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Cambridge Secondary 1

Cambridge Secondary 1 Science Curriculum Framework in relation to the National Curriculum for England

Purpose
This document summarises how the Cambridge Secondary 1 Science curriculum framework relates to the Science National Curriculum for England.

Further detail can be found in the full document which is available on the dedicated Cambridge Secondary 1 support website: **https://cambridgesecondary1.cie.org.uk**

Review
We have reviewed the structure, content and standards of Cambridge Secondary 1 Science against the National Curriculum for England.

The National Curriculum for England specifies teaching and attainment in separate documents:

- Programme of Study – an overview of statutory teaching requirements comprising learning objectives for each key stage.
- National Curriculum levels and attainment targets – performance descriptors for each key stage and target levels of achievement for each year.

The Cambridge Secondary 1 Science curriculum framework provides a comprehensive set of learning objectives that describe what learners should know and what they should be able to do in each year of a lower secondary education. In the National Curriculum for England the equivalent years to Cambridge Secondary 1 Stages 7–9 is Key Stage 3.

Structure and content
The content of the Cambridge Secondary 1 Science curriculum framework and the National Curriculum for England is similar, but the main structures are relatively different.

Cambridge Secondary 1 Science	National Curriculum for England for Key Stage 3 Science
Scientific enquiry	1 Key concepts 2 Key processes
Biology	1 Key concepts 3 Range and content
Chemistry	1 Key concepts 3 Range and content 4 Curriculum opportunities
Physics	1 Key concepts 3 Range and content 4 Curriculum opportunities

- The structure of the Cambridge Secondary 1 Science curriculum framework places greater emphasis on scientific knowledge with separate strands dedicated to each of ‘Biology’, ‘Chemistry’ and ‘Physics’. The National Curriculum for England contains a single strand, ‘Range and content’ that covers knowledge objectives for all science subjects.

- The Cambridge 'Scientific enquiry' strand which is concerned with ideas, evidence, investigation and data, is broadly equivalent to 'Key processes' in the National Curriculum for England.

- Most of the objectives in 'Key concepts' in the National Curriculum for England do not map to an equivalent strand in the Cambridge Secondary 1 Science curriculum framework. 'Key concepts' relates to application, cultural understanding and collaboration and as such forms part of the individual teaching approach. For example, working in groups can be covered in practice in the classroom.

- 'Curriculum opportunities' in the National Curriculum for England is an integral part of the Cambridge Secondary 1 Science curriculum framework, rather than stated in a separate strand.

Our reviewers identified specific content points where there is more (or less) emphasis in Cambridge Secondary 1 Science than in the National Curriculum for England. The content is evident in both curricula but is often more detailed in the Cambridge Secondary 1 Science curriculum framework. Content that is not explicit in the Cambridge Secondary 1 Science curriculum framework usually relates to the context in which content can be explored in the classroom. As part of an international programme, Cambridge Secondary 1 Science is designed to be appropriate and relevant to an international audience and the context in which learning objectives are explored will vary internationally.

Standards

In the National Curriculum for England, learners' performance is measured in National Curriculum levels. A range of expected levels of attainment is specified for each key stage as well as an expected level of attainment for the majority of learners at the end of the key stage.

The table below provides an overview of how the content of the Cambridge Secondary 1 Science curriculum framework maps to National Curriculum level descriptors for Science at Key Stage 3.

	Range of National Curriculum levels within which the great majority are expected to work	**Expected attainment for the majority of learners at the *end* of the key stage**
Key Stage 1	1–3	2
Key Stage 2	2–5	4
Key Stage 3	3–7	5 / 6
	Range of National Curriculum levels covered in the content of Cambridge Secondary 1 Science (Stages 7–9)	**National Curriculum levels covered in Cambridge Secondary 1 Science Stage 9, the last stage in Cambridge Secondary 1**
Scientific enquiry	4–7	6 / 7
Biology	4–7	6 / 7
Chemistry	4–7	6 / 7
Physics	4–7	6 / 7

The learning objectives that make up Stages 7–9 of Cambridge Secondary 1 Science cover the range of National Curriculum levels within which the majority of learners are expected to work. Cambridge Secondary 1 Science Stage 9 is the last stage in Cambridge Secondary 1 and the equivalent to the end of Key Stage 3 in the National Curriculum for England. The learning objectives in this stage cover content at National Curriculum Levels 6 and 7 which are at the top of the expected range of attainment of the majority at the end of Key Stage 3 Science in the National Curriculum for England.

A learner who achieves Silver or Gold in a Stage 9 Science Progression Test (which approximates to 2.5–6.0 in Cambridge Checkpoint Science) is successfully achieving many, or the great majority of, learning objectives at this stage and therefore could reasonably be expected to be achieving Level 6 or Level 7 in the National Curriculum for England.

Following the Cambridge Secondary 1 Science curriculum framework allows learners to acquire the skills, knowledge base and understanding needed to progress to Key Stage 4.

National Curriculum for England – Review in the UK

The changes proposed in June 2012 as part of the National Curriculum for England Review share our educational approach and in many ways bring the National Curriculum for England into closer alignment with the Cambridge Primary and Secondary 1 curricula.

The National Curriculum for England Review recommends that the current system of levels and level descriptors should be removed and not replaced. Instead, the revised National Curriculum for England will describe content in a way which makes clear both what should be taught and what pupils should know and be able to do as a result. The learning objectives provided in the Cambridge Secondary 1 curriculum frameworks have been written for this very purpose – to provide a structure for teaching and learning as well as a reference against which learners' ability, understanding and progress can be checked.