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Cambridge Secondary 1

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

Purpose
This document summarises how the Cambridge Secondary 1 Mathematics curriculum framework relates to the 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 Mathematics 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 Mathematics 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 main content of the Cambridge Secondary 1 Mathematics curriculum framework and the National Curriculum for England are relatively similar, but the structures of the two curricula are different.

The strands that make up the National Curriculum Programme of Study are wider than the strands in the Cambridge Secondary 1 Mathematics curriculum framework. This means that all six strands in the Cambridge Secondary 1 Mathematics curriculum framework map to two strands of the National Curriculum Programme of Study: 'Range and content' and 'Key processes'. The wide strands in the National Curriculum Programme of Study include sub-headings which are included in the mapping to the Cambridge strands and relate more closely to the Cambridge strands.

Cambridge Secondary 1 Mathematics strand	National Curriculum Programme of Study strand
Number	3 Range and content – Number and algebra
Algebra	3 Range and content – Number and algebra
Geometry	3 Range and content – Geometry and measure
Measure	3 Range and content – Geometry and measure
Handling data	3 Range and content – Statistics
Problem solving	2 Key processes 3 Range and content

- ‘Problem solving’ in the Cambridge Secondary 1 Mathematics curriculum framework describes techniques, skills and the application of strategies in solving problems, including written methods. This is broadly equivalent to ‘Key processes’ in the National Curriculum for England.

- Many of the other objectives from ‘Number’, ‘Algebra’, ‘Geometry’, ‘Measure’ and, particularly, ‘Handling data’ also relate to the ‘Key processes’ strand but we have not detailed explicit mappings given that the particular key processes depend upon the approach used to teach a particular objective.

- There are a number of topics explicitly mentioned within the ‘Range and content’ of the National Curriculum for England that are not covered in the Cambridge Secondary 1 Mathematics curriculum framework.

Our reviewers identified specific content points where there is more (or less) emphasis in the Cambridge Secondary 1 Mathematics curriculum framework than in the National Curriculum for England. The areas in which Cambridge provides more in depth content have not been included because on the whole the Cambridge Secondary 1 Mathematics curriculum framework is more detailed.

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 Mathematics curriculum framework maps to National Curriculum level descriptors for Mathematics 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 Mathematics (Stages 7–9)	**National Curriculum levels covered in Cambridge Secondary 1 Mathematics Stage 9, the last stage in Cambridge Secondary 1**
Number	4–7	6 / 7
Algebra	4–7	6 / 7
Geometry	4–7	6 / 7
Measure	4–7	6 / 7
Handling data	4–7	6 / 7
Problem solving	4–7	6 / 7

The learning objectives that make up Stages 7–9 of Cambridge Secondary 1 Mathematics cover the range of National Curriculum levels within which the majority of learners are expected to work. Cambridge Secondary 1 Mathematics 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 Mathematics in the National Curriculum for England.

A learner who achieves Silver or Gold in a Stage 9 Mathematics Progression Test (which approximates to 2.5–6.0 in Cambridge Checkpoint Mathematics) 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 Mathematics 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 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.