the same, but it is important that the changes are planned rather than unintentional.

Examining the school curriculum horizontally and vertically, in terms of both the written curriculum and evidence of what students actually learn, is an important part of the evaluation process considered in the next chapter. It also informs on decisions about which Cambridge courses to include and whether or not to combine them with others.

4.3 Combining Cambridge programmes with other national or international programmes

If a school decides to combine Cambridge qualifications with other local or national ones to form a blended school curriculum, issues of balance, coherence and consistency are particularly important to consider. Ideally the school curriculum should form a complementary whole rather than

two separate curricula operating side by side. Where there are differences in approach these need to be understood and planned. As far as possible it is better for teaching and assessment methodologies for both systems to be compatible and mutually supportive.

Running a dual programme can create periods of excessive workload and high levels of stress for both learners and teachers. The leadership team should support teachers and learners by considering these factors in the curriculum design and timetabling process, and ensure that the programmes are appropriately resourced.

4.4 Curriculum models for bilingual and multilingual schools

As our assessments are in English, it is common for schools to use Cambridge programmes and qualifications for the English-medium (second-language) strand of a bilingual (or trilingual) education programme, and to use their own national (or regional) curriculum and qualifications for the first-language strand of the programme.

There are many ways of organising bilingual education, depending on individual contexts (e.g. resources, environment, language skills, goals). There can be different balances of first language and second language at different stages, starting with the first language, or starting with the second language, or starting with both languages as media of instruction. A curriculum model is based on how many subjects are taught and learnt through each language and over how much time.

For example, some schools:

- begin in a small way by teaching one module or project in English (short term, low intensity)
- prepare learners by immersing them in English for a short period – e.g. through overseas student exchanges, or by teaching all curriculum subjects in English for one school term (short term, high intensity)
- teach one or two content subjects in English over several years (long term, low intensity)
- teach a substantial part of the curriculum in English over several years (long term, high intensity).

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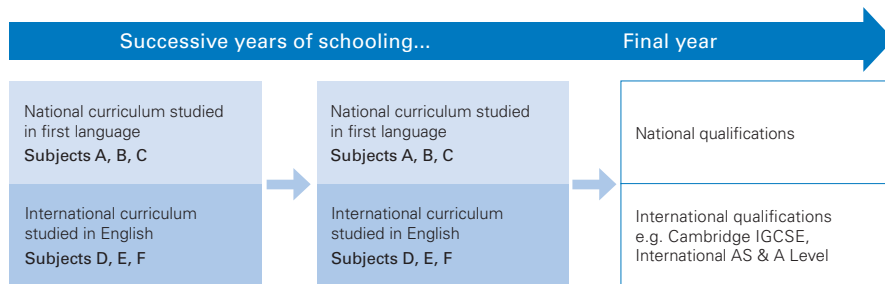
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Fundamental to all these approaches is developing the ability of teachers to teach their content through the medium of English. Content and language integrated learning (CLIL) is a recommended methodology to support this process, so that students are supported in learning the language they need to achieve in their subjects. A long-term training strategy would also allow local teachers to build up their second language skills to enable them to deliver lessons in English.

Learners also need to develop sufficient English language skills before taking high-stakes Cambridge IGCSE and Cambridge International A Level examinations in the Cambridge Secondary 2 and Advanced programmes. The Cambridge Primary and Secondary 1 programmes help prepare bilingual learners, and enable teachers to assess their progress and give feedback on their strengths and weaknesses in the core subjects of English, maths and science.

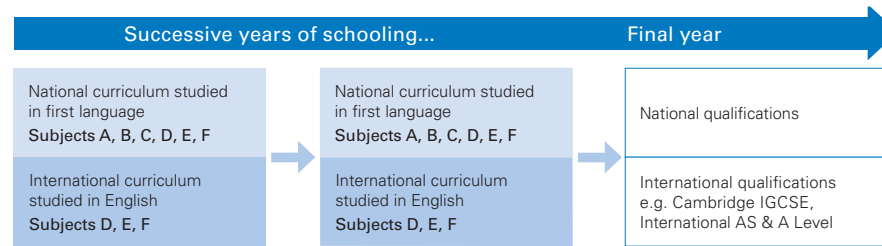
In addition, bilingual education often has to meet the needs of two curricula – a national (or regional) curriculum and an international curriculum. In such cases, how will learning be organised?

Approach A: Split curriculum



Using this approach, learners study some subjects as part of the national curriculum and other subjects as part of an international curriculum. In this way the problem of double timetabling is avoided. This model is only feasible if equal official recognition is given to the qualifications taken in both curricula.

Approach B: Shared subject curriculum



Using this approach, learners study selected subjects in both the first language and in English, which could lead to awarding both national and Cambridge qualifications. The remaining subjects are studied in the first language. The common subjects (D E F) could be taught using:

- **An integrated curriculum.** Both national and Cambridge curricula for a subject are mapped to identify areas of overlap and difference, and are then covered:
 - In the same class by a bilingual teacher or two team-teachers. This way, the same teaching and learning can enable learners to take two qualifications: the national qualification in the first language and the Cambridge qualification in English.
 - By rotating classes/weeks/topics/terms/years between the first language and English. Sometimes, the learning is rotated or sandwiched over several years. In this way, learning starts in the early years with the national curriculum through the first language, then switches for a period of years to the Cambridge curriculum, when this 'learning in English' period allows students to work towards international qualifications, before returning to national curriculum priorities in the final years.

An integrated curriculum means that the learning is streamlined for the benefit of the learner – the learner just goes to one timetabled class for a subject. However, this does require curriculum mapping, planning and teacher coordination.

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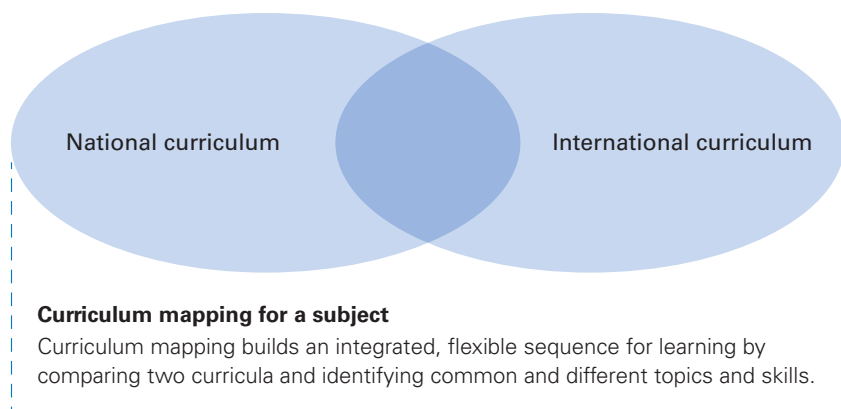
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- **Two separate curricula.** The national and Cambridge curricula for a subject are covered in separate classes and languages, with no mapping of areas of overlap/difference.

If the curricula are separate, then the learner is probably aware that they are going to a national curriculum class and then to a separate Cambridge (e.g. IGCSE) class. Also, some of the learning may be duplicated. However, this may be easier for the school to organise if it is hard to map the two curricula, if there is not sufficient commonality between the two curricula, or if there is a language barrier which prevents teachers coordinating to produce and teach a single, integrated curriculum.



Learners in all Cambridge schools need to be able to complete their studies and undertake assessments in subjects through the medium of English. While this can present particular challenges for learners with English as a second language, there are educational advantages in supporting language development and bilingualism. Not only are learners better prepared for participation in the modern global world, bilingualism also helps support individual cognitive development. Even if you are not running a bilingual education programme, there are other ways of developing 'language awareness' in international English-medium schools in order to help support bi/multilingualism.

An effective language policy can help to achieve this. We are committed to supporting schools to develop and implement strategies to successfully support students in multilingual settings, and to use CLIL (see our website www.cie.org.uk/bilingual for further information). We are also committed to ensuring that our assessments are fair to learners who do not have English as a first language.

4.5 The English language component

For learners hoping to gain entry into universities in English-speaking countries, the English language component of their learning programme is really important. Universities set their own admission criteria for courses, which are usually available on their websites. For many universities a good grade in a Cambridge IGCSE English course satisfies their admission criteria.

We offer a number of English language courses through our international programmes. When deciding which course to include in your curriculum, make sure you understand the requirements of these courses, including the assessment tasks for each option and any examination restrictions or limitations that may apply. This information is available in the relevant syllabuses and in the guidance materials we send to Cambridge exams officers.

4.6 Cambridge English language qualifications

We provide two possible ways for learners to achieve the English language admission requirements for universities and other higher learning institutions.

Cambridge English language route

Learners who have higher English speaking and writing capabilities can achieve their English qualifications through one of several possible pathways (see diagram on the next page). You can also offer the Cambridge Secondary 1 English course to prepare your learners for one of the English options. The course is assessed through the Cambridge Checkpoint tests.

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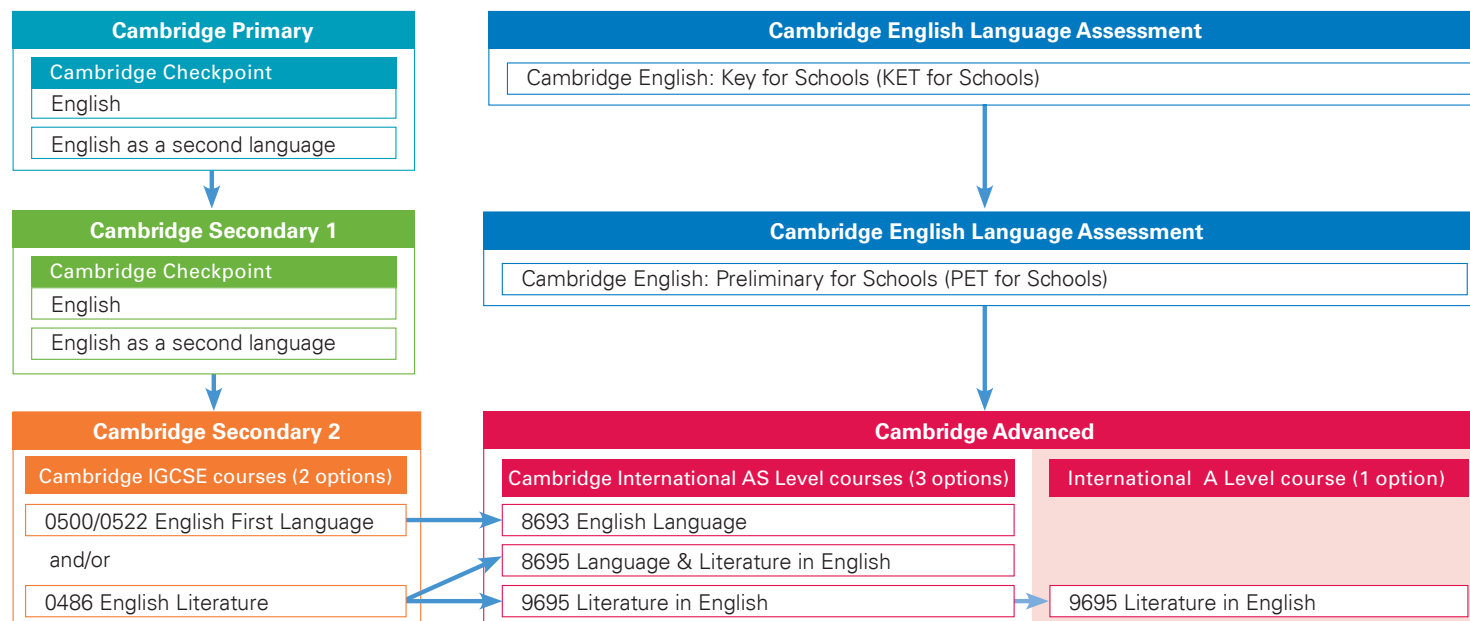
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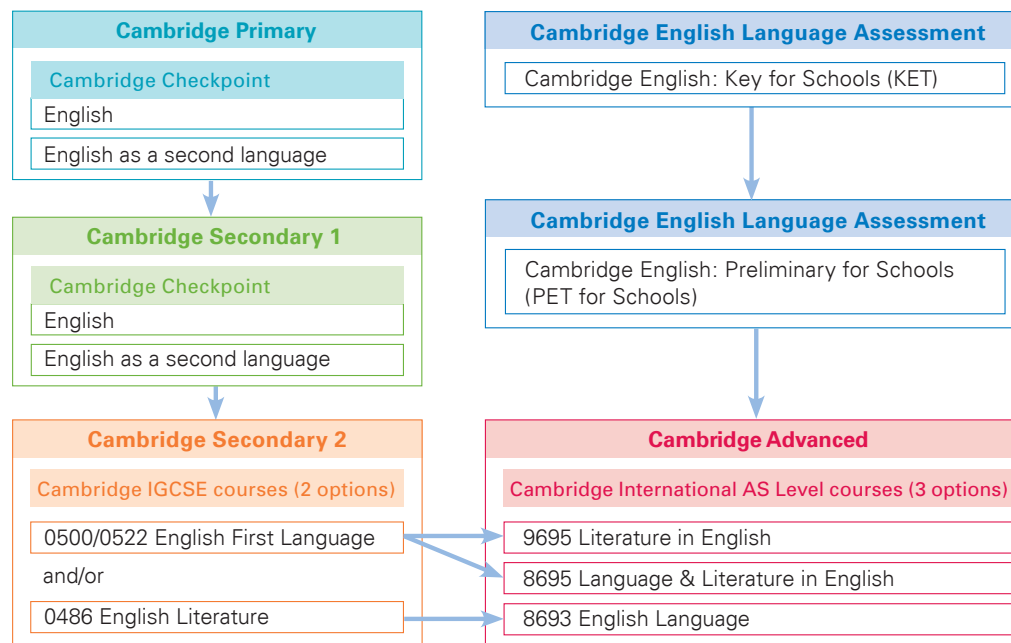
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Main progression pathways



Alternative progression pathways



Cambridge English Language Assessment route

Our sister organisation, Cambridge English Language Assessment (formerly known as Cambridge ESOL), offers qualifications accepted by many universities, employers and governments, such as *Cambridge English: Advanced (CAE)*. These qualifications are internationally accepted as an in-depth test of English language. In combination with the Cambridge Secondary 1 English as a second language course you can deliver a full programme of English language learning within the school curriculum. Make sure you are fully aware of the admission requirements for the universities and institutions your learners may want to attend.

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4.7 Other subjects with alternative courses

Apart from English language, we have a number of other Cambridge Secondary 2 subjects that have alternative courses (detailed at the end of the document). This flexibility helps you identify and select specific courses to meet your teaching requirements.

Some of our alternative subject courses have particular restrictions (barred combinations) when it comes to the exams. For example, learners cannot take Cambridge IGCSE Mathematics and Cambridge IGCSE International Mathematics in the same exam series. These restrictions do not mean you cannot offer both courses; only that your learners cannot undertake the exams or associated assessments of the 'barred combinations' in the same examination series.



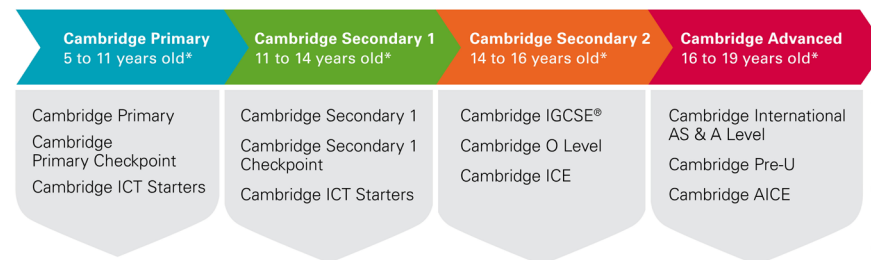
4.8 Cambridge programmes

This section provides an overview of the structure and nature of Cambridge programmes and qualifications. You can find more specific information, including a list of all the courses available at each stage, in the *Cambridge Prospectus* available on our website www.cie.org.uk

Cambridge programmes and qualifications have four stages, which lead seamlessly from primary through to secondary and pre-university years.

The programmes can be implemented together or separately, i.e. as 'stand-alone' programmes. Collectively, they are designed to provide a sequential programme of learning from primary through to the end of secondary education. Each programme builds upon the previous, and prepares for the next, revealing a progressive and staged approach to developing knowledge, conceptual understanding, skills and attitudes.

Another design feature of all Cambridge programmes is that they are intended to be adapted to the local context. Teachers will create a unique programme of study which is based on our programmes and adapted, where meaningful, to include local content and case studies. This will enhance the quality of teaching and learning, and ensure that the curriculum reflects national culture and heritage. Therefore it is important to distinguish the written Cambridge programmes, defined in our documentation and syllabuses, from the taught curriculum in the school, representing the local expression of our programmes.



*Age ranges are for guidance only

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Table 3: Cambridge programmes (Note: More detail, including every subject syllabus, can be found on our website www.cie.org.uk)

Cambridge programme	Subjects	Assessment
Cambridge Primary		
<p>Typically for 5 to 11 year olds, it is structured through curriculum frameworks and organised into six stages. The curriculum frameworks reflect the teaching targets for each year group and provide comprehensive learning objectives. The learning objectives provide a structure for teaching and learning and a reference against which learners' ability and understanding can be checked.</p> <p>No part of the curriculum is compulsory, so schools can select the elements that are right for their learners.</p> <p>Develops the skills, knowledge and understanding that will prepare learners for a smooth transition to Cambridge Secondary 1.</p>	<p>A six-stage programme that provides curriculum frameworks and assessment for each of the following subjects:</p> <ul style="list-style-type: none"> • English • English as a second language • mathematics • science. <p>Each stage reflects the teaching targets for a year group.</p> <p>The curriculum frameworks are divided into content areas called 'strands'. Mathematics for example has five strands:</p> <ul style="list-style-type: none"> • Number • Geometry • Measure • Handling data • Problem solving. 	<p>An optional testing structure with assessments that provide an international benchmark enabling teachers to:</p> <ul style="list-style-type: none"> • identify learner strengths and weaknesses within individuals and class groups • develop further teaching and learning support using the information from the test results • provide learners with a statement of achievement (if they choose to do Cambridge Primary Checkpoint) at the end of their primary schooling. <p>Cambridge Primary Progression Tests: From stage 3 of the curriculum. Can be given when the teacher feels the class is ready. Marked by the teachers in school.</p> <p>Cambridge Progress Checker: An analysis tool for the Cambridge Primary Progression Tests. This allows you to compare a learner's results against their class, school or other schools around the world teaching Cambridge Primary.</p> <p>Cambridge Primary Checkpoint: Diagnostic tests for English, mathematics and science, taken at the end of the programme. Provides comprehensive feedback on the strengths and weaknesses of each learner.</p>

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Cambridge programme	Subjects	Assessment
Cambridge Secondary 1		
<p>Typically for 11 to 14 year olds, it is structured through curriculum frameworks and organised into three stages. The curriculum frameworks reflect the teaching targets for each year group and provide comprehensive learning objectives. The learning objectives provide a structure for teaching and learning and a reference against which learners' ability and understanding can be checked.</p> <p>No part of the curriculum is compulsory, so schools can select the elements that are right for their learners.</p> <p>Develops the skills, knowledge and understanding that will prepare learners for a smooth transition to Cambridge Secondary 2.</p>	<p>A three-stage programme which provides curriculum frameworks and assessment for each of the following subjects:</p> <ul style="list-style-type: none"> English English as a second language mathematics science. <p>Each stage reflects the teaching targets for a year group.</p> <p>The curriculum frameworks are divided into content areas called 'strands'. Mathematics for example has four strands:</p> <ul style="list-style-type: none"> Number Algebra Geometry and measure Handling data. 	<p>An optional testing structure with assessments that provide an international benchmark enabling teachers to:</p> <ul style="list-style-type: none"> identify learner strengths and weaknesses within individuals and class groups develop further teaching and learning support using the information from the test results provide learners with a statement of achievement (if they choose to do Cambridge Checkpoint) at the end of their lower secondary schooling. <p>Cambridge Secondary 1 Progression Tests: For each stage of the curriculum frameworks. Can be given when the teacher feels the class is ready. Marked by the teachers in school.</p> <p>Cambridge Progress Checker: An analysis tool for the Cambridge Progression Tests. This allows you to compare a learner's results against their class, school or other schools around the world teaching Cambridge Secondary 1.</p> <p>Cambridge Checkpoint: Diagnostic tests for English, mathematics and science taken at the end of the programme. Provides comprehensive feedback on the strengths and weaknesses of each learner.</p>
Cambridge Secondary 2		
<p>Typically for learners aged 14 to 16, it builds on the foundations of Cambridge Secondary 1. The syllabuses for qualifications within this programme use learner-centred and enquiry-based approaches to learning. They describe the knowledge, understanding and skills learners will develop and explain how these will be assessed.</p> <p>Cambridge Secondary 2 provides excellent progression to the next stage of a Cambridge international education – Cambridge Advanced for 16 to 19 years – as well as other progression routes.</p>	<p>A one- or two-year programme offering over 70 subjects for Cambridge IGCSE, including more than 30 language courses, and more than 40 subjects for Cambridge O Level.</p> <p>Schools can offer any combination of subjects. Each subject is certificated separately.</p>	<p>Cambridge IGCSE: Assessment takes place at the end of the course. There is a range of assessment options, including written, oral, coursework and practical assessment. Many subjects offer a tiered structure for different ability levels. Grades are benchmarked using eight internationally recognised grades, which have clear guidelines to explain the standard of achievement.</p> <p>Cambridge O Level: Assessments take place at the end of the course. There is a range of assessment options, including written, practical and oral assessment. Grades are benchmarked using six internationally recognised grades.</p> <p>Cambridge O Levels are no longer available to schools in administrative zones 1, 2 and 6. For more information on administrative zones, go to www.cie.org.uk/help and type 'administrative zone' into the search field.</p>

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Cambridge Advanced		
Typically for 16 to 19 year olds, it helps learners to develop deep understanding, and independent learning and critical thinking skills, which universities value highly. It builds on the foundations of Cambridge Secondary 2 and leads to entry to universities worldwide.	<p>Offers a choice of over 80 different subjects: 55 for Cambridge International A Level and 28 for Cambridge Pre-U.</p> <p>Schools can offer almost any combination of the wide choice of subjects available.</p> <p>Learners receive a certificated grade for each subject they take.</p>	<p>Cambridge International AS and A Levels: Use a range of assessment options, including a staged assessment route. There are a wide range of options including formal written examinations, orals, practicals, projects and coursework. Grades are benchmarked using six internationally recognised grades.</p> <p>Cambridge Pre-U: Assessment of Cambridge Pre-U Principal Subjects is at the end of the two-year course. There is a range of nine grades, including an extended grade range at the top to recognise outstanding achievement. There is the option to qualify for the Cambridge Pre-U Diploma for learners taking three Principal Subjects and Cambridge Pre-U Global Perspectives and Research. Cambridge Pre-U Short Courses are available in some subjects. These are typically one-year courses, with exams taken at the end.</p> <p>Cambridge Pre-U Global Perspectives and Research helps develop independent thinking, research and communication skills. It is examined through an externally assessed written paper, essay and presentation.</p> <p>At the moment schools outside the UK need our approval before they can offer Cambridge Pre-U Principal Subjects.</p>

4.9 Cambridge Primary and Cambridge Secondary 1

Both Cambridge Primary and Cambridge Secondary 1 programmes provide a core curriculum of three subject areas, leaving plenty of subject choices to further broaden the curriculum. Studying all of the subjects is not compulsory and they can be integrated into a local or national curriculum. The assessment structure for each programme is also optional, giving you the flexibility to decide how and when you want to assess your learners. We produce a teacher guide for each subject curriculum area, which brings together schemes of work, sample lesson plans, planning and implementation guidance. There are also detailed schemes of work with suggestions for activities, resources and timings for each learning objective within the curriculum frameworks.

For Cambridge Primary and Cambridge Secondary 1, the emphasis of assessment is on supporting student learning and benchmarking. Cambridge Primary Checkpoint and Cambridge Checkpoint – diagnostic tests at the end of both programmes – are also recorded by statements of achievement and detailed feedback reports for both the learner and the school.

4.10 Cambridge Secondary 2

The Cambridge Secondary 2 programme has an extensive range of subjects available at Cambridge IGCSE or Cambridge O Level, allowing you to design a broad and balanced curriculum, or a more specialised one, depending on your educational aims. Some schools opt for a specialised programme with a number of compulsory subjects and only a few (or

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even no) learner electives. Others give learners more choice. Decisions about offering choice need to be balanced against the cost of resourcing the curriculum. The number of staff needed to teach the school curriculum, and the number and type of necessary specialist facilities, are likely to be greater the more courses are offered.

Cambridge IGCSE and Cambridge O Level can be studied over one or two years. In most schools learners study up to 10 subjects, and very occasionally more, over a period of two years. In others, learners study a reduced number of subjects, typically about six, over a single year. Reducing the Cambridge Secondary 2 programme to a one-year period has a direct influence on the balance of the curriculum, as the curriculum will be narrower for any individual learner studying fewer subjects. Some schools allow very able learners to study for exams in selected subjects a year earlier.

Some Cambridge IGCSE subjects offer two study options. These are referred to as 'core' and 'supplement' curriculum options. The supplementary curriculum can be studied in addition to the core curriculum. This provides an opportunity to study the subject in more depth and experience wider coverage of the content within additional learning contexts.

What is a Cambridge IGCSE?

IGCSE stands for International General Certificate of Secondary Education. Over 70 subjects are available, including more than 30 language courses, offering a variety of routes for learners of different abilities. Schools can offer any combination of subjects and each subject is certificated separately.

- A Cambridge IGCSE is the formal recognition of a learner's achievement at the end of a particular subject course. The content of the course is based on an international curriculum developed for 14 to 16 year olds (although it can be studied by younger or older learners).
- The content of each course is created to suit a wide variety of schools and avoid cultural bias. It encourages learner-centred and enquiry-based approaches to learning. It helps to develop creative thinking, enquiry and problem-solving skills.



- Each qualification is made up of a number of assessments (called components), the majority of which take place at the end of the course. The methods of assessment include written papers, orals, coursework and practicals.
- Learners have to pass a particular combination of these assessments to achieve the qualification. The majority of syllabuses offer learners and teachers different assessment options through which to achieve the qualification. This broadens opportunities for students to demonstrate their learning, particularly when their first language is not English.
- In the UK Cambridge IGCSE is accepted as an equivalent to the GCSE.
- Cambridge IGCSE assessment standards are aligned to those of the UK GCSE and are equivalent on a subject-for-subject, grade-for-grade basis. The grades awarded are A* to G, with A* being the highest, and are designed to cover a wide ability range.
- The main differences between Cambridge IGCSE and GCSEs are in the syllabus content and methods of assessment:

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- Most IGCSE subjects have an optional coursework element, whereas with many GCSE subjects it is compulsory.
- The content of IGCSE subjects is tailored to the multicultural, multilingual audience they serve, in a way the GCSE is not.
- Cambridge IGCSE subjects are linear. Subject understanding of the whole course is assessed; it is not broken down into modules.

What is a Cambridge O Level?

O Level stands for Ordinary Level, and is an internationally recognised qualification equivalent to the UK General Certificate of Secondary Education (GCSE) and Cambridge IGCSE. Over 50 subjects are available to schools, except those in administrative zones 1, 2 and 6.

- A Cambridge O Level is the formal recognition of a learner's achievement at the end of a particular subject course. The content of the course is based on an international curriculum developed for 14 to 16 year olds (although it can be studied by younger or older learners).
- The qualifications were developed from the academically focused O Level introduced in the UK in the 1950s and eventually replaced by the GCSE.
- The content of each Cambridge O Level syllabus is designed especially for an international market, and is sensitive to the needs of different countries.
- Each qualification is made up of a number of assessments (called components), the majority of which take place at the end of the course. The methods of assessment include written papers, orals and practicals.
- Learners have to pass a particular combination of these assessments to achieve the qualification. Some of the syllabuses offer learners and teachers different assessment options through which to achieve the qualification. This broadens opportunities for students to demonstrate their learning, particularly when their first language is not English.
- In the UK, Cambridge O Level is accepted as an equivalent to the GCSE.

- Cambridge O Level assessment standards are aligned to those of the GCSE, and are equivalent on a subject-for-subject, grade-for-grade basis. The grades awarded are A* to E, with A* being the highest.

The main difference between Cambridge O Level and GCSE and Cambridge IGCSE is the grade range: O Levels are graded on an A* to E scale, while Cambridge IGCSEs are on an A* to G scale, so providing for a slightly wider ability range. Syllabus content and assessments are generally very similar for Cambridge O Level and Cambridge IGCSE, although in many subjects the assessment model at Cambridge IGCSE additionally includes coursework options.

4.11 Cambridge Advanced

By the time learners begin studying the Cambridge Advanced programme they are likely to want to access more specialised programmes of study depending upon their current interests, ambitions for higher learning and potential career paths. However, it is still possible to study a wide range of different subjects at this level, creating a broad programme of study, and the co-curricular programme can add breath and balance to the educational experience.

What are Cambridge International AS and A Level?

- A Level stands for Advanced Level and AS Level stands for Advanced Subsidiary. An AS Level contains half the content of the corresponding A Level and can be completed in one year. This allows for flexibility, as learners can complete AS Levels as qualifications in their own right or as the first half of an A Level, for which they are allowed to carry forward their AS result. Some learners take all the assessments for their full A Level at the end of the second year (see the following section, 'Planning a Cambridge International AS and A Level programme').
- Cambridge International AS and A Level are the names of the qualifications that formally recognise a learner's achievement at the end of a particular subject course. The content of the course is more in-depth than Cambridge IGCSE or O Level. It is based on an international curriculum developed for 16 to 19 year olds preparing for higher education.

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- The assessment standards of Cambridge International A Levels are aligned to those of UK A Levels and are equivalent on a subject-for-subject, grade-for-grade basis. The grades awarded are A* to E, with A* being the highest. There is no A* grading in the certification of Cambridge International AS Levels. Cambridge International A and AS Levels are, therefore, viewed as equivalent to AS and A Level qualifications taken by learners in the UK.
- The main differences between Cambridge International AS and A Level qualifications and the UK AS and A Level qualifications exist in the syllabus content and methods of assessment:
 - Cambridge International A Levels are different in structure from UK A Levels. Whereas UK A Levels are modular and learners can retake individual components (assessments), the Cambridge International A Levels have a linear structure which encourages a more integrated study of the entire subject.
 - The context or examples used in the syllabuses and assessments are designed to be culturally sensitive and to provide an international context.
 - There is a wider range of subjects available at Cambridge International A Level, for example the wide range of languages offered.

What is Cambridge Pre-U?

- Cambridge Pre-U is a new qualification designed to help schools equip learners with the skills they need to succeed at university. The qualification formally recognises a learner's achievement at the end of a particular subject course. It is based on a curriculum that promotes deep understanding of subjects through specialisation.
- Learners can take Cambridge Pre-U qualifications separately, and receive grades for each one, or choose three Principal Subjects to achieve the Cambridge Pre-U Diploma. To achieve the Diploma they also need to complete Global Perspectives and Research, a qualification that gives learners the chance to develop independent thinking, research and communication skills.

- Cambridge Pre-U short courses are also available in some subjects. These are typically one-year courses with exams taken at the end.
- Cambridge Pre-U Principal Subjects are assessed at the end of the two-year course.
- Cambridge Pre-U Principal Subjects are recognised by UK universities as equivalent to A Levels.
- Cambridge Pre-U qualifications have an extended grade range at the top to recognise outstanding achievement. The grades awarded are reported on a nine-grade scale, reflecting three broad bands of achievement: Distinction, Merit and Pass. Each band is sub-divided into three grades: Distinction 1, 2, 3 (D1, D2, D3), Merit 1, 2, 3 (M1, M2, M3) and Pass 1, 2, 3 (P1, P2, P3). Each subject a learner takes at Cambridge Pre-U receives a separate grade, for example, D3.

Schools outside the UK need our approval before they offer Cambridge Pre-U Principal Subjects. If you are interested in offering Cambridge Pre-U Principal Subjects outside the UK, please contact us at info@cie.org.uk

Planning a Cambridge International AS and A Level programme

There are three different approaches for planning and scheduling Cambridge International A Level (see Table 4). Each approach will have a different effect on the structure of the school curriculum and the school timetable. For example, Approach 2 allows 'multi-levelling' where learners may be studying both Cambridge International AS and A Level courses in the same year.

As a consequence, an AS Biology class may have learners from the two final school years studying for the Cambridge International AS Level qualification. Approach 3 has the potential to provide the broadest and most balanced curriculum but the compromise is less specialisation. This needs to be considered in light of higher education entry requirements. In many countries AS Level standards are accepted but in others they are not.

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Table 4: Cambridge International AS and A Level assessment options

Approach 1	Approach 2	Approach 3
A 'non-staged' assessment route. Learners take all papers of the Cambridge International A Level course in the same examination series, usually at the end of the second year of study.	A 'staged' assessment route. Learners take the Cambridge International AS Level in Year 1 and/or Year 2 and complete the final Cambridge International A Level in the second series.	Cambridge International AS Level only. Learners take the Cambridge International AS Level exams only. The syllabus content for Cambridge International AS Level is half of a Cambridge International A Level programme.
A learner who successfully completes the non-staged option will normally have studied three or four Cambridge International A Level courses.	A learner who successfully completes the staged assessment option might have outcomes that include: <ul style="list-style-type: none"> • three Cambridge International A Levels and one AS Level (first example below) • two Cambridge International A Levels and four AS Levels (second example below) • three Cambridge International A Levels and two AS Levels (third example below). 	A learner who successfully completes the Cambridge International AS Level only assessment option might have studied eight Cambridge International AS Level courses, completing four in each year. This could represent a broad and balanced curriculum but with less specialisation and depth.

In this example the learner has selected a programme that will result in three Cambridge International A Levels in History, Geography and French and one AS Level in Global Perspectives.

Curriculum level	Subjects selected for study			
First year	AS Level Global Perspectives	AS Level History	AS Level Geography	AS Level French
Second year		A Level History	A Level Geography	A Level French

In the following example a learner has selected a programme that will result in two Cambridge International A Levels in Mathematics and Economics. They have broadened their programme by selecting an additional two AS Level subjects in the final year. Together with their first year AS Level subjects they will achieve four Cambridge International AS Level qualifications: English Literature, Biology, Art and Design and Global Perspectives.

Curriculum level	Subjects selected for study			
First year	AS Level Literature – English	AS Level Mathematics	AS Level Biology	AS Level Economics
Second year	AS Level Art & Design	A Level Mathematics	AS Level Global Perspectives	A Level Economics

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In the example below the learner follows a more specialised programme, resulting in three Cambridge International A Levels supported by two Cambridge International AS Level awards. In this case Cambridge International AS Level Business Studies reinforces the mathematics–economics combination, with a possible career in the financial world in mind. On the other hand this could be criticised as being over specialised, and it might be preferable for the learner to select a different sort of discipline, for example art or global perspectives.

Curriculum level	Subjects selected for study			
First year	AS Level Literature – English	AS Level Mathematics	AS Level Biology	AS Level Economics
Second year	A Level Literature – English	A Level Mathematics	AS Level Business Studies	A Level Economics

Learners need guidance to ensure that their intended course of study provides the learning and qualifications they need, either for admission into higher level studies or for pursuing a particular career. Considering admission requirements, for both national and international universities and other higher learning institutions, is important when constructing your curriculum and qualification pathways.

4.12 Timetabling the curriculum

While it is important to start the curriculum planning process by designing a school curriculum that delivers the school's mission, there are also practical timetabling issues that will need to be considered from the outset. These are largely determined by school context, local laws and practices, and the scale of the school budget to support resourcing. This section aims to briefly highlight some of these.

Your school vision, mission and educational aims will influence a number of timetabling decisions including:

- How much flexibility you build into the curriculum to allow learners to select options and, where applicable, options within subjects.
- The extent, nature of co-curricular activities and expectations or requirements for learner participation in these.
- The inclusion of any additional courses or programmes you want to offer that do not end in some form of external assessment, such as religious education, values education, cultural or heritage courses, student leadership and career experience programmes. Decisions about whether or not these are compulsory.

- Whether you introduce multi-leveilling so that learners in different year groups can be scheduled in the same class depending on their needs.
- The length of the school day, number of days' schooling a week and length of the school year.

The timetable has to be developed within the resource constraints of your school. These constraints include:

- number of teaching and support staff
- staff contracts stipulating conditions and expectations
- subject expertise and experience of the teaching staff
- availability of classrooms and specialist rooms – for example, science laboratories and technology rooms
- available resources for language support, special educational needs and gifted learning programmes.

Factors influencing timetable decisions can also be considered in terms of internal and external drivers.

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Table 5: Factors influencing timetable decisions

Internal influences	External influences
Organisation structure	Cambridge programme requirements
Resources including staff and facilities	Cambridge qualification requirements
Compulsory subjects or options (degree of learner choice)	Recommended hours a week for each subject
English language capability of learners	National curriculum and qualification requirements
Multi-levelling or fixed school years	External agency requirements, for example, ministry of education
Co-curriculum. Additional courses and activities outside core curriculum	University admissions criteria
Employment contracts	Requirement to take exams in English
	Core vs supplementary subject options

When constructing the timetable you have to decide how much teaching time to allocate to each subject. This can be expressed in hours a week but, because schools operate different annual calendars, it is often better calculated as hours per year. This equates to the number of periods per week multiplied by the duration of these allocated periods and the number of weeks in the school year. Some schools operate timetables on a 10-day (two-weekly) cycle or some other system of rotation, for example an eight-day cycle. This can create flexibility.

We recommend the following guided learning hour allocations for our international programmes:

Programme	Recommended weekly teaching time
Cambridge Secondary 1	Approximately three to four hours per subject per week.
Cambridge Secondary 2	About 130 hours* per subject completed in one year (if scheduled for one year) or, more normally, spread out over two years with learners doing more subjects.
Cambridge Advanced	<ul style="list-style-type: none"> Staged option: 180 hours* per subject for each Cambridge International AS Level course. Non-staged option: 360 hours* per subject over the two-year course.

* Includes teaching time and directed study. Does not account for the independent study the learner is expected to carry out. We recommend that learners are given opportunities for independent study outside of normal timetabled lessons for Cambridge Secondary 2 and Cambridge Advanced courses.

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There are a large variety of models you can follow for structuring learning hours into the timetable. The following example is based on practice in one Cambridge school and is intended to be illustrative of one model. Detailed consideration of different timetable options is beyond the scope of this guide.

Example: Monday's timetable for Years 8 and 12

Period	Time of day	Year 8 class	Year 12 class
1	8.00–8.40	English	Art
2	8.40–9.20	Arabic	Business Studies IT
Break			
3	9.40–10.20	Religious Studies	Mathematics A
4	10.20–11.00	Mathematics	Mathematics B
5	11.00–11.40	Science	English
6	11.40–12.20		
Lunch			
7	13.00–13.40	Physical Education	Chemistry/History Geography
8	13.40–14.20		Second Language (French, Mandarin, Spanish)
9	14.20–15.00	Geography	

In this timetable the day is divided into nine teaching periods of 40 minutes' duration. For the Year 8 level, most periods are single periods of 40 minutes in length. Periods can be combined to form double periods which allow an extended period of time for particular subjects or activities. For example, the double period for science gives the time needed to carry out practical experiments, and physical education for sports and the time needed for changing.

In Year 12 (higher) levels subjects are mostly scheduled with double periods, providing 80 minutes for lessons. Each subject has equal amounts of allocated teaching time, with three double periods and one single period throughout the week, equating to four hours and 40 minutes per subject per week. Because of the greater degree of specialisation at this level, it is possible for the school to schedule subjects to be taught at the same time (for example maths A and maths B (periods 3 and 4) and chemistry, history and geography (period 7) based on the fact that no learners, or as few as possible, want to study more than one of the combinations of subjects timetabled together).

Some schools have longer school days for older learners so that more time is available. This could be every school day or on specific days. Extending the day to accommodate the curriculum is a way to increase the amount of teaching time for subjects, or to increase the number of subjects on offer. Depending on a learner's choice of subjects they may have study periods allocated in the school day to work on projects or in the library. This is consistent with the aim of creating independent and responsible learners but will also depend on the school's ability to provide the facilities learners need and their attitude to learners having time to manage on their own.

The length of timetabled periods can have an impact on the types of pedagogy used in classrooms. Teachers will often adapt their teaching style and the types of activities they create to fit the available lesson duration. There is a tendency for shorter periods to become dominated by teacher-led learning with limited use of active learning activities. In the same way, longer lessons can become wasteful if teachers have not planned and prepared enough work to fill the entire lesson. As part of the school's quality assurance programme you need to make sure teachers have the right amount of time for engaging and effective lessons. Ideally, there should be enough time for the teacher to run several different activities, including active learning and skill development opportunities, which collectively fulfil the prescribed requirements of the syllabus or curriculum.

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4.13 Facilities to support the curriculum

In addition to effective teachers, schools need to provide suitable learning environments supportive of the curriculum. Schools will have very different resourcing budgets but, at a minimum, learning spaces should support your teachers in delivering interactive and stimulating lessons. Each learning space should be suitable for the number of students and the type of activities that will take place in them. Things to think about here include:

- Activities that will take place for particular coursework components.
- Subjects that require particular equipment, resources and differentiated learning spaces, such as art, physical education, music and dance.
- Science laboratories and the necessary safety requirements. You can find out more about our requirements in our *Planning for Practical Science* document available at www.cie.org.uk/help
- Any cultural issues that may impact the way you set up your learning environments.

Libraries, often called media or learning resource centres, provide areas for learners to work with their teachers on research projects or individual assignments during scheduled classes. Learners can also use these facilities during scheduled study periods, if they have them, during break times and before and after school. Some schools link with local community facilities to provide this resource. Usually these areas are also equipped with computers and other electronic resources connected to the school's internal network or intranet, and to the internet. Ideally school libraries (or some other location) will have dedicated resources to support the professional development of teaching staff, for example:

- professional development books and magazines
- electronic journals
- access to professional teacher sites and forums
- access to subject websites
- written reference materials.



Apart from the ICT resources located in the library, teachers will often have access to both the school's intranet and the internet in their classrooms and workspaces. Many traditional teaching resources are being replaced or supplemented by online resources and commercially purchased, or free-to-download, software resources.

Learners often have access to computers and the internet in the classroom. This can enhance the teaching programme by providing opportunities for differentiated learning approaches that target the individual learning needs of each student. Computers in classrooms can also provide additional opportunities for extension work for more capable learners, as well as providing access to additional support or resources for learners with particular needs. For these reasons, some schools provide learners with laptops or tablets for use at school.

To offer our examinations you must make sure your facilities and processes meet our regulations. These regulations are published in the *Cambridge Handbook*. We send a hard copy of the handbook to exams officers in our registered schools each year. It is also available on our website at www.cie.org.uk/examsofficers

One of our requirements is that each school has secure processes and storage facilities for receiving and storing examination question papers and other examination materials, including completed answer scripts. We recommend that you read the relevant sections of the *Cambridge Handbook* to help you plan the introduction of your new curriculum.

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