

Connecting Math Concepts

Direct Instruction for English Schools

Department for Education, National Curriculum in England, Mathematics programmes of study: Key stages 1 and 2 mapped to Connecting Math Concepts

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1 Welcome

Direct Instruction programs are available through McGraw Hill UK. To order online, visit <https://www.mheducation.co.uk/>. To contact your local McGraw-Hill Education Consultant, please visit <https://www.mheducation.co.uk/customer-service/contact-a-rep>.

2 About this Document

This document assists schools who use McGraw Hill's Connecting Math Concepts (CMC) program to understand how to deliver the Department for Education (DfE) Mathematics standards of the National Curriculum in England, Mathematics programmes of study: key stages 1 and 2.

This document shows how Connecting Math Concepts can be used to achieve the related Mathematics requirements of the National Curriculum in England. It sets out the Mathematics standards and learning area sub-strands of the National Curriculum in England and shows how the Direct Instruction programs meet them.

September 2013 Version of the National Curriculum in England has been used in this document.

3 Department for Education

The Department for Education (DfE) is a ministerial department responsible for children's services and education in England, spanning early years, primary and secondary schools, higher and further education, apprenticeships, and wider skills.

The DfE is committed to providing a comprehensive education and skills training framework that ensures equal opportunities for all individuals, regardless of their background, family circumstances, or specific needs. They strive to enable children and learners to reach their full potential by safeguarding the vulnerable and delivering high standards of education, training, and care. This commitment helps fuel the economy, strengthens society, and promotes fairness.

DfE key responsibilities include:

- Overseeing teaching and learning for children in early years and primary education.
- Managing teaching and learning for young people in secondary education.
- Facilitating teaching, learning, and training for young people and adults in apprenticeships, traineeships, and further education.
- Supporting teaching and learning for young people and adults in higher education.
- Assisting professionals who work with children, young people, and adult learners.
- Helping disadvantaged children and young people to achieve higher educational outcomes.
- Ensuring local services protect and support children.

4 The National Curriculum in England

The national curriculum provides pupils with an introduction to the essential knowledge that they need to be educated citizens. It introduces pupils to the best that has been thought and said; and helps engender an appreciation of human creativity and achievement.

The national curriculum is just one element in the education of every child. There is time and space in the school day and in each week, term and year to range beyond the national curriculum specifications. The national curriculum provides an outline of core knowledge around which teachers can develop exciting and stimulating lessons to promote the development of pupils' knowledge, understanding and skills as part of the wider school curriculum.

5 Direct Instruction Programs for English and Maths

Direct Instruction programs are published in the United Kingdom by McGraw Hill. There are over seventy Direct Instruction programs to choose from depending on student needs. Reading Mastery Signature

Edition is the flagship program, and other popular programs include Spelling Mastery and Connecting Math Concepts.

6 Mathematics: Stages 1 and 2 National Curriculum Mapped to CMC

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

6.1 Aims

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The national curriculum for mathematics in England is divided into various strands. Not every strand is taught in each year group. The content descriptions for each strand have been aligned with Direct Instruction programs. These mappings are presented in this document across six tables:

- Number – number and place value
- Number – addition and subtraction
- Number – multiplication and division
- Number – addition, subtraction, multiplication and division
- Number – fractions
- Number – fractions (including decimals and percentages)
- Measurement
- Geometry – properties of shapes
- Geometry – position and direction
- Statistics
- Ratio and proportion
- Algebra.

Tables 2 – 8 provide the content descriptions for each of the strands that form the mathematics subject in the English Curriculum including the year level, the content description set by National Curriculum in England and which Direct Instruction program delivers this learning opportunity for students.

Direct Instruction programs cover most of the mathematics strands of the English Curriculum.

There are three levels of mapping in the Direct Instruction programs:

- At program level.
- At lesson level.
- At exercise level.

7 English National Curriculum Mathematics Mapped to Direct Instruction at the Program Level

Table 1 below describes the English National Curriculum Mathematics standards for each year level and the Direct Instruction programs and assessments that meet those standards.

Year 1	
<ul style="list-style-type: none"> • Number and Place Value: Counting forwards and backwards and in multiples of twos, fives and tens. They'll also practise reading and writing numbers to 20 in numerals and words. • Addition and Subtraction: Using the addition, subtraction and equals signs and solving practical problems. • Multiplication and Division: Solving one-step problems involving multiplication and division by using concrete objects and pictorial representations. • Fractions: Recognising a half as one of two equal parts and a quarter as one of four equal parts. In the following years, they'll go into more detail and learn to write other fractions as well. • Measurement: Solving practical problems that involve lengths and heights, capacity and volume and mass or weight. They'll also learn how to tell the time to the hour and half past the hour. • Geometry - Position and Direction: Children will make their first steps in describing position, movement and direction. • Geometry - Properties of Shape: Naming common 2D and 3D shapes. 	
Programs	Assessments
Connecting Math Concepts: Level A, B, C & D	Mastery tests every 10 lessons. Cumulative Test 1 completed after Lesson 60. Cumulative Test 2 completed after Lesson 130.
Year 2	
<ul style="list-style-type: none"> • Number and Place Value: Count in steps, recognise place value, represent, compare, order, read, and write numbers up to 100, solving problems using place value. • Addition and Subtraction: Solve problems using objects, pictures, and mental methods; recall facts to 20, extend to 100, understand addition properties, check with inverse relationships. • Multiplication and Division: Recall facts for 2, 5, 10 times tables; solve problems using multiplication, division, and properties of operations. • Fractions: Recognise, find, write fractions like $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$; understand equivalence of $\frac{2}{4}$ and $\frac{1}{2}$. • Measurement: Measure length, mass, temperature, capacity; compare, use money symbols, solve practical problems, tell time to the nearest five minutes. • Geometry - Properties of Shape: Identify and describe 2D and 3D shapes, sort and compare shapes, understand symmetry. • Geometry - Position and Direction: Arrange patterns, describe positions, movements, and turns using directional language. • Statistics: Interpret and create charts and tables; ask and answer questions by counting, sorting, and comparing data. 	
Programs	Assessments
Connecting Math Concepts: Level A, B, C, D & E	Mastery tests every 10 lessons. Cumulative Test 1 completed after Lesson 60. Cumulative Test 2 completed after Lesson 125.

Year 3	
<ul style="list-style-type: none"> • Number and Place Value: Count by 4, 8, 50, 100; find 10/100 more or less; recognise, compare, order, read, write, estimate numbers up to 1000. • Addition and Subtraction: Solve complex problems using number facts and place value; add/subtract mentally and using columnar methods; estimate and check with inverse operations. • Multiplication and Division: Recall facts for 3, 4, 8 tables; solve problems with two-digit times one-digit multiplication; handle scaling and correspondence problems. • Fractions: Count in tenths; recognise and write fractions; identify equivalent fractions; add/subtract same denominator fractions; compare/order fractions; solve related problems. • Measurement: Measure, compare, add, subtract lengths, mass, volume; measure perimeters; handle money transactions; read/write time accurately; understand time units and durations. • Geometry - Properties of Shape: Draw and model 2D/3D shapes; recognise angles and lines; identify right angles and their multiples; distinguish horizontal, vertical, perpendicular, parallel lines. • Statistics: Interpret/present bar charts, pictograms, tables; solve questions using scaled data representations. 	
Programs	Assessments
Connecting Math Concepts: Level B, C, D, E & F	Mastery tests every 10 lessons. Cumulative Test 1 completed after Lesson 60. Cumulative Test 2 completed after Lesson 130.
Year 4	
<ul style="list-style-type: none"> • Number and Place Value: Count in multiples of 6, 7, 9, 25, 1000; handle four-digit place value; compare, order, round, and estimate large numbers; read Roman numerals to 100. • Addition and Subtraction: Add/subtract up to 4-digit numbers using columnar methods; estimate and check with inverse operations; solve contextual two-step problems. • Multiplication and Division: Recall facts up to 12x12; multiply/divide mentally using place value and derived facts; solve problems using distributive law, scaling, and complex correspondences. • Fractions: Recognise decimal equivalents; divide numbers by 10/100; round, compare, and solve problems with fractions and decimals; add/subtract fractions with the same denominator. • Measurement: Convert time units; read/write analogue and digital clocks; measure perimeter and area; convert and calculate various measurements including money. • Geometry - Properties of Shape: Compare and classify shapes; identify acute and obtuse angles; recognise lines of symmetry; complete symmetric figures. • Geometry - Position and Direction: Describe positions on a grid; translate coordinates; plot points and complete polygons. • Statistics: Present data with bar charts and time graphs; solve problems using bar charts, pictograms, and tables. 	
Programs	Assessments
Connecting Math Concepts: Level B, C, D, E & F	Mastery tests every 10 lessons. Cumulative Test 1 completed after Lesson 70. Cumulative Test 2 completed after Lesson 130.

Year 5	
<ul style="list-style-type: none"> • Number and Place Value: Read, write, compare numbers to 1,000,000; count by powers of 10; interpret negative numbers; round numbers; solve related problems; read Roman numerals to 1000. • Addition and Subtraction: Add/subtract numbers over 4 digits using formal methods; solve multi-step problems; use rounding to check answers and determine accuracy. • Multiplication and Division: Identify multiples, factors, primes; multiply/divide up to 4 digits; solve problems using factors, multiples, squares, cubes; understand scaling and rates. • Fractions: Compare, order, add, subtract, multiply fractions; recognise decimals and percentages; convert between fractions, decimals, and percentages; solve related problems. • Measurement: Convert metric/imperial units; calculate perimeter, area, volume; solve time conversion problems; use all operations to solve measurement problems. • Geometry - Properties of Shape: Identify 3D shapes from 2D; understand rectangle properties; classify polygons; estimate, measure, draw angles; recognise angle relationships. • Geometry - Position and Direction: Describe and represent positions after reflection/translation, using appropriate language, ensuring the shape remains unchanged. • Statistics: Solve problems using line graphs; read and interpret tables, including timetables. 	
Programs	Assessments
Connecting Math Concepts: Level B, C, D, E & F	Mastery tests every 10 lessons. Cumulative Test 1 completed after Lesson 70. Cumulative Test 2 completed after Lesson 130.
Year 6	
<ul style="list-style-type: none"> • Number and Place Value: Read, write, order, compare up to 10,000,000; round to required accuracy; use negative numbers; solve related problems. • Addition, Subtraction, Multiplication, Division: Solve problems with all operations; perform mental calculations; use order of operations; estimate answers; multiply/divide large numbers; identify factors and primes. • Fractions: Simplify, compare, order fractions; add/subtract different denominators; multiply fractions; divide proper fractions by whole numbers; convert fractions to decimals; use fraction, decimal, percentage equivalences. • Ratio and Proportion: Solve problems with similar shapes, unequal sharing, relative sizes; calculate percentages and comparisons. • Algebra: Use simple formulae; generate sequences; solve algebraic expressions; find pairs of numbers; enumerate combinations of variables. • Measurement: Solve problems with unit conversion; use standard units; convert miles to kilometres; calculate area, volume; recognise area-perimeter relationships. • Geometry - Properties of Shape: Draw 2D shapes; describe/build 3D shapes; classify shapes; find unknown angles; understand circle parts. • Geometry - Position and Direction: Describe positions on a full coordinate grid; translate and reflect shapes on the coordinate plane. • Statistics: Interpret/construct pie charts, line graphs; solve related problems; calculate and interpret the mean. 	
Programs	Assessments
Connecting Math Concepts: Level B, D, E & F	Mastery tests every 10 lessons. Cumulative Test 1 completed after Lesson 60. Cumulative Test 2 completed after Lesson 120.

8 Curriculum Mathematics Statutory Requirements Mapped to Connecting Math Concepts

8.1 Sequence of Content: Year 1 Programme of Study

Table 2: National curriculum in England for Year 1 Statutory requirements mapped to Connecting Math Concepts Levels.

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Number – Number and Place Value			
Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.	A	Students are required to:	Learning objective: Count to 100 by ones and 10s.
		<ul style="list-style-type: none"> count to 100 and differentiate names, numerals and quantities by: <ul style="list-style-type: none"> daily touch and count activities progressively increasing throughout the year count events, objects, pictures to relate names, number and quantity write numerals for each named number draw lines (for numbers) and count. 	CMC Level A Presentation Books 1 to 3. Lessons 1 to 40. Lessons 1.1, 1.5, 1.7, 2.1, 2.4, 2.6, 3.1, 3.5, 3.6, 4.1, 4.4, 4.6, 5.1, 5.4, 5.6, 6.1, 6.6, 7.2, 7.6, 8.2, 8.6, 9.1, 9.7, 10.1, 10.7, 11.1, 11.3, 11.8, 12.1, 12.7, 13.1, 13.7, 14.3, 15.1, 15.6, 16.1, 16.5, 17.1, 17.4, 17.7, 18.1, 18.3, 18.6, 18.8, 19.1, 19.4, 1.9.7, 19.9, 20.1, 20.3, 20.5, 21.1, 22.1, 22.4, 23.1, 23.3, 24.3, 25.2, 25.7, 26.2, 27.1, 27.5, 28.1, 29.1, 30.1, 30.7, 31.1, 32.1, 33.1, 33.4, 34.5, 35.5, 36.3, 37.1, 38.1, 38.2, 39.1, 39.2, 39.8, 39.11, 39IW, 40.7, 40.9, 40IW
	Students are required to:	Learning objective: Write numbers from 0-20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	
	<ul style="list-style-type: none"> recite the counting of numbers with fluency and confidence: <ul style="list-style-type: none"> show they are able to count to 100 in ones and tens starting from any number count backwards starting from any number recite numbers in fixed order identify the number the teacher counts to learning the relationship between the counting numbers and the number of objects shown. 	CMC Level A Presentation Books 1 to 3. Lessons 1 to 80. Lessons 1.8, 2.8, 3.8, 4.8, 5.8, 6.8, 7.8, 9.8, 10.8, 11.10, 12.10, 13.10, 14.11, 15.5, 15.10, 16.4, 16.9, 17.5, 17.12, 18.4, 18.11, 19.3, 19.11, 20.7, 20.9, 21.10, 21.11, 22.10, 22.11, 23.9, 23.10, 24.7, 24.9, 25.9, 25.10, 26.7, 26.11, 27.10, 28.8, 28.11, 29.9, 29.11, 30.9, 30.12, 31.9, 31.12, 32.7, 32.12, 33.3, 33.12, 34.7, 34.9, 34.11, 34IW, 35.9, 35.12, 35IW, 36.9, 36IW, 37.8, 37.11, 37IW, 38.8, 38.11, 38IW, 39.8, 39.11IW, 40.7, 40.9, 40IW, 41.11, 42.7, 42.12, 43.9, 43IW, 44.9, 44IW, 45.8, 45.10, 45IW, 46.9, 46IW, 47.10, 47IW, 48.10, 48IW, 49.11, 49IW, 50.4, 50.12, 50IW, 51.7, 51.11, 51IW, 52.7, 52.11, 52IW, 53.11, 53IW, 54.10, 54IW, 55.8, 55.11, 55IW, 56.10, 56IW, 57.8, 57.11, 57IW, 58.10, 58IW, 59.11, 59IW, 60.11, 60IW, 61.5, 61.10, 61IW, 62.1, 62.6, 62.10, 62IW, 63.2, 63.3, 63.6, 63.11, 63IW, 64.2, 64.10, 64.11, 64IW, 65.2, 65.10, 65.11, 65.12, 65IW, 67.8, 67.11, 67IW, 68.9, 68.11, 68IW, 69.8, 69.10, 69.11, 69IW, 70.8, 70.11, 70IW, 71.11, 71.12, 71IW, 72.4, 72.9, 72.11, 72.12, 72IW, 73.5, 73.11, 73.12, 73.13, 73IW, 74.7, 74.12, 74IW, 75.9, 75.11, 75IW, 76.9, 76.11, 76IW, 77.8, 77.12, 77IW, 78.10, 78.11, 78IW, 79.11, 79.12, 79IW, 80.11	
B	Students are required to:	Learning objective: Count by ones.	
Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens.	B	<ul style="list-style-type: none"> count by ones from a number to a number count forwards and backwards. 	CMC Level B Presentation Books 1, 2 and 3. Lessons: 1 to 125. Sample Lessons: 1.2, 2.2, 3.2, 4.7, 5.3, 6.2, 7.1, 8.6, 9.1, 10.3, 11.4, 12.5, 13.2, 14.6, 15.2, 16.12, 17.1, 18.1, 19.3, 20.3, 21.4, 22.6, 23.6, 24.5, 25.5
		Students are required to:	Learning objective: Identify and write symbols.
	<ul style="list-style-type: none"> identify numerals from zero to hundreds 	CMC Level B Presentation Books 1, 2, and 3. Lessons: 1 to 119.	

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> • write numerals from zero to hundreds • write numerals for lines, objects and diagrams • draw lines for numerals • complete number lines • write numerals from dictated word problems. 	Lessons 1.1, 1.4, 1.7, 2.1, 2.4, 2.8, 2.9, 3.1, 3.5, 3.9, 3.10, 4.1, 4.2, 4.9, 5.1, 5.10, 5IW, 6.1, 6.4, 6.10, 6IW, 7.2, 7.7, 7.10, 7IW, 8.8, 8.10, 8.11, 8.12, 8IW, 9.2, 9.5, 9.8, 9.11, 9IW, 10.1, 10.2, 10.9, 10.12, 10IW, 11.5, 11.6, 11.11, 11.12, 11IW, 12.7, 13.5, 13.9, 13.11, 13IW, 14.1, 14.6, 14IW, 15.1, 15.6, 15IW, 16.1, 16.4, 16.8, 16.11, 16.12, 16IW, 17.4, 17.9, 17.10, 17.11, 17IW, 18.5, 18.9, 18IW, 19.2, 19.5, 19.9, 19IW, 20.2, 20IW, 21.2, 21.9, 21.10, 21.11, 22.2, 22.4, 23.2, 23.8, 24.1, 24.4, 24.7, 24IW, 25.1, 25.4, 25.7, 25.9, 25IW, 26.1, 26.7, 26.10, 27.1, 27.6, 27.9, 28.3, 28.5, 29.1, 29.5, 29.7, 30.2, 30.5, 31.1, 31.2, 31.9, 32.1, 32.9, 32IW, 33.3, 33.5, 33.7, 34.1, 34.5, 34.7, 35.2, 35.5, 35.9, 36.2, 36.7, 37.6, 37.7, 37.10, 38.6, 38.8, 38.10, 39.7, 39.8, 40.7, 41.7, 41.9, 41.10, 42.7, 43.7, 44.9, 45.9, 46.8, 47.6, 49.10, 50.8, 51.8, 52.4, 52.7, 53.7, 53.8, 54.5, 54.9, 55.10, 56.8, 56.9, 57.8, 57.10, 58.6, 59.8, 59.9, 60.7, 62.7, 63.8, 64.9, 65.9, 65IW, 66.9, 66IW, 67.3, 67.8, 67IW, 68.2, 68.9, 69.3, 69IW, 70.9, 70IW, 71.7, 71IW, 72.7, 73.9, 73IW, 79IW, 80IW, 81.4, 81IW, 82.8, 82IW, 83.8, 84.7, 84IW, 85.9, 85IW, 86IW, 88IW, 89.9, 89IW, 90.6, 90IW, 91IW, 92.7, 92.9, 92IW, 93IW, 94IW, 95.7, 95IW, 96.5, 96IW, 97.7, 97IW, 98.7, 98IW, 99.4, 99.9, 99IW, 100.5, 101.5, 101.6, 101IW, 102.6, 102.8, 102IW, 103.6, 103.8, 103IW, 104.5, 104IW, 105.7, 105IW, 106.6, 107.6, 107.7, 107IW, 108.6, 108.8, 108IW, 109.8, 109.9, 109IW, 110.5, 110.8, 110.9, 110IW, 111.6, 111.9, 111IW, 112.8, 112.9, 112IW, 113.8, 113.9, 113IW, 114.6, 114.7, 114IW, 115.10, 115IW, 116IW, 117.5, 117.6, 117IW, 118.6, 118IW, 119.7, 119IW
Given a number, identify one more and one less.	B	Students are required to: <ul style="list-style-type: none"> • count by ones from a number to a number • count forwards and backwards. 	Learning objective: Count by ones. CMC Level B Presentation Books 1, 2 and 3. Lessons: 1 to 125. Sample Lessons: 1.2, 2.2, 3.2, 4.7, 5.3, 6.2, 7.1, 8.6, 9.1, 10.3, 11.4, 12.5, 13.2, 14.6, 15.2, 16.12, 17.1, 18.1, 19.3, 20.3, 21.4, 22.6, 23.6, 24.5, 25.5
Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.	A	Students are required to: <ul style="list-style-type: none"> • count to answer “how many?” questions about as many as 20 things: <ul style="list-style-type: none"> - in an arranged in a line - in a rectangular array - in a circle • count to answer “How many?” questions about as many as 10 things in a scattered configuration • count out the number of objects from a given number between 1 and 20. 	Learning objective: Count collections up to 20. CMC Level A Presentation Book 3. Lessons 41 to 120. Lessons 41.5, 41.6, 41.7, 42.5, 42.9, 42.10, 43.6, 43.7, 43.9, 43IW, 44.6, 44.7, 44.8, 44.9, 44IW, 45.4, 45.6, 45.7, 45.9, 45.10, 45IW, 46.6, 46.7, 46.8, 46.9, 46IW, 47.3, 47.5, 47.7, 47.8, 47.9, 47.10, 47IW, 48.6, 48.7, 48.8, 48.9, 48.10, 48IW, 49.6, 49.8, 49.9, 49.10, 49.11, 49IW, 50.5, 50.8, 50.9, 50.10, 50.11, 50.12, 50IW, 52.6, 51.8, 51.11, 51IW, 52.9, 52.10, 52.11, 52IW, 53.8, 53.11, 53IW, 54.5, 54.8, 54.10, 54IW, 55.9, 55.11, 55IW, 56.3, 56.10, 56IW, 57.6, 57.7, 57.10, 57.11, 57IW, 58.9, 58.10, 58IW, 59.6, 59.10, 59.11, 59.12, 59IW, 60.10, 60.11, 60IW, 61.4, 61.9, 61.10, 61IW, 62.3, 62.7, 62.10, 62IW, 63.4, 63.7, 63.11, 63IW, 64.4, 64.8, 65.7, 65.8, 65.9, 66.4, 66.9, 66.10, 66.11, 66.12, 66IW, 67.4, 67.7, 67.8, 67.10, 68.6, 68.8, 68.9, 68.10, 69.1, 69.7, 69.8, 69.10, 70.3, 70.8, 70.9, 70.10, 71.4, 71.6, 71.9, 71.10, 71.11, 72.2, 72.4, 72.9, 72.10, 72.11, 73.3, 73.5, 73.10, 73.12, 74.7, 74.8, 74.11, 75.7, 76.5, 76.9, 76.10, 77.8, 77.11, 78.6, 78.7, 78.10, 79.6, 79.7, 79.11, 80.6, 80.7, 80.11, 81.8, 81.9, 81.11, 81.12, 81IW, 82.5, 82.6, 82.7, 83.6, 83.7, 83.8, 83.10, 84.6, 84.7, 84.10, 85.5, 85.11, 85IW, 86.9, 86.10, 86IW, 87.9, 87.10, 87IW, 88.9, 88.10, 88IW, 89.6, 89.10, 89.11, 89IW, 90.3, 90.10, 90.11, 90IW, 91.3, 91.5, 91.9, 91IW, 92.2, 92.4, 92.9, 92IW, 93.4, 93.8, 93.10, 93IW, 94.8, 94.10, 94IW, 95.9, 95.11, 95IW, 96.9, 96.10, 96IW,

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
			97.10, 97.11, 97IW, 98.9, 98IW, 99.9, 99.11, 99IW, 100.9, 101.6, 101.11, 101IW, 102.10, 102IW, 103.3, 103.11, 103IW, 104.4, 104.10, 104IW, 105.6, 105.11, 105IW, 106.7, 106.11, 106IW, 107.7, 107.10, 107IW, 108.5, 108.10, 108.11, 108IW, 109.5, 109.8, 109.11, 109IW, 110.10, 110.11, 110IW, 111.8, 111.10, 111IW, 112.10, 112IW, 113.11, 113IW, 114.1, 114IW, 115.10, 115IW, 116.2, 116.5, 117.1, 117.6, 118.9, 118.10, 119.8, 119.11, 120.10, 120.11
Read and write numbers from 1 to 20 in numerals and words.	A	<p>Students are required to:</p> <ul style="list-style-type: none"> count to answer 'How many?' questions about as many as 20 things: <ul style="list-style-type: none"> in an arranged in a line in a rectangular array in a circle count to answer 'How many?' questions about as many as 10 things in a scattered configuration count out the number of objects from a given number between 1 and 20. 	<p>Learning objective: Count collections up to 20.</p> <p>CMC Level A Presentation Book 3. Lessons 41 to 120.</p> <p>Lessons 41.5, 41.6, 41.7, 42.5, 42.9, 42.10, 43.6, 43.7, 43.9, 43IW, 44.6, 44.7, 44.8, 44.9, 44IW, 45.4, 45.6, 45.7, 45.9, 45.10, 45IW, 46.6, 46.7, 46.8, 46.9, 46IW, 47.3, 47.5, 47.7, 47.8, 47.9, 47.10, 47IW, 48.6, 48.7, 48.8, 48.9, 48.10, 48IW, 49.6, 49.8, 49.9, 49.10, 49.11, 49IW, 50.5, 50.8, 50.9, 50.10, 50.11, 50.12, 50IW, 52.6, 51.8, 51.11, 51IW, 52.9, 52.10, 52.11, 52IW, 53.8, 53.11, 53IW, 54.5, 54.8, 54.10, 54IW, 55.9, 55.11, 55IW, 56.3, 56.10, 56IW, 57.6, 57.7, 57.10, 57.11, 57IW, 58.9, 58.10, 58IW, 59.6, 59.10, 59.11, 59.12, 59IW, 60.10, 60.11, 60IW, 61.4, 61.9, 61.10, 61IW, 62.3, 62.7, 62.10, 62IW, 63.4, 63.7, 63.11, 63IW, 64.4, 64.8, 65.7, 65.8, 65.9, 66.4, 66.9, 66.10, 66.11, 66.12, 66IW, 67.4, 67.7, 67.8, 67.10, 68.6, 68.8, 68.9, 68.10, 69.1, 69.7, 69.8, 69.10, 70.3, 70.8, 70.9, 70.10, 71.4, 71.6, 71.9, 71.10, 71.11, 72.2, 72.4, 72.9, 72.10, 72.11, 73.3, 73.5, 73.10, 73.12, 74.7, 74.8, 74.11, 75.7, 76.5, 76.9, 76.10, 77.8, 77.11, 78.6, 78.7, 78.10, 79.6, 79.7, 79.11, 80.6, 80.7, 80.11, 81.8, 81.9, 81.11, 81.12, 81IW, 82.5, 82.6, 82.7, 83.6, 83.7, 83.8, 83.10, 84.6, 84.7, 84.10, 85.5, 85.11, 85IW, 86.9, 86.10, 86IW, 87.9, 87.10, 87IW, 88.9, 88.10, 88IW, 89.6, 89.10, 89.11, 89IW, 90.3, 90.10, 90.11, 90IW, 91.3, 91.5, 91.9, 91IW, 92.2, 92.4, 92.9, 92IW, 93.4, 93.8, 93.10, 93IW, 94.8, 94.10, 94IW, 95.9, 95.11, 95IW, 96.9, 96.10, 96IW, 97.10, 97.11, 97IW, 98.9, 98IW, 99.9, 99.11, 99IW, 100.9, 101.6, 101.11, 101IW, 102.10, 102IW, 103.3, 103.11, 103IW, 104.4, 104.10, 104IW, 105.6, 105.11, 105IW, 106.7, 106.11, 106IW, 107.7, 107.10, 107IW, 108.5, 108.10, 108.11, 108IW, 109.5, 109.8, 109.11, 109IW, 110.10, 110.11, 110IW, 111.8, 111.10, 111IW, 112.10, 112IW, 113.11, 113IW, 114.1, 114IW, 115.10, 115IW, 116.2, 116.5, 117.1, 117.6, 118.9, 118.10, 119.8, 119.11, 120.10, 120.11</p>
Number – Addition and Subtraction			
Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs.	A	<p>Students are required to:</p> <ul style="list-style-type: none"> identify the symbols required to write addition and subtraction problems: <ul style="list-style-type: none"> writing numbers symbols + (addition) – (subtraction) = (equals). 	<p>Learning objective: Use written numbers to represent situations in word problems and solve.</p> <p>CMC Level A Presentation Books 2 and 3. Lessons 41 – 103.</p> <p>Lessons 41.3, 42.2, 43.3, 44.3, 45.3, 46.3, 47.9, 48.9, 49.10, 50.11, 52.6, 53.4, 54.1, 55.4, 56.9, 57.10, 58.9, 59.10, 60.10, 61.7, 62.7, 63.8, 64.6, 66.8, 67.9, 68.4, 69.9, 70.7, 71.8, 72.8, 74.10, 75.6, 76.8, 77.7, 79.10, 80.10, 81.5, 82.10, 83.8, 84.5, 85.8, 87.8, 90.9, 91.7, 95.8, 97.9, 100.8, 103.10</p>
Represent and use number bonds and related subtraction facts within 20.	B	<p>Students are required to:</p> <ul style="list-style-type: none"> work 1- and 2-digit addition problems using the following strategies: 	<p>Learning objective: Work addition and subtraction problems in a variety of contexts.</p> <p>CMC Level B Presentation Books 1, 2, and 3. Lessons: 5 to 125.</p>

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
<p>Add and subtract one-digit and two-digit numbers to 20, including zero.</p> <p>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = _ - 9$.</p>		<ul style="list-style-type: none"> - draw lines for numerals and count - count groups of objects - count on from a number - add in columns, with carrying Count combined segments on a ruler - count backwards for a missing addend - relate fact families - use tens and ones diagrams • work 1- and 2-digit subtraction problems using the following strategies: <ul style="list-style-type: none"> - count backwards - use related addition/subtraction facts - subtract in columns - use tens diagrams. 	<p>Lessons 5.6, 6.2, 6.5, 6.9, 7.3, 7.4, 7.8, 7.10, 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 9.1, 9.3, 9.4, 9.7, 9.9, 10.3, 10.4, 10.5, 10.6, 10.7, 10.10, 10.11, 11.2, 11.3, 11.4, 11.7, 11.10, 12.2, 12.5, 12.6, 12.8, 12.10, 12.11, 13.2, 13.3, 13.4, 13.8, 13.10, 13.11, 14.2, 14.4, 14.6, 14.7, 14.8, 14.9, 14.10, 15.2, 15.3, 15.4, 15.5, 15.7, 15.9, 16.1, 16.5, 16.6, 16.7, 16.8, 17.1, 17.3, 17.5, 17.6, 17.7, 17.9, 17.10, 18.1, 18.2, 18.4, 18.7, 18.9, 19.1, 19.3, 19.4, 19.7, 19.9, 19.11, 20.1, 20.3, 20.6, 20.7, 20.8, 20.9, 21.2, 21.4, 21.5, 21.10, 22IW, 23.1, 23.3, 23.6, 23.7, 23.8, 23.9, 24.3, 24.5, 24.6, 24.8, 24.10, 25.3, 25.5, 25.6, 25.8, 26.2, 26.3, 26.4, 26.5, 26.8, 26.11, 27.1, 27.2, 27.3, 27.4, 27.7, 27.8, 27.11, 28.1, 28.2, 28.4, 28.5, 28.6, 28.7, 28.10, 28IW, 29.2, 29.3, 29.4, 29.6, 29.7, 29.8, 29IW, 30.1, 30.3, 30.4, 30.6, 30.7, 30.9, 30.10, 30IW, 31.3, 31.4, 31.5, 31.6, 31.7, 31.10, 31IW, 32.1, 32.2, 32.3, 32.4, 32.6, 32.8, 32.9, 32IW, 33.1, 33.2, 33.4, 33.6, 33.8, 33.9, 33IW, 34.1, 34.2, 34.3, 34.4, 34.6, 34.8, 34.9, 34IW, 35.1, 35.3, 35.4, 35.6, 35.7, 35.10, 35IW, 36.1, 36.3, 36.4, 36.6, 36.8, 36IW, 37.1, 37.2, 37.4, 37.6, 37.8, 37IW, 38.2, 38.3, 38.4, 38.5, 38.7, 38.9, 38IW, 39.2, 39.3, 39.4, 39.5, 39.6, 39.9, 39.10, 39IW, 40.1, 40.2, 40.3, 40.5, 40.6, 40.8, 40.9, 40IW, 41.2, 41.4, 41.6, 41.8, 41.9, 41.11, 41IW, 42.1, 42.2, 42.3, 42.6, 42.8, 42IW, 43.1, 43.3, 43.4, 43.8, 43IW, 44.2, 44.3, 44.6, 44.7, 44.8, 44.9, 44.10, 44IW, 45.2, 45.3, 45.6, 45.8, 45.10, 45IW, 46.1, 46.2, 46.4, 46.5, 46.6, 46.7, 46.9, 46IW, 47.1, 47.2, 47.3, 47.5, 47.9, 47IW, 48.1, 48.3, 48.5, 48.6, 48.8, 48.10, 48IW, 49.1, 49.3, 49.4, 49.5, 49.7, 49.8, 49IW, 50.1, 50.2, 50.3, 50.5, 50.6, 50.7, 50.8, 50.9, 50.10, 50IW, 51.1, 51.2, 51.3, 51.4, 51.5, 51.6, 51.8, 51IW, 52.1, 52.2, 52.3, 52.4, 52.5, 52.8, 52IW, 53.2, 53.3, 53.4, 53.5, 53.6, 53.8, 53.9, 53IW, 54.1, 54.2, 54.3, 54.6, 54.7, 54.8, 54IW, 55.1, 55.2, 55.3, 55.5, 55.6, 55.7, 55.8, 55IW, 56.1, 56.2, 56.4, 56.7, 56.8, 56IW, 57.2, 57.3, 57.5, 57.8, 57.9, 57IW, 58.2, 58.3, 58.5, 58.6, 58.7, 58.9, 58IW, 59.4, 59.5, 59.7, 59.9, 59.10, 59IW, 60.1, 60.2, 60.6, 60.9, 60.10, 60IW, 61.1, 61.3, 61.5, 61.7, 61.9, 61IW, 62.2, 62.3, 62.5, 62.7, 62.9, 62IW, 63.1, 63.3, 63.4, 63.7, 63.9, 63IW, 64.1, 64.3, 64.4, 64.7, 64IW, 65.2, 65.3, 65.6, 65.7, 65IW, 66.1, 66.2, 66.5, 66.6, 66.7, 66.8, 66.9, 66IW, 67.1, 67.4, 67.6, 67.7, 67.8, 67.9, 67IW, 68.1, 68.3, 68.5, 68.7, 68.8, 68IW, 69.1, 69.5, 69.7, 69.8, 69.9, 69IW, 70.2, 70.4, 70.5, 70.7, 70.8, 70.9, 70IW, 71.1, 71.4, 71.5, 71.6, 71.7, 71.8, 71IW, 72.1, 72.3, 72.4, 72.6, 72.7, 72.9, 72IW, 73.1, 73.3, 73.6, 73.7, 73.8, 73IW, 74.1, 74.2, 74.4, 74.5, 74.6, 74.8, 74.9, 74IW, 75.1, 75.3, 75.4, 75.7, 75.8, 75IW, 76.1, 76.2, 76.4, 76.8, 76IW, 77.2, 77.4, 77.5, 77.7, 77IW, 78.1, 78.3, 78.4, 78.7, 78.8, 78IW, 79.1, 79.3, 79.4, 79.5, 79.7, 79IW, 80.1, 80.3, 80.4, 80.5, 80.7, 80IW, 81.1, 81.3, 81.5, 81.6, 81IW, 82.1, 82.3, 82.7, 82.8, 82IW, 83.2, 83.3, 83.4, 83.6, 83IW, 84.1, 84.4, 84.5, 84.9, 84IW, 85.1, 85.5, 85.6, 85.8, 85IW, 86.1, 86.3, 86.5, 86.7, 86IW, 87.1, 87.6, 87.8, 87IW, 88.1, 88.4, 88.6, 88.8, 88IW, 89.1, 89.3, 89.5, 89.6, 89.8, 89IW, 90.1, 90.2, 90.4, 90.8, 90IW, 91.1, 91.3, 91.4, 91.5, 91.6, 91.9, 91IW, 92.1, 92.2, 92.3, 92.5, 92.8, 92IW, 93.3, 93.5, 93.6, 93.8, 93IW, 94.2, 94.3, 94.5, 94.6, 94.7, 94.9, 94IW, 95.1, 95.5, 95.7, 95.9, 95IW, 96.2, 96.5, 96.6, 96.9, 96IW; 97.1, 97.3, 97.7, 97.9, 97IW, 98.2, 98.4, 98.5, 98.8, 98IW, 99.1, 99.2, 99.7, 99.9, 99IW, 100.2, 100.8, 100.9, 100.10, 100IW, 101.1, 101.7, 101.8, 101IW, 102.1, 102.5, 102IW, 103.1, 103.4, 103IW, 104.1, 104.4, 104.8, 104IW, 105.1, 105.4, 105.8, 105.9, 105IW, 106.1, 106.2, 106.4, 106.8, 106.9, 106IW, 107.1, 107.2, 107.9, 107IW, 108.1, 108.2, 108.6, 108.9, 108IW, 109.1, 109.2, 109.6, 109.9, 109IW, 110.1, 110.2, 110.3, 110.5, 110.7, 110IW, 111.1, 111.4, 111.7, 111.9, 111IW, 112.1, 112.2, 112.4, 112.7, 112.8, 112IW, 113.1, 113.3, 113.7, 113IW, 114.1, 114.3, 114.4, 114.9, 114IW, 115.1, 115.3, 115.4, 115.7, 115.8, 115.9, 115IW, 116.1, 116.5, 116.7, 116.9, 116IW,</p>

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
			117.1, 117.2, 117.3, 117.4, 117.5, 117.8, 117IW, 118.1, 118.2, 118.3, 118.4, 118.6, 118.7, 118IW, 119.1, 119.3, 119.6, 119.7, 119IW, 120.1, 120.2, 120.5, 120.6, 120.7, 120IW, 121.1, 121.4, 121.5, 121.7, 121.8, 121IW, 122.1, 122.6, 122.8, 122IW; 123.1, 123.4, 123.5, 124.1, 124.4, 124.5, 125.1, 125.4
Number – Multiplication and Division			
Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	C	Students are required to: <ul style="list-style-type: none"> use multiplication to solve picture problems representing equal sized groups. 	Learning objective: Use multiplication and division within 100 to solve word problems in situations involving equal groups.
			CMC Level C Presentation Book 2. Lessons: 110-119.
	D	Students are required to: <ul style="list-style-type: none"> say and write multiplication facts and related division facts for number families representing doubles through 20 demonstrate proficiency with multiplication and division facts for twos through timed exercises. 	Learning objective: Multiply and divide fluently by twos using doubling and halving strategies.
			CMC Level D Presentation Book 1. Lessons: 47-73. Lessons 47.5, 48.1, 49.1, 50.1, 51.1, 52.1, 53.1, 54.1, 55.1, 55.8, 56.1, 57.1, 58.1, 59.1, 60.1, 61.1, 68.7, 69.1, 70.1, 71.1, 72.1, 73.1
Number – Fractions			
Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	C	Students are required to: <ul style="list-style-type: none"> name fractional parts of a whole recognise that fractional parts are equal parts of a whole, including halves, thirds, fourths, fifths, sixths, eighths connect halves and fourths through halving connect thirds and sixths through halving. 	Learning objective: Identify fractions from diagrams.
			CMC Level C Presentation Book 2. Lessons: 121-126.
			Lessons 121.5, 122.6, 123.1, 124.1, 125.6, 126.6, 126IW
Measurement			
Compare, describe and solve practical problems for: <ul style="list-style-type: none"> lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] mass/weight [for example, heavy/light, heavier than, lighter than] 	A	Students are required to: <ul style="list-style-type: none"> directly compare two objects with a measurable attribute in common to see which object has 'more of' / 'less of' that attribute and describe the difference for: <ul style="list-style-type: none"> height weight age cost 	Learning objective: Describe and compare measurable attributes.
			CMC Level A Presentation Book 3. Lessons 97-120.
			Lessons 97.4, 98.3, 100.2, 101.4, 102.3, 112.3, 113.5, 114.5, 118.4, 119.5, 120.5

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
<ul style="list-style-type: none"> capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] time [for example, quicker, slower, earlier, later] 		<ul style="list-style-type: none"> compare two objects with a measurable attribute in common to see which object has “more of” or “less of” the attribute and describe the difference learn ‘greater than’ and ‘less than’ symbols. 	
	B	Students are required to: <ul style="list-style-type: none"> compare and order up to three objects based on length, height, weight and age. compare the lengths of two objects indirectly by using a third object 	Learning objective: Compare and order objects and events using attributes of length, mass, capacity, and duration, communicating reasoning. CMC Level B Presentation Books 2 and 3. Lessons: 77 to 97. Lessons 77.3, 78.2, 79.2, 80.6, 81.7, 82.4, 83.1, 83.8; 84.3, 85.3, 85.9, 86.2, 87.2, 88.2, 89.2, 90.3, 93.4, 95.4, 96.4, 96.8, 97.5
Measure and begin to record the following: <ul style="list-style-type: none"> Lengths and heights. Mass/weight. Capacity and volume. Time (hours, minutes, seconds). 	B	Students are required to: <ul style="list-style-type: none"> measure shapes and objects using informal units. 	Learning objective: Measure the length of various shapes and objects using informal units. CMC Level B Presentation Books 2 and 3. Lessons: 60 to 117. Lessons 60.8, 61.8, 62.1, 63.7, 64.6, 65.8, 66.7, 67.7, 68.8, 69.7, 70.4, 70.6, 71.6, 72.6, 73.6, 74.6, 74IW, 75.7, 75IW, 76IW, 78IW, 79IW, 80IW, 82IW, 83IW, 84IW, 85IW, 86IW, 87IW, 88IW, 89IW, 90IW, 91IW, 92IW, 94IW, 95IW, 97IW, 99IW, 105IW, 107IW, 108IW, 110.IW, 112IW, 114IW, 117IW
Recognise and know the value of different denominations of coins and notes. ¹	B	Students are required to: <ul style="list-style-type: none"> identify coins worth 5¢, 10¢, 20¢, 50¢, or \$1 as the repeating unit and skip count accordingly to calculate the total value of a set of like coins or mixed coins. 	Learning objective: Use shapes and objects. CMC Level B Presentation Books 2 and 3. Lessons: 41 to 118. Lessons 41.3, 41.5, 42.5, 43.2, 44.1, 44.4, 45.1, 45.4, 46.3, 47.4, 48.7, 49.7, 51IW, 52IW, 53IW, 54IW, 55.9, 56.5, 57.6, 58.8, 59.2, 59.6, 60.4, 60.6, 61.6, 62.6, 62.8, 63.5, 63.9, 64.5, 64.8, 65.5, 66.3, 66IW, 67.2, 67IW, 68.6, 68IW; 69.6, 69IW, 70.1, 70IW, 71.3, 71IW, 72.5, 72IW, 73.5, 73IW, 74.7, 74IW, 75.6, 75IW, 76.7, 76.8, 76IW, 77.6, 78.6, 78IW, 79.8, 80.8, 80IW, 81.2, 82.2, 82.5, 83.7, 83.9, 83IW, 84.2, 84.6, 84IW, 85.2, 85.4, 85IW, 86.6, 86.9, 86IW, 87.3, 87.9, 87IW, 88.3, 88IW, 89.4, 89IW, 90.7, 91.8, 92.6, 93.7, 95IW, 96IW, 97.6, 97IW, 98IW, 99IW, 101.8, 101IW, 102.7, 104IW, 105IW, 106IW, 108IW, 111IW, 113IW, 115IW, 118IW
Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].		No equivalent content found.	
Recognise and use language relating to dates, including days of the week, weeks, months and years.	Oz-e-maths Top-ups Year 2	Students are required to: <ul style="list-style-type: none"> identify the date and determine the number of days between events using calendars. 	Lesson objectives: Know the terms calendar and dates. Identify the parts of a calendar (e.g. months, weeks, days, year). Identify and mark dates on a calendar. Identify the day a date falls. Determine the number of days between events using calendars.

¹ The Direct Instruction books are published in the USA so the currency is American. Teachers will need to swap out the currency on those pages.

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
			Oz-e-maths Top-ups Supplementary Materials for Connecting Maths Concepts Teaching Guide Years F–3. Lesson: 6
			Lessons 6.1, 6.2, 6.3, Mastery Test 6
Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	B	Students are required to: <ul style="list-style-type: none"> count by 5 for each number on an analogue clock to measure minutes after the hour. 	Lesson objective: Use sequence of events and tell time to a 5-minute interval on an analogue clock. CMC Level B Presentation Book 3. Lessons: 108 to 122. 108.5, 109.7, 110.6, 111.5, 112.5, 113.6, 114.8, 115.5, 116.6, 117.9, 118.8, 119.8, 120IW, 121IW, 122IW
Geometry – Properties of Shapes			
Recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> 2-D shapes [for example, rectangles (including squares), circles and triangles] 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. 	C	Students are required to: <ul style="list-style-type: none"> classify 2-dimensional shapes: rectangle, triangle, circle, square, pentagon, hexagon, quadrilateral learn classify 3- dimensional shapes: cube, pyramid, sphere, rectangular prism, and partition shapes into their component parts shapes, include, cubes, rectangular prisms, right circular cones, right circular cylinders, pyramids, decompose complex shapes into familiar component shapes spheres. 	Learning objective: Recognise shapes having specified attributes, such as a given number of angles or sides, or identical faces. CMC Level C Presentation Books 1 and 2. Lessons: 43-129. Lessons 43.2, 44.2, 45.3, 46.2, 47.2, 48.2, 49.9, 50.6, 50.9, 51.6, 51.9, 52.5, 53.6, 53.8, 54.6, 55.4, 56.2, 56.7, 57.2, 57.8, 58.2, 59.8, 60.8, 66.9, 68.9, 69.3, 70.8, 107.7, 110.3, 111.2, 112.2, 113.2, 114.2, 115.2, 115.7, 116.2, 117.2, 117.7, 118.2, 123.6, 124.6, 125.3, 126.2, 127.1, 127.6, 128.3, 128.6, 129.1, 129.3
Geometry – Position and Direction			
Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	A	Students are required to: <ul style="list-style-type: none"> use appropriate language to describe locations and spatial relationships using appropriate prepositions: <ul style="list-style-type: none"> over, under, behind, above, below, besides, next to, in front of describe the relative position between two objects: <ul style="list-style-type: none"> closer than, further than. 	Learning objective: Describe objects in the environment and the relative positions of these objects. CMC Level A Presentation Book 3. Lessons 94 to 120. Lessons 94.4, 95.5, 96.2, 99.6, 100.2, 103.1, 104.3, 106.3, 107.3, 109.3, 110.2, 111.1, 112.1, optional exercise, 113.2, 113.5, 114.5, 115.2, 116.4, 117.4, 118.2, 119.3, 120.3

8.2 Sequence of Content: Year 2 Programme of Study

Table 3: National curriculum in England for Year 2 Statutory requirements mapped to Connecting Math Concepts Levels.

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Number – Number and Place Value			
Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.	B	Students are required to:	Learning objective: Count by fives.
		<ul style="list-style-type: none"> count by 5s, initially using a patterned vertical display. 	CMC Level B Presentation Book 2. Lessons: 48 to 53.
			Lesson 48.4, 49.2, 50.2, 53.1
		Students are required to:	Learning objective: Count by twos.
		<ul style="list-style-type: none"> count by 2s, * using a patterned pair of number lines. 	CMC Level B Presentation Book 3. Lessons: 93 to 100.
			Lessons: 93.2, 94.1, 95.3, 96.1, *97.4, *98.1, *99.3, *100.1
	Students are required to:	Learning objective: Mixed counting.	
	<ul style="list-style-type: none"> skip count by 10s, 5s, 2s, 100's, and 25s, continuing the pattern sequence by extrapolation to new number ranges. 	CMC Level B Presentation Book 3. Lessons: 97 to 107.	
		Sample lessons: 97.3, 98.4, 99.1, 101.4, 102.2, 103.8, 104.2, 105.2, 106.3, 107.4	
C	Students are required to:	Learning objective: Investigate and use the properties of odd and even numbers.	
		<ul style="list-style-type: none"> identify even and odd numbers using skip counting by twos or by grouping even collections of objects in twos explain why all numbers that end in the digits 0, 2, 4, 6 and 8 are even and that numbers ending in 1, 3, 5, 7, and 9 are odd. 	CMC Level C Presentation Book 2. Lessons 124 to 129.
			Lessons 124.5, 125.2, 126.3, 127.3, 128.4, 129.5
Recognise the place value of each digit in a two-digit number (tens, ones).	B	Students are required to:	Learning objective: Understand that the two digits of a 2-digit number represent amounts of tens and ones.
	<ul style="list-style-type: none"> say place-value addition equations for 2-digit numbers complete place-value addition equations for 2-digit numbers identify ones, tens and hundreds digits partition tens and ones for column addition and subtraction problems write one-, two-, and 3-digit numbers in place-value columns use coins to represent groups of tens and ones partition teens numbers when carrying to the tens column write place value addition for tens and ones diagrams work addition and subtraction problems using tens and ones diagrams. 	CMC Level B Presentation Books 1, 2, and 3. Lessons: 16 to 124	
		Lessons 16.1, 17.9, 18.3, 19.9, 20.9, 21.9, 22.10, 23.8, 24.1, 24.7, 25.1, 25.7, 25.9, 26.7, 26.9, 27.6, 27.9, 28.3, 28.11, 28IW, 29.1, 29.6, 30.2, 31.2, 31.11, 31IW, 32.11, 32IW, 33.5, 33.6, 33.11, 33IW, 34.1, 34.11, 34IW, 35.2, 35.8, 35.9, 35.11, 35IW, 36.2, 36.10, 36IW, 37.7, 37.11, 37IW, 38.6, 38.11, 38IW, 39.7, 39.9, 40.10, 40IW, 41.8, 41.10, 42.5, 42.11, 42IW, 43.2, 44.4, 44.9, 45.4, 45.9, 46.3, 46.6, 47.4, 48.7, 48.11, 48IW, 49.7, 49.10, 49IW, 50.11, 50IW, 51.10, 51IW, 52.9, 52IW, 53.10, 53IW, 54.10, 54IW, 55.6, 55.9, 55.11, 55IW, 56.5, 57.11, 57IW, 58.7, 58.10, 58IW, 59.10, 59.11, 59IW, 60.11, 60IW, 61.10, 61IW, 64.7, 65.7, 66.6, 66.10, 66IW, 67.3, 68.2, 69.3, 71.10, 71IW, 73.3, 73.10, 73IW, 74.2, 75.3, 75.9, 75IW, 76.2, 77.5, 78.4, 79.4, 80.5, 81.5, 82.7, 83.6, 84.5, 85.6, 85.10, 85IW, 88.9, 88IW, 89.10, 89IW, 99.10, 99IW, 100.9, 101.8, 104.9, 104IW, 108.9, 108IW, 109.10, 109IW, 111.10, 111IW, 112.9, 113.2, 113.4, 114.3, 114.6, 114.11, 114IW, 115.3, 115.4, 115.11, 115IW, 116.2, 116.4, 116.10, 116IW, 117.2, 117.3, 118.2, 118.3, 118.9, 118IW, 119.3, 120.3, 121.7, 122.9, 122IW, 123.8, 123.9, 123IW, 124.5	
C	Students are required to	Learning objective: Understand place value.	

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> read and write numbers in place value columns in order to: <ul style="list-style-type: none"> understand that two digits of a 2-digit number represents amounts of 10s and 1s understand that three digits of a 3-digit number represents amounts of 100s, 10s and 1s students are also required to write 2- and 3-digit numbers as a sequence of addends (e.g. $584 = 500 + 80 + 4$) count within 1000. 	CMC Level C Presentation Book 1. Lessons 1 to 38. Lessons 1.4, 1.6, 1.8, 2.1, 2.2, 2.3, 2.5, 3.2, 3.8, 4.8, 4.9, 7.9, 10.IW, 11.6, 12.3, 12.7, 13.3, 13.8, 14.2, 14.7, 15.6, 15.8, 16.3, 16.5, 17.3, 18.2, 19.1, 20.1, 21.2, 22.IW, 23.8, 24.8, 25.IW, 27.8, 38.IW
Identify, represent and estimate numbers using different representations, including the number line.	D	Students are required to: <ul style="list-style-type: none"> represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ... represent fractions equivalent to whole numbers on a number line diagram. 	Learning objective: Represent whole numbers on a number line. CMC Level D Presentation Book 2. Lessons 99 to 104. Lessons 99.3, 100.3, 101.4, 102.5, 103.4, 104.4
Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs.	A	Students are required to: <ul style="list-style-type: none"> compare groups of objects to determine $>$, $<$ or $=$. 	Learning objective: Compare collections. CMC Level A Presentation Book 3. Lessons 116 to 120 Lessons 116.1, 117.3, 118.3, 119.4, 120.4
	B	Students are required to: <ul style="list-style-type: none"> order numbers by comparison through hundreds. 	Learning objective: Compare numbers. CMC Level B Presentation Books 1, 2, and 3. Lessons: 1 to 119 Lessons 81.4, 82.4, 83.1, 83.5, 84.3, 84.8, 85.3, 85.7, 86.2, 86.8, 87.2, 87.7, 88.2, 88.7, 89.2, 89.7, 90.3, 90.5, 91.7
Read and write numbers to at least 100 in numerals and in words.	B	Students are required to: <ul style="list-style-type: none"> identify numerals from zero to hundreds write numerals from zero to hundreds write numerals for lines, objects and diagrams draw lines for numerals complete number lines write numerals from dictated word problems. 	Learning objective: Identify and write symbols. CMC Level B Presentation Books 1, 2, and 3. Lessons: 1 to 119. Lessons 1.1, 1.4, 1.7, 2.1, 2.4, 2.8, 2.9, 3.1, 3.5, 3.9, 3.10, 4.1, 4.2, 4.9, 5.1, 5.10, 5.IW, 6.1, 6.4, 6.10, 6.IW, 7.2, 7.7, 7.10, 7.IW, 8.8, 8.10, 8.11, 8.12, 8.IW, 9.2, 9.5, 9.8, 9.11, 9.IW, 10.1, 10.2, 10.9, 10.12, 10.IW, 11.5, 11.6, 11.11, 11.12, 11.IW, 12.7, 13.5, 13.9, 13.11, 13.IW, 14.1, 14.6, 14.IW, 15.1, 15.6, 15.IW, 16.1, 16.4, 16.8, 16.11, 16.12, 16.IW, 17.4, 17.9, 17.10, 17.11, 17.IW, 18.5, 18.9, 18.IW, 19.2, 19.5, 19.9, 19.IW, 20.2, 20.IW, 21.2, 21.9, 21.10, 21.11, 22.2, 22.4, 23.2, 23.8, 24.1, 24.4, 24.7, 24.IW, 25.1, 25.4, 25.7, 25.9, 25.IW, 26.1, 26.7, 26.10, 27.1, 27.6, 27.9, 28.3, 28.5, 29.1, 29.5, 29.7, 30.2, 30.5, 31.1, 31.2, 31.9, 32.1, 32.9, 32.IW, 33.3, 33.5, 33.7, 34.1, 34.5, 34.7, 35.2, 35.5, 35.9, 36.2, 36.7, 37.6, 37.7, 37.10, 38.6, 38.8, 38.10, 39.7, 39.8, 40.7, 41.7, 41.9, 41.10, 42.7, 43.7, 44.9, 45.9, 46.8, 47.6, 49.10, 50.8, 51.8, 52.4, 52.7, 53.7, 53.8, 54.5, 54.9, 55.10, 56.8, 56.9, 57.8, 57.10, 58.6, 59.8, 59.9, 60.7, 62.7, 63.8, 64.9, 65.9, 65.IW, 66.9, 66.IW, 67.3, 67.8, 67.IW, 68.2, 68.9, 69.3, 69.IW, 70.9, 70.IW, 71.7, 71.IW, 72.7, 73.9, 73.IW, 79.IW, 80.IW, 81.4, 81.IW, 82.8, 82.IW, 83.8, 84.7, 84.IW, 85.9, 85.IW, 86.IW, 88.IW, 89.9, 89.IW, 90.6, 90.IW, 91.IW, 92.7, 92.9, 92.IW, 93.IW, 94.IW, 95.7, 95.IW, 96.5, 96.IW, 97.7, 97.IW,

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
			98.7, 98IW, 99.4, 99.9, 99IW, 100.5, 101.5, 101.6, 101IW, 102.6, 102.8, 102IW, 103.6, 103.8, 103IW, 104.5, 104IW, 105.7, 105IW, 106.6; 107.6, 107.7, 107IW, 108.6, 108.8, 108IW, 109.8, 109.9, 109IW, 110.5, 110.8, 110.9, 110IW, 111.6, 111.9, 111IW, 112.8, 112.9, 112IW, 113.8, 113.9, 113IW, 114.6, 114.7, 114IW, 115.10, 115IW, 116IW, 117.5, 117.6, 117IW, 118.6, 118IW, 119.7, 119IW
Use place value and number facts to solve problems.	B	<p>Students are required to:</p> <ul style="list-style-type: none"> say place-value addition equations for 2-digit numbers complete place-value addition equations for 2-digit numbers identify ones, tens and hundreds digits partition tens and ones for column addition and subtraction problems write one-, two-, and 3-digit numbers in place-value columns use coins to represent groups of tens and ones partition teens numbers when carrying to the tens column write place value addition for tens and ones diagrams work addition and subtraction problems using tens and ones diagrams. 	<p>Learning objective: Understand that the two digits of a 2-digit number represent amounts of tens and ones.</p> <p>CMC Level B Presentation Books 1, 2 and 3. Lessons: 16 to 124</p> <p>Lessons 16.1, 17.9, 18.3, 19.9, 20.9, 21.9, 22.10, 23.8, 24.1, 24.7, 25.1, 25.7, 25.9, 26.7, 26.9, 27.6, 27.9, 28.3, 28.11, 28IW, 29.1, 29.6, 30.2, 31.2, 31.11, 31IW, 32.11, 32IW, 33.5, 33.6, 33.11, 33IW, 34.1, 34.11, 34IW, 35.2, 35.8, 35.9, 35.11, 35IW, 36.2, 36.10, 36IW, 37.7, 37.11, 37IW, 38.6, 38.11, 38IW, 39.7, 39.9, 40.10, 40IW, 41.8, 41.10, 42.5, 42.11, 42IW, 43.2, 44.4, 44.9, 45.4, 45.9, 46.3, 46.6, 47.4, 48.7, 48.11, 48IW, 49.7, 49.10, 49IW, 50.11, 50IW, 51.10, 51IW, 52.9, 52IW, 53.10, 53IW, 54.10, 54IW, 55.6, 55.9, 55.11, 55IW, 56.5, 57.11, 57IW, 58.7, 58.10, 58IW, 59.10, 59.11, 59IW, 60.11, 60IW, 61.10, 61IW, 64.7, 65.7, 66.6, 66.10, 66IW, 67.3, 68.2, 69.3, 71.10, 71IW, 73.3, 73.10, 73IW, 74.2, 75.3, 75.9, 75IW, 76.2, 77.5, 78.4, 79.4, 80.5, 81.5, 82.7, 83.6, 84.5, 85.6, 85.10, 85IW, 88.9, 88IW, 89.10, 89IW, 99.10, 99IW, 100.9, 101.8, 104.9, 104IW, 108.9, 108IW, 109.10, 109IW, 111.10, 111IW, 112.9, 113.2, 113.4, 114.3, 114.6, 114.11, 114IW, 115.3, 115.4, 115.11, 115IW, 116.2, 116.4, 116.10, 116IW, 117.2, 117.3, 118.2, 118.3, 118.9, 118IW, 119.3, 120.3, 121.7, 122.9, 122IW, 123.8, 123.9, 123IW, 124.5</p>
Number – Addition and Subtraction			
<p>Solve problems with addition and subtraction:</p> <ul style="list-style-type: none"> using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods. 	A	<p>Students are required to:</p> <ul style="list-style-type: none"> solve subtraction problems with numbers less than or equal to 10. 	<p>Learning objective: Decompose numbers less than or equal to 10.</p> <p>CMC Level A Presentation Books 1 and 2. Lessons 16 to 50.</p> <p>Lessons 16.6, 17.9, 18.7, 19.5, 20.8, 21.9, 22.9, 22.8, 24.6, 25.3, 26.3, 27.4, 28.5, 29.5, 31.6, 32.6, 33.5, 34.6, 35.7, 36.4, 37.7, 38.7, 38.9, 39.7, 39.9, 40.4, 43.7; 44.7, 45.7, 46.8, 47.9, 48.8, 49.9, 50.9</p>
	B	<p>Students are required to:</p> <ul style="list-style-type: none"> work 1- and 2-digit addition problems using the following strategies: <ul style="list-style-type: none"> draw lines for numerals and count count groups of objects count on from a number add in columns, with carrying Count combined segments on a ruler count backwards for a missing addend relate fact families use tens and ones diagrams 	<p>Learning objective: Work addition and subtraction problems in a variety of contexts.</p> <p>CMC Level B Presentation Books 1, 2, and 3. Lessons: 5 to 125.</p> <p>Lessons 5.6, 6.2, 6.5, 6.9, 7.3, 7.4, 7.8, 7.10, 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 9.1, 9.3, 9.4, 9.7, 9.9, 10.3-7, 10.10, 10.11, 11.2, 11.3, 11.4, 11.7, 11.10, 12.2, 12.5, 12.6, 12.8, 12.10, 12.11, 13.2, 13.3, 13.4, 13.8, 13.10, 13.11, 14.2, 14.4, 14.6, 14.7, 14.8, 14.9, 14.10, 15.2, 15.3, 15.4, 15.5, 15.7, 15.9, 16.1, 16.5, 16.6, 16.7, 16.8, 17.1, 17.3, 17.5, 17.6, 17.7, 17.9, 17.10, 18.1, 18.2, 18.4, 18.7, 18.9, 19.1, 19.3, 19.4, 19.7, 19.9, 19.11, 20.1, 20.3, 20.6, 20.7, 20.8, 20.9 21.2, 21.4, 21.5, 21.10, 22IW, 23.1, 23.3, 23.6, 23.7, 23.8, 23.9, 24.3, 24.5, 24.6, 24.8, 24.10, 25.3, 25.5, 25.6, 25.8, 26.2, 26.3, 26.4, 26.5, 26.8, 26.11, 27.1, 27.2, 27.3, 27.4, 27.7, 27.8, 27.11, 28.1, 28.2, 28.4, 28.5, 28.6, 28.7, 28.10, 28IW, 29.2, 29.3, 29.4, 29.6, 29.7, 29.8, 29IW, 30.1, 30.3, 30.4, 30.6, 30.7, 30.9, 30.10, 30IW, 31.3, 31.4, 31.5, 31.6, 31.7, 31.10, 31IW, 32.1, 32.2, 32.3, 32.4, 32.6, 32.8, 32.9, 32IW, 33.1, 33.2, 33.4, 33.6,</p>

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> • work 1- and 2-digit subtraction problems using the following strategies: <ul style="list-style-type: none"> - count backwards - use related addition/subtraction facts - subtract in columns - use tens diagrams. 	33.8, 33.9, 33IW, 34.1, 34.2, 34.3, 34.4, 34.6, 34.8, 34.9, 34IW, 35.1, 35.3, 35.4, 35.6, 35.7, 35.10, 35IW, 36.1, 36.3, 36.4, 36.6, 36.8, 36IW, 37.1, 37.2, 37.4, 37.6, 37.8, 37IW, 38.2, 38.3, 38.4, 38.5, 38.7, 38.9, 38IW, 39.2,39.3, 39.4, 39.5, 39.6, 39.9, 39.10, 39IW, 40.1, 40.2, 40.3, 40.5, 40.6, 40.8, 40.9, 40IW, 41.2, 41.4, 41.6, 41.8, 41.9, 41.11, 41IW, 42.1, 42.2, 42.3, 42.6, 42.8, 42IW, 43.1, 43.3, 43.4, 43.8, 43IW, 44.2, 44.3, 44.6, 44.7, 44.8, 44.9, 44.10, 44IW, 45.2, 45.3, 45.6, 45.8, 45.10, 45IW, 46.1, 46.2, 46.4, 46.5, 46.6, 46.7, 46.9, 46IW, 47.1, 47.2, 47.3, 47.5, 47.9, 47IW, 48.1, 48.3, 48.5, 48.6, 48.8, 48.10, 48IW, 49.1, 49.3, 49.4, 49.5, 49.7, 49.8, 49IW, 50.1, 50.2, 50.3, 50.5, 50.6, 50.7, 50.8, 50.9, 50.10, 50IW, 51.1, 51.2, 51.3, 51.4, 51.5, 51.6, 51.8, 51IW, 52.1, 52.2, 52.3, 52.4, 52.5, 52.8, 52IW, 53.2, 53.3, 53.4, 53.5, 53.6, 53.8, 53.9, 53IW, 54.1, 54.2, 54.3, 54.6, 54.7, 54.8, 54IW, 55.1, 55.2, 55.3, 55.5, 55.6, 55.7, 55.8, 55IW, 56.1, 56.2, 56.4, 56.7, 56.8, 56IW, 57.2, 57.3, 57.5, 57.8, 57.9, 57IW, 58.2, 58.3, 58.5, 58.6, 58.7, 58.9, 58IW, 59.4, 59.5, 59.7, 59.9, 59.10, 59IW, 60.1, 60.2, 60.6, 60.9, 60.10, 60IW, 61.1, 61.3, 61.5, 61.7, 61.9, 61IW, 62.2, 62.3, 62.5, 62.7, 62.9, 62IW, 63.1, 63.3, 63.4, 63.7, 63.9, 63IW, 64.1, 64.3, 64.4, 64.7, 64IW, 65.2, 65.3, 65.6, 65.7, 65IW, 66.1, 66.2, 66.5, 66.6, 66.7, 66.8, 66.9, 66IW, 67.1, 67.4, 67.6, 67.7, 67.8, 67.9, 67IW, 68.1, 68.3, 68.5, 68.7, 68.8, 68IW, 69.1, 69.5,69.7 69.8, 69.9, 69IW, 70.2, 70.4, 70.5, 70.7, 70.8, 70.9, 70IW, 71.1, 71.4, 71.5, 71.6,71.7, 71.8, 71IW, 72.1, 72.3, 72.4, 72.6,72.7, 72.9, 72IW, 73.1, 73.3, 73.6, 73.7, 73.8, 73IW, 74.1, 74.2, 74.4, 74.5, 74.6, 74.8, 74.9, 74IW, 75.1, 75.3, 75.4, 75.7,75.8, 75IW, 76.1, 76.2, 76.4, 76.8, 76IW, 77.2, 77.4, 77.5, 77.7, 77IW, 78.1, 78.3, 78.4, 78.7, 78.8, 78IW, 79.1, 79.3, 79.4, 79.5, 79.7, 79IW, 80.1, 80.3, 80.4, 80.5, 80.7, 80IW, 81.1, 81.3, 81.5, 81.6, 81IW, 82.1, 82.3, 82.7, 82.8, 82IW, 83.2, 83.3, 83.4, 83.6, 83IW, 84.1, 84.4, 84.5, 84.9, 84IW, 85.1, 85.5, 85.6, 85.8, 85IW, 86.1, 86.3, 86.5, 86.7, 86IW, 87.1, 87.6, 87.8, 87IW, 88.1, 88.4, 88.6, 88.8, 88IW, 89.1, 89.3, 89.5, 89.6, 89.8, 89IW, 90.1, 90.2, 90.4, 90.8, 90IW, 91.1, 91.3, 91.4, 91.5, 91.6, 91.9, 91IW, 92.1, 92.2, 92.3, 92.5, 92.8, 92IW, 93.3, 93.5, 93.6, 93.8, 93IW, 94.2, 94.3, 94.5, 94.6, 94.7, 94.9, 94IW, 95.1, 95.5, 95.7, 95.9, 95IW, 96.2, 96.5, 96.6, 96.9, 96IW; 97.1, 97.3, 97.7, 97.9, 97IW, 98.2, 98.4, 98.5, 98.8, 98IW, 99.1, 99.2, 99.7, 99.9, 99IW, 100.2, 100.8, 100.9, 100.10, 100IW, 101.1, 101.7, 101.8, 101IW, 102.1, 102.5, 102IW, 103.1, 103.4, 103IW, 104.1, 104.4, 104.8, 104IW, 105.1, 105.4, 105.8, 105.9, 105IW, 106.1, 106.2, 106.4, 106.8, 106.9, 106IW, 107.1, 107.2, 107.9, 107IW, 108.1, 108.2, 108.6, 108.9, 108IW, 109.1, 109.2, 109.6, 109.9, 109IW, 110.1, 110.2, 110.3, 110.5, 110.7, 110IW, 111.1, 111.4, 111.7, 111.9, 111IW, 112.1, 112.2, 112.4, 112.7, 112.8, 112IW, 113.1, 113.3, 113.7, 113IW, 114.1, 114.3, 114.4, 114.9, 114IW, 115.1, 115.3, 115.4, 115.7, 115.8, 115.9, 115IW, 116.1, 116.5, 116.7, 116.9, 116IW, 117.1, 117.2, 117.3, 117.4, 117.5, 117.8, 117IW, 118.1, 118.2, 118.3, 118.4, 118.6, 118.7, 118IW, 119.1, 119.3, 119.6, 119.7, 119IW, 120.1, 120.2, 120.5, 120.6, 120.7, 120IW, 121.1, 121.4, 121.5, 121.7, 121.8, 121IW, 122.1, 122.6, 122.8, 122IW; 123.1, 123.4, 123.5, 124.1, 124.4, 124.5, 125.1, 125.4
Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.	C	Students are required to: <ul style="list-style-type: none"> • say and write addition facts and related subtraction facts for number families representing sums through 20 	Lesson objective: Add and subtract fluently within 20 using mental strategies. CMC Level C Presentation Books 1 and 2. Lessons: 1-130. Lessons 1.3, 1.5, 1.10, 2.2, 2.7, 2.9, 3.6, 3.9, 3.11, 4.2, 4.9, 4.10, 5.2, 5.3, 5.4, 5.10, 6.1, 6.4, 6.6, 6.7, 6.8, 7.1, 7.2, 7.3, 7.5, 7.7, 7.8, 8.1, 8.3, 8.5, 8.6, 8.7, 8.8, 9.1, 9.3, 9.4, 9.5, 9.6, 9.8, 10.1, 10.2, 10.3, 10.4, 10.6, 10.7, 10.9, 11.2, 11.3, 11.5, 11.8,

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> demonstrate proficiency with addition and subtraction facts to 20 through timed exercises extend single-digit addition to add tens numbers mentally. 	11.9, 11.10, 12.1, 12.2, 12.4, 12.6, 12.8, 12.9, 12.10, 13.1, 13.2, 13.4, 13.5, 13.7, 13.9, 14.1, 14.4, 14.5, 14.8, 15.1, 15.2, 15.3, 15.5, 15.9, 16.2, 16.6, 16.7, 16.8, 16.9, 17.2, 17.4, 17.6, 17.8, 17.9, 17.10, 18.3, 18.4, 18.6, 18.7, 18.9, 19.2, 19.3, 19.4, 19.6, 19.7, 19.8, 20.3, 20.4, 20.6, 20.7, 20.9, 21.1, 21.6, 21.7, 21.8, 22.1, 22.5, 22.6, 22.7, 23.1, 23.6, 23.7, 23.8, 24.1, 24.6, 24.7, 24.8, 25.1, 25.2, 25.7, 25.8, 25.9, 26.1, 26.6, 26.7, 26.9, 27.1, 27.5, 27.6, 27.8, 28.1, 28.3, 28.6, 28.8, 28.9, 29.1, 29.3, 29.7, 29.8, 30.1, 30.9, 31.1, 31.3, 31.7, 32.1, 32.3, 32.9, 32.10, 33.2, 33.6, 33.9, 33.10, 34.6, 34.8, 34.9, 35.6, 35.8, 36.8, 36.9, 37.8, 38.7, 38.9, 39.9, 39.10, 40.7, 41.4, 41.6, 41.9, 42.3, 42.6, 42.8, 43.3, 43.8, 43.10, 44.3, 44.8, 45.1, 45.4, 45.10, 46.1, 46.3, 46.4, 46.8, 46.9, 47.1, 47.3, 47.5, 47.8, 48.1, 48.3, 48.6, 48.9, 49.1, 49.2, 49.3, 49.6, 49.9, 50.1, 50.4, 50.7, 50.9, 51.2, 51.3, 51.4, 51.7, 51.9, 52.2, 52.3, 52.6, 53.4, 53.8, 54.7, 54.9, 55.1, 55.7, 56.1, 56.4, 56.7, 57.1, 57.5, 57.8, 58.1, 58.6, 58.8, 59.1, 59.5, 59.8, 60.1, 60.3, 60.6, 60.8, 61.1, 61.2, 61.4, 61.5, 61.8, 62.1, 62.3, 62.4, 62.6, 62.8, 63.1, 63.3, 63.4, 63.6, 63.9, 64.4, 64.5, 64.7, 64.8, 65.3, 65.4, 65.8, 66.4, 66.9, 67.4, 67.9, 68.4, 68.9, 69.4, 69.9, 70.6, 70.8, Lessons 71.2, 71.3, 71.7, 71.8, 72.2, 72.5, 72.6, 72.8, 73.2, 73.3, 73.5, 73.8, 74.3, 74.5, 75.2, 75.3, 75.6, 75.7, 75.9, 76.2, 76.4, 77.4, 77.5, 77.9, 78.6, 78.9, 79.5, 79.8, 80.5, 80.7, 80.8, 81.5, 81.7, 82.5, 82.9, 83.7, 84.1, 84.3, 85.6, 85.8, 86.2, 86.7, 86.9, 87.7, 87.9, 88.5, 88.8, 89.2, 89.3, 89.5, 90.5, 90.9, 91.6, 92.7, 92.8, 93.7, 93.8, 94.7, 94.8, 95.1, 95.4, 95.8, 96.2, 96.3, 96.8, 97.2, 97.3, 97.8, 98.2, 98.3, 98.9, 99.3, 99.4, 99.8, 100.4, 100.6, 101.4, 101.6, 101.7, 102.4, 102.6, 102.7, 103.5, 103.8, 104.5, 104.7, 105.6, 105.7, 106.3, 106.7, 107.3, 107.7, 108.1, 108.7, 109.1, 109.7, 110.1, 110.7, 111.1, 111.3, 111.7, 112.1, 112.7, 113.1, 113.6, 114.1, 114.3, 114.7, 115.1, 115.3, 115.7, 116.7, 117.5, 117.7, 118.5, 119.6, 120.6, 121.8, 122.2, 122.5, 122.8, 123.8, 124.7, 125.8, 126.10, 127.9, 128.8, 129.4, 130.1
Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> a two-digit number and ones a two-digit number and tens two two-digit numbers adding three one-digit numbers. 	B	Students are required to: <ul style="list-style-type: none"> work 1- and 2-digit addition problems using the following strategies: <ul style="list-style-type: none"> draw lines for numerals and count count groups of objects count on from a number add in columns, with carrying Count combined segments on a ruler count backwards for a missing addend relate fact families use tens and ones diagrams. work 1- and 2-digit subtraction problems using the following strategies: <ul style="list-style-type: none"> count backwards use related addition/subtraction facts subtract in columns 	Learning objective: Work addition and subtraction problems in a variety of contexts. CMC Level B Presentation Books 1, 2, and 3. Lessons: 5 to 125. Lessons 5.6, 6.2, 6.5, 6.9, 7.3, 7.4, 7.8, 7.10, 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 9.1, 9.3, 9.4, 9.7, 9.9, 10.3, 10.4, 10.5, 10.6, 10.7, 10.10, 10.11, 11.2, 11.3, 11.4, 11.7, 11.10, 12.2, 12.5, 12.6, 12.8, 12.10, 12.11, 13.2, 13.3, 13.4, 13.8, 13.10, 13.11, 14.2, 14.4, 14.6, 14.7, 14.8, 14.9, 14.10, 15.2, 15.3, 15.4, 15.5, 15.7, 15.9, 16.1, 16.5, 16.6, 16.7, 16.8, 17.1, 17.3, 17.5, 17.6, 17.7, 17.9, 17.10, 18.1, 18.2, 18.4, 18.7, 18.9, 19.1, 19.3, 19.4, 19.7, 19.9, 19.11, 20.1, 20.3, 20.6, 20.7, 20.8, 20.9, 21.2, 21.4, 21.5, 21.10, 22IW, 23.1, 23.3, 23.6, 23.7, 23.8, 23.9, 24.3, 24.5, 24.6, 24.8, 24.10, 25.3, 25.5, 25.6, 25.8, 26.2, 26.3, 26.4, 26.5, 26.8, 26.11, 27.1, 27.2, 27.3, 27.4, 27.7, 27.8, 27.11, 28.1, 28.2, 28.4, 28.5, 28.6, 28.7, 28.10, 28IW, 29.2, 29.3, 29.4, 29.6, 29.7, 29.8, 29IW, 30.1, 30.3, 30.4, 30.6, 30.7, 30.9, 30.10, 30IW, 31.3, 31.4, 31.5, 31.6, 31.7, 31.10, 31IW, 32.1, 32.2, 32.3, 32.4, 32.6, 32.8, 32.9, 32IW, 33.1, 33.2, 33.4, 33.6, 33.8, 33.9, 33IW, 34.1, 34.2, 34.3, 34.4, 34.6, 34.8, 34.9, 34IW, 35.1, 35.3, 35.4, 35.6, 35.7, 35.10, 35IW, 36.1, 36.3, 36.4, 36.6, 36.8, 36IW, 37.1, 37.2, 37.4, 37.6, 37.8, 37IW, 38.2, 38.3, 38.4, 38.5, 38.7, 38.9, 38IW, 39.2, 39.3, 39.4, 39.5, 39.6, 39.9, 39.10, 39IW, 40.1, 40.2, 40.3, 40.5, 40.6, 40.8, 40.9, 40IW, 41.2, 41.4, 41.6, 41.8, 41.9, 41.11, 41IW, 42.1, 42.2, 42.3, 42.6, 42.8, 42IW, 43.1, 43.3, 43.4, 43.8, 43IW, 44.2, 44.3, 44.6, 44.7, 44.8, 44.9, 44.10, 44IW,

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> - use tens diagrams. 	45.2, 45.3, 45.6, 45.8, 45.10, 45IW, 46.1, 46.2, 46.4, 46.5, 46.6, 46.7, 46.9, 46IW, 47.1, 47.2, 47.3, 47.5, 47.9, 47IW, 48.1, 48.3, 48.5, 48.6, 48.8, 48.10, 48IW, 49.1, 49.3, 49.4, 49.5, 49.7, 49.8, 49IW, 50.1, 50.2, 50.3, 50.5, 50.6, 50.7, 50.8, 50.9, 50.10, 50IW, 51.1, 51.2, 51.3, 51.4, 51.5, 51.6, 51.8, 51IW, 52.1, 52.2, 52.3, 52.4, 52.5, 52.8, 52IW, 53.2, 53.3, 53.4, 53.5, 53.6, 53.8, 53.9, 53IW, 54.1, 54.2, 54.3, 54.6, 54.7, 54.8, 54IW, 55.1, 55.2, 55.3, 55.5, 55.6, 55.7, 55.8, 55IW, 56.1, 56.2, 56.4, 56.7, 56.8, 56IW, 57.2, 57.3, 57.5, 57.8, 57.9, 57IW, 58.2, 58.3, 58.5, 58.6, 58.7, 58.9, 58IW, 59.4, 59.5, 59.7, 59.9, 59.10, 59IW, 60.1, 60.2, 60.6, 60.9, 60.10, 60IW, 61.1, 61.3, 61.5, 61.7, 61.9, 61IW, 62.2, 62.3, 62.5, 62.7, 62.9, 62IW, 63.1, 63.3, 63.4, 63.7, 63.9, 63IW, 64.1, 64.3, 64.4, 64.7, 64IW, 65.2, 65.3, 65.6, 65.7, 65IW, 66.1, 66.2, 66.5, 66.6, 66.7, 66.8, 66.9, 66IW, 67.1, 67.4, 67.6, 67.7, 67.8, 67.9, 67IW, 68.1, 68.3, 68.5, 68.7, 68.8, 68IW, 69.1, 69.5, 69.7, 69.8, 69.9, 69IW, 70.2, 70.4, 70.5, 70.7, 70.8, 70.9, 70IW, 71.1, 71.4, 71.5, 71.6, 71.7, 71.8, 71IW, 72.1, 72.3, 72.4, 72.6, 72.7, 72.9, 72IW, 73.1, 73.3, 73.6, 73.7, 73.8, 73IW, 74.1, 74.2, 74.4, 74.5, 74.6, 74.8, 74.9, 74IW, 75.1, 75.3, 75.4, 75.7, 75.8, 75IW, 76.1, 76.2, 76.4, 76.8, 76IW, 77.2, 77.4, 77.5, 77.7, 77IW, 78.1, 78.3, 78.4, 78.7, 78.8, 78IW, 79.1, 79.3, 79.4, 79.5, 79.7, 79IW, 80.1, 80.3, 80.4, 80.5, 80.7, 80IW, 81.1, 81.3, 81.5, 81.6, 81IW, 82.1, 82.3, 82.7, 82.8, 82IW, 83.2, 83.3, 83.4, 83.6, 83IW, 84.1, 84.4, 84.5, 84.9, 84IW, 85.1, 85.5, 85.6, 85.8, 85IW, 86.1, 86.3, 86.5, 86.7, 86IW, 87.1, 87.6, 87.8, 87IW, 88.1, 88.4, 88.6, 88.8, 88IW, 89.1, 89.3, 89.5, 89.6, 89.8, 89IW, 90.1, 90.2, 90.4, 90.8, 90IW, 91.1, 91.3, 91.4, 91.5, 91.6, 91.9, 91IW, 92.1, 92.2, 92.3, 92.5, 92.8, 92IW, 93.3, 93.5, 93.6, 93.8, 93IW, 94.2, 94.3, 94.5, 94.6, 94.7, 94.9, 94IW, 95.1, 95.5, 95.7, 95.9, 95IW, 96.2, 96.5, 96.6, 96.9, 96IW, 97.1, 97.3, 97.7, 97.9, 97IW, 98.2, 98.4, 98.5, 98.8, 98IW, 99.1, 99.2, 99.7, 99.9, 99IW, 100.2, 100.8, 100.9, 100.10, 100IW, 101.1, 101.7, 101.8, 101IW, 102.1, 102.5, 102IW, 103.1, 103.4, 103IW, 104.1, 104.4, 104.8, 104IW, 105.1, 105.4, 105.8, 105.9, 105IW, 106.1, 106.2, 106.4, 106.8, 106.9, 106IW, 107.1, 107.2, 107.9, 107IW, 108.1, 108.2, 108.6, 108.9, 108IW, 109.1, 109.2, 109.6, 109.9, 109IW, 110.1, 110.2, 110.3, 110.5, 110.7, 110IW, 111.1, 111.4, 111.7, 111.9, 111IW, 112.1, 112.2, 112.4, 112.7, 112.8, 112IW, 113.1, 113.3, 113.7, 113IW, 114.1, 114.3, 114.4, 114.9, 114IW, 115.1, 115.3, 115.4, 115.7, 115.8, 115.9, 115IW, 116.1, 116.5, 116.7, 116.9, 116IW, 117.1, 117.2, 117.3, 117.4, 117.5, 117.8, 117IW, 118.1, 118.2, 118.3, 118.4, 118.6, 118.7, 118IW, 119.1, 119.3, 119.6, 119.7, 119IW, 120.1, 120.2, 120.5, 120.6, 120.7, 120IW, 121.1, 121.4, 121.5, 121.7, 121.8, 121IW, 122.1, 122.6, 122.8, 122IW, 123.1, 123.4, 123.5, 124.1, 124.4, 124.5, 125.1, 125.4
Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	C	Students are required to: <ul style="list-style-type: none"> • say the facts for each addition/subtraction number family • know all the sums of any two 1-digit numbers • use knowledge of addition facts to identify a missing addend (subtract) • use number family principles with 2-digit numbers. 	Learning objective: Add and subtract within 20. Fluently add and subtract within 20 using mental strategies. By end of Year 2, know from memory all sums of two 1-digit numbers. CMC Level C Presentation Book 1. Lessons 1 to 40. Lessons 1.3, 1.5, 1.10, 2.2, 2.7, 2.9, 3.6, 3.9, 3.11, 4.2, 4.9, 4.10, 5.2, 5.3, 5.4, 5.10, 6.1, 6.4, 6.6, 6.7, 6.8, 7.1, 7.2, 7.3, 7.5, 7.7, 7.8, 8.1, 8.3, 8.5, 8.6, 8.7, 8.8, 9.1, 9.3, 9.4, 9.5, 9.6, 9.8, 10.1, 10.2, 10.3, 10.4, 10.6, 10.7, 10.9, 11.2, 11.3, 11.5, 11.8, 11.9, 11.10, 12.1, 12.2, 12.4, 12.6, 12.8, 12.9, 12.IW, 13.1, 13.2, 13.4, 13.5, 13.7, 13.9, 14.1, 14.4, 14.5, 14.8, 15.1, 15.2, 15.3, 15.5, 15.9, 16.2, 16.6, 16.7, 16.8, 16.IW, 17.2, 17.4, 17.6, 17.8, 17.9, 17.IW, 18.3, 18.4, 18.6, 18.7, 18.IW, 19.2, 19.3,

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
			19.4, 19.6, 19.7, 19.IW, 20.3, 20.4, 20.6, 20.7, 20.IW, 21.1, 21.6, 21.7, 21.IW, 22.1, 22.5, 22.6, 22.8, 23.1, 23.6, 23.7, 23.8, 24.1, 24.6, 24.7, 24.8, 25.1, 25.2, 25.7, 25.8, 25.IW, 26.1, 26.6, 26.7, 26.IW, 27.1, 27.5, 27.6, 27.IW, 28.1, 28.3, 28.6, 28.8, 28.IW, 29.1, 29.3, 29.7, 29.IW, 30.1, 30.IW, 31.1, 31.3, 31.IW, 32.1, 32.3, 32.9, 32.IW, 33.2, 33.6, 33.9, 33.IW, 34.6, 34.8, 34.IW, 35.6, 35.8, 36.8, 36.IW, 37.8, 38.7, 38.9, 39.9, 39.IW, 40.7, 40.10
Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	C	<p>Students are required to:</p> <ul style="list-style-type: none"> use addition/subtraction fact number families to find the missing difference or missing sum read and write the 4 problems that derive from one number family (e.g., $4 - 2 \rightarrow 6: 4+2=6, 2+4=6, 6-2=4, 6-4=2$.) find a missing minuend or addend using the inverse operation. (E.g., solve $__ - 3 = 9$ as $9+3$) check answers to multidigit addition and subtraction problems using the inverse operation. 	<p>Learning objective: Use addition and subtraction within 100 to solve problems with unknowns in all positions.</p> <p>CMC Level C Presentation Book 1. Lessons 33 to 70.</p> <p>Lessons 1.3, 2.2, 4.6, 5.9, 6.8, 7.8, 8.6, 8.IW, 9.IW, 10.6, 10.IW, 11.9, 11.IW, 14.1, 15.IW, 16.IW, 17.2, 18.IW, 20.IW, 30.1, 31.1, 32.9, 34.IW, 35.IW, 46.3, 47.3, 61.4, 62.3, 63.3, 64.4, 65.4, 68.TB1, 69.tb1, 70.tb2, 71.IW (TB), 72.IW (TB), 73.IW (TB), 85.IW (TB), 87.IW (TB), 89.IW (TB), 92.IW, 101.IW (TB), 105.IW (TB), 106.2, 107.2, 107.4, 108.5, 109.5, 110.6, 111.6, 112.5, 113.5, 113.IW (TB), 114.6, 114.IW (TB), 115.7, 119.IW (TB), 125.IW (TB), 127.IW (TB), 128.IW (TB),</p>
Number – Multiplication and Division			
Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	B	<p>Students are required to:</p> <ul style="list-style-type: none"> count by forwards and backwards by 10s add 10 to 10s and 2-digit numbers identify missing numbers in a number line for skip counting by 10s. 	<p>Learning objective: Count by tens. Add 10 to a number.</p> <p>CMC Level B Presentation Book 1. Lessons: 1 to 31</p> <p>Lessons 1.6, 2.5, 3.7, 4.6, 5.5, 6.7, 7.4, 8.1, 9.7, 10.11, 11.10, 12.11, 13.11, 14.10, 14.IW, 24.IW, 26.IW, 31.IW,</p>
		<p>Students are required to:</p> <ul style="list-style-type: none"> count by 5s, initially using a patterned vertical display. 	<p>Learning objective: Count by fives.</p> <p>CMC Level B Presentation Book 2. Lessons: 48 to 53.</p> <p>Lesson 48.4, 49.2, 50.2, 53.1</p>
		<p>Students are required to:</p> <ul style="list-style-type: none"> count by 2s, * using a patterned pair of number lines. 	<p>Learning objective: Count by twos.</p> <p>CMC Level B Presentation Book 3. Lessons: 93 to 100.</p> <p>Lessons: 93.2, 94.1, 95.3, 96.1, *97.4, *98.1, *99.3, *100.1</p>
	C	<p>Students are required to:</p> <ul style="list-style-type: none"> skip count by 10s to 100 skip count by 100s to 1000 skip count by 5s to 50 skip count by 2s to 20 skip count by 9s to 90 skip count by 4s to 40 skip count by 25s to 100 skip count from a given number 	<p>Lesson objective: Count within 1000, skip count by fives, tens, and hundreds.</p> <p>CMC C Books 1 and 2. Lessons: 1-96.</p> <p>Lessons 1.6, 2.3, 3.4, 4.3, 5.6, 6.3, 7.6, 8.2, 8.3, 9.1, 9.7, 10.1, 10.8, 11.2, 11.4, 12.1, 12.5, 13.1, 13.6, 14.3, 15.7, 16.1, 16.4, 17.1, 17.7, 17.IW, 18.1, 18.5, 18.IW, 19.5, 19.IW, 20.5, 20.IW, 21.5, 21.IW, 22.2, 22.IW, 23.3, 23.IW, 24.3, 24.IW, 25.4, 25.IW, 26.2, 26.IW, 27.3, 27.IW, 30.5, 30.IW, 31.IW, 32.5, 33.1, 33.6, 34.1, 34.3, 34.6, 35.1, 35.3, 35.6, 36.1, 36.3, 36.6, 37.1, 37.3, 37.6, 38.2, 38.4, 38.7, 38.IW, 39.2, 39.4, 39.7, 39.IW, 40.2, 40.4, 40.7, 40.8, 40.IW, 41.1, 41.4, 41.8, 41.IW, 42.3, 42.8, 43.3, 43.6, 43.IW, 44.IW, 45.1, 45.IW, 46.IW, 48.IW, 49.1, 50.7, 51.7, 52.6, 53.1, 54.1, 54.3, 55.2, 55.5, 56.5, 57.3, 58.4, 59.3, 59.5, 59.IW, 60.3, 60.IW, 62.IW, 65.1, 66.7, 67.7, 68.7, 69.7, 70.1, 75.1, 76.1, 77.1, 78.1, 79.1, 80.1, 81.1, 84.1, 87.4, 91.1, 91.3, 92.1, 92.3, 93.2, 94.2, 95.5, 96.4</p>

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> extend skip-counting patterns to new number ranges. <p>Students are required to:</p> <ul style="list-style-type: none"> identify even and odd numbers using skip counting by twos or by grouping even collections of objects in twos explain why all numbers that end in the digits 0, 2, 4, 6 and 8 are even and that numbers ending in 1, 3, 5, 7, and 9 are odd. 	<p>Learning objective: Investigate and use the properties of odd and even numbers.</p> <p>CMC Level C Presentation Book 2. Lessons 124 to 129.</p> <p>Lessons 124.5, 125.2, 126.3, 127.3, 128.4, 129.5</p>
<p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs.</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.</p> <p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</p>	D	<p>Students are required to:</p> <ul style="list-style-type: none"> recall and practice multiplication and division facts using: <ul style="list-style-type: none"> arrays count bys. multiply three numbers e.g. $5 \times 3 \times 2$ using parenthesis and applying commutative, associative and distributive properties (begins L106) solve word problems using multiplication and division by: <ul style="list-style-type: none"> drawing on their knowledge of number families exploring the word 'times' within problems assessing reasonableness of answers by using mental computation and estimation strategies including rounding completing multiplication and division column problems with regrouping applying properties of operations as strategies to multiply and divide and using parenthesis and applying commutative, associative and distributive properties. 	<p>Learning objective: Multiply and divide one and 2-digit numbers with regrouping; use commutative, associative and distributive properties.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 64 to 129.</p> <p>Lessons 64.2, 65.3, 65.4, 66.2, 66.3, 67.2, 67.3, 68.2, 68.4, 68.8, 69.2, 69.8, 70.2, 70.3, 71.2, 71.3, 71IW, 72.4, 72.6, 72IW, 73.6, 73IW, 74.5, 74.7, 74IW, 75.4, 75.7, 76.2, 76.7, 76IW, 77.2, 77IW, 78.2, 78.8, 78IW, 79.7, 79.8, 79IW, 80IW, 81IW, 82IW, 83IW, 84IW, 85IW, 86IW, 87IW, 88IW, 89.3, 89IW, 90.3, 90IW, 91.7, 91IW, 92.5, 92.6, 92IW, 93.6, 93.7, 93IW, 94.6, 94IW, 95.7, 95.9, 95IW, 96.2, 96.6, 96.7, 96IW, 97.2, 97.3, 97.6, 97IW, 98.2, 98.3, 98.4, 98.6, 98.7, 98IW, 99.2, 99.5, 99.6, 99.7, 99IW, 100.2, 100.5, 100.6, 100.7, 100IW, 101.2, 101.8, 101IW, 102.8, 102IW, 103.8, 103IW, 104.7, 104IW, 105.7, 105IW, 106.3, 106.7, 106IW, 107.3, 107.6, 107IW, 108.6, 108IW, 109IW, 110IW, 111IW, 112IW, 113IW, 114.2, 114IW, 115.2, 115IW, 116.4, 116IW, 117.2, 117.3, 117IW, 118.2, 118.3, 118IW, 119.3, 119.6, 119IW, 120.2, 120.5, 120IW, 121.2, 121IW, 122IW, 123IW, 124IW, 125IW, 126IW, 127IW, 128IW, 129IW</p>
Number – Fractions			
<p>Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.</p> <p>Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.</p>	D	<p>Students are required to:</p> <ul style="list-style-type: none"> demonstrate an understanding of fractions (including $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$ and their multiples) as numbers by: <ul style="list-style-type: none"> learning basic rules for constructing fractions from pictures 	<p>Learning objective: Read and write fractions (less than 1 and greater than 1) and mixed numbers to represent parts of a unit or of a group; combine fractions with the same denominator.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 29 to 130.</p> <p>Lessons 29.5, 30.3, 31.2, 32.2, 33.3, 34.3, 35.6, 35.10, 36.2, 36IW, 37.2, 37IW, 38.3, 38IW, 39.4, 39IW, 40.4, 40IW, 41., 42.2, 42IW, 43.6, 42IW, 44.6, 44IW, 45.5, 45IW, 46.6, 46IW, 47., 48., 48IW, 49., 50.7, 51.7, 51IW, 52.3, 52IW, 53.3, 53IW, 54.2, 54IW, 55.3, 56.3, 56IW, 57.2, 57IW, 58.2, 59.2, 60.3, 60IW, 61.9, 61IW, 62.3,</p>

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> - partitioning wholes and exploring fractions that equal one whole. 	<p>62IW, 63.3, 63IW, 64.4, 65IW, 66IW, 67IW, 68., 69IW, 70IW, 71IW, 72.3, 72IW, 73.4, 73IW, 74.4, 75.6, 76.5, 76IW, 77.7, 77IW, 78., 79IW, 80IW, 81IW, 82IW, 83IW, 84IW, 85IW, 86IW, 87.4, 87IW, 88.3, 88IW, 89.4, 89IW, 90.4, 90IW, 91.2, 91IW, 92.2, 92IW, 93.2, 93IW, 94.4, 94IW, 95.3, 95IW, 96.4, 97.5, 98.8, 98IW, 99.3, 99IW, 100.3, 100IW, 101.4, 101IW, 102.5, 102IW, 103.4, 104.4, 104IW, 105.4, 106.5, 106IW, 107.7, 107IW, 108.5, 108IW, 109.4, 109IW, 110.5, 110IW, 111.5, 115IW, 112.5, 112IW, 113.3, 113.5, 114.3, 114.5, 114IW, 115.4, 115.6, 115IW, 116.2, 116IW, 117.9, 117IW, 118.4, 118IW, 119.2, 119IW, 120.3, 120IW, 121.3, 121IW, 122.5, 122IW, 123.5, 123IW, 124., 125.6, 125IW, 126.2, 126.4, 126IW, 127.3, 127.4, 127IW, 128.2, 128.3, 128IW, 129.2, 129.6, 129IW, 130.2, 130.6, 130IW,</p>
		<p>Students are required to:</p> <ul style="list-style-type: none"> • represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ... • represent fractions equivalent to whole numbers on a number line diagram. 	<p>Learning objective: Represent whole numbers on a number line.</p>
			<p>CMC Level D Presentation Book 2. Lessons 99 to 104.</p>
			<p>Lessons 99.3, 100.3, 101.4, 102.5, 103.4, 104.4</p>
Measurement			
<p>Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.</p>	E	<p>Students are required to:</p> <ul style="list-style-type: none"> • use scaled instruments to measure and compare lengths, masses, capacities and temperatures • read and interpret the graduated scales on a range of measuring instruments to the nearest graduation • calculate conversions in the metric system • order numbers by making comparisons that use < > = symbols to record the results of comparison. 	<p>Learning objective: Measure and compare lengths, masses, capacities and temperatures.</p> <p>CMC Level E Presentation Books 1 and 2. Lessons 71 to 130.</p> <p>Lessons 71.9, 72.9, 73.8, 74.8, 76.9, 77.9, 78.9, 79.9, 80.9, 82.9, 83.9, 84.9, 85.10, 86.9, 87.9, 88.8, 89.7, 90.8, 91.8, 92.8, 93.9, 94.9, 105.8, 106.8, 107.7, 108.5, 108.8, 110.7, 111.7, 112.5, 112.8, 113.6, 113.8, 114.5, 115.4, 115.6, 115.8, 116.4, 116.7, 117.5, 117.7, 118.4, 118.7, 119.5, 120.7, 121.6, 122.5, 123.5, 123.7, 124.3, 124.7, 125.3, 125.8, 126.6, 127.3, 127.6, 128.5, 129.3, 129.6, 130.5</p>
<p>Compare and order lengths, mass, volume/capacity and record the results using >, < and =.</p>	B	<p>Students are required to:</p> <ul style="list-style-type: none"> • compare and order up to three objects based on length, height, weight and age • compare the lengths of two objects indirectly by using a third object. 	<p>Learning objective: Compare and order objects and events using attributes of length, mass, capacity, and duration, communicating reasoning.</p> <p>CMC Level B Presentation Books 2 and 3. Lessons: 77 to 97.</p> <p>Lessons 77.3, 78.2, 79.2, 80.6, 81.7, 82.4, 83.1, 83.8; 84.3, 85.3, 85.9, 86.2, 87.2, 88.2, 89.2, 90.3, 93.4, 95.4, 96.4, 96.8, 97.5</p>
<p>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.</p> <p>Find different combinations of coins that equal the same amounts of money.</p>	C	<p>Students are required to:</p> <ul style="list-style-type: none"> • identify the value of sets of like coins • identify the value of sets of mixed coins • identify the value of sets of like notes • identify the value of sets of mixed notes and coins. 	<p>Lesson objective: Count and order small collections of Australian coins and notes according to their value.</p> <p>CMC Level C Presentation Books 1 and 2. Lessons 14-128.</p> <p>Lessons 14.6, 15.4, 16.9, 17.5, 18.8, 19.3, 19.8, 20.2, 20.8, 21.3, 22.4, 23.5, 24.5, 25.8, 26.4, 26IW, 27.8, 27IW, 28.7, 28IW, 29.8, 29IW, 30IW, 31IW, 32IW, 33IW, 36IW, 39IW, 40.6, 41.3, 42.2, 43.4, 43IW, 44IW, 46IW, 47IW, 48IW, 50IW, 51IW, 52IW, 53IW, 54IW, 55IW, 57IW, 58.5, 58IW, 59.6, 60.5, 60IW, 61.7, 61IW, 62.7, 62IW, 63.8, 64IW, 65IW, 66IW, 67IW, 68IW, 69IW, 70IW, 72IW, 73IW, 77IW, 78IW, 80.6, 80IW, 81.6, 82.7, 82IW, 83.6, 83IW, 84.6, 84IW, 85IW, 86IW, 87IW,</p>

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.			89IW, 90IW, 92.4, 92IW, 93.3, 93IW, 94.3, 95.3, 95IW, 96.7, 96IW, 97.6, 98.7, 99.8, 99IW, 100.3, 100.5, 100IW, 101.3, 101.5, 102.3, 103.3, 103.7, 104.4, 104.7, 105.5, 105.7, 106.4, 106IW, 107.5, 107.6, 108.4, 108IW, 109.3, 109.6, 110.4, 110IW, 111.4, 112IW, 113IW, 114IW, 115IW, 116IW, 117IW, 118IW, 119IW, 120IW, 121IW, 123IW, 124IW, 125IW, 126IW, 127IW, 128IW
		Students are required to:	Learning objective: Solve picture problems involving money transactions.
		<ul style="list-style-type: none"> calculate the total cost of two or more items calculate the amount remaining after purchasing one or more items. 	CMC Level C Presentation Book 2. Lessons: 100 to 116. Lessons 100.5, 101.5, 102.5, 103.7, 104.7, 105.7, 106.5, 107.6, 108.4, 109.6, 110.4, 111.4, 112.7, 114 IW, 116 IW
Compare and sequence intervals of time. Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. Know the number of minutes in an hour and the number of hours in a day.	D	Students are required to: <ul style="list-style-type: none"> tell and write time to the nearest minute and measure time intervals in minutes establish elapsed time complete addition and subtraction column problems involving time solve word problems involving time. 	Learning objective: Tell and measure time to the nearest minute; calculate elapsed time and solve other word problems involving time. CMC Level D Presentation Books 1 and 2. Lessons 53 to 130. Lessons 53.5, 53.7, 53IW, 54.5, 54.6, 54IW, 55.6, 55.7, 55IW, 56.6, 56IW, 57.6, 57IW, 58.6, 58IW, 59.6, 59.9, 59IW, 60.6, 60IW, 61.4, 61.7, 61IW, 62.4, 62.8, 62IW, 63.4, 63.7, 64.2, 64.5, 64.7, 64IW, 65.3, 65.6, 65IW, 66.3, 66.5, 66IW, 67.3, 67.6, 67IW, 68.4, 68.5, 68IW, 69.3, 69.6, 69IW, 70.3, 70.6, 70IW, 71.2, 71.3, 71IW, 72.4, 72.6, 72IW, 73.6, 73IW, 74.7, 74IW, 75.7, 75IW, 76.7, 76IW, 77.4, 77IW, 78.8, 78IW, 79.2, 79.8, 79IW, 80.3, 80.7, 80IW, 81.3, 81.7, 81IW, 82.4, 82.7, 82IW, 83.5, 83.7, 83IW, 84.4, 84.7, 84IW, 85.4, 85.5, 85.7, 85IW, 86.6, 86.7, 87.6, 87.7, 87IW, 88.6, 88.8, 88.9, 88IW, 89.7, 89.9, 89IW, 90.6, 90.7, 90IW, 91.6, 91.9, 91IW, 92.5, 92IW, 93.6, 93.8, 93IW, 94.8, 94.9, 94IW, 95.7, 95.8, 95IW, 96.6, 96.8, 96IW, 97.8, 97IW, 98.3, 98.6, 98.8, 98.9, 98IW, 99.6, 99.8, 99IW, 100.6, 100IW, 101.5, 101.7, 101IW, 102.7, 102IW, 103.8, 106.7, 108.7, 112.7, 117.7, 118.5, 119.5, 120.5, 121.6, 121.8, 122.7, 123.7, 123.8, 127.9, 130.2
Geometry – Properties of Shapes			
Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Compare and sort common 2-D and 3-D shapes and everyday objects.	A	Students are required to: <ul style="list-style-type: none"> group objects based on common characteristics organise and sort shapes into different categories by size, number of sides, shape and orientation expressing sorting data in tables match a row of objects and shapes to a model sorting 2- and 3-dimensional shapes according to attributes label a hexagon, triangle, rectangle, square, cube, circle, cylinder relate real-life objects to shapes: identify features of real objects (e.g., tuna can, a bill, a coin) to determine its shape (e.g., cylinder, rectangle, circle). 	Learning objective: Analyse and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts.
			CMC Level A Presentation Book 3. Lessons 94 to 118. Lesson 94.4, 95.5, 96.2, 96.4, 97.2, 97.4, 98.3, 98.6, 99.3, 99.6, 100.2, 100.4, 103.1, 104.3, 111.1, 111.3, 112.1, 112.3, 113.2, 113.5, 114.5, 115.2, 116.4, 117.4, 118.2
	B	Students are required to:	Learning objective: Make, compare and classify two- and three-dimensional shapes and describing their obvious features.

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
<p>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.</p> <p>Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid].</p>		<ul style="list-style-type: none"> compare and classify circles, triangles, rectangles, squares, hexagons, and pentagons identify the shapes of street signs (triangle, rectangle, circle) compare and classify cubes, pyramids, prisms, and cylinders identify component parts of a composite two-dimensional figure label faces of three-dimensional figures. 	<p>CMC Level B Presentation Books 2 and 3. Lessons: 61 to 119.</p> <p>Lessons 61.2, 62.4, 63.3, 64.2, 65.4, 66.4, 67.5, 68.4, 69.2, 70.3, 71.2, 72.2, 73.2, 74.3, 75.2, 76.3, 76.5, 77.1, 77.6, 78.5, 79.6, 80IW, 81IW, 82IW, 83IW, 84IW, 85IW, 86.2, 86IW, 87.5, 87IW, 88.5, 88IW, 89IW, 90IW, 91IW, 92IW, 93IW, 94IW, 95.2, 96.3, 96IW, 97.10, 97IW, 98.9, 98IW, 99.8, 99IW, 100.3, 100IW, 101.7, 101IW, 102.8, 102IW, 103.7, 103IW, 104.7, 104IW, 105.3, 105IW, 106.7, 107.8, 107IW, 108.4, 108IW, 109.5, 109IW, 110.4, 110IW, 111.8, 111IW, 112.6, 112IW, 113.8, 113IW, 114.2, 114IW; 115.2; 116.3, 116IW, 117IW, 118IW, 119IW</p>
Geometry – Position and Direction			
Order and arrange combinations of mathematical objects in patterns and sequences.	Oz-e-maths Top-ups Year 1	<p>Students are required to:</p> <ul style="list-style-type: none"> recognise, continue and create repeating patterns with shapes and objects. 	<p>Learning objectives: Recognise, create and continue repeating patterns of shapes and objects.</p> <p>Oz-e-maths Top-ups Supplementary Materials for Connecting Maths Concepts Teaching Guide Years F–3. Lesson: 3</p> <p>Lessons 3.1, 3.2, 3.3, Mastery Test 3</p>
Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise).	A	<p>Students are required to:</p> <ul style="list-style-type: none"> use appropriate language to describe locations and spatial relationships using appropriate prepositions: <ul style="list-style-type: none"> over, under, behind, above, below, besides, next to, in front of describe the relative position between two objects: <ul style="list-style-type: none"> closer than, further than. 	<p>Learning objective: Describe objects in the environment and the relative positions of these objects.</p> <p>CMC Level A Presentation Book 3. Lessons 94 to 120.</p> <p>Lessons 94.4, 95.5, 96.2, 99.6, 100.2, 103.1, 104.3, 106.3, 107.3, 109.3, 110.2, 111.1, 112.1, optional exercise, 113.2, 113.5, 114.5, 115.2, 116.4, 117.4, 118.2, 119.3, 120.3</p>
	C	<p>Students are required to:</p> <ul style="list-style-type: none"> identify an angle as the point where two lines come together identify the number of angles in two-dimensional shapes (triangle, rectangle, hexagon). 	<p>Learning objective: State the number of angles in a two-dimensional shape.</p> <p>CMC Level C Presentation Book 2. Lessons 123 to 129.</p> <p>Lessons 123.6, 124.6, 125.3, 126.2, 127.1, 128.3, 129.1</p>
	D	<p>Students are required to:</p> <ul style="list-style-type: none"> recognise angles as measures of turn and compare angle sizes in everyday situations compare the angles created by opening doors partially and fully recognise that analogue clocks use the turning of arms to indicate time, and comparing the size of angles between the arms for familiar times identify the number of angles in a shape. (The number of angles equals the number of sides.) 	<p>Learning objective: Identify two-dimensional shapes and their attributes.</p> <p>CMC Level D Presentation Book 2. Lessons 27 to 81.</p> <p>Lessons: 27.4, 28.5, 29.4, 30.8, 31.5, 32.8, 33.8, 34.8, 78.4, 79.4, 80.4, 81.3</p>

Statutory Requirements	Level	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Statistics			
<p>Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.</p> <p>Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.</p> <p>Ask and answer questions about totalling and comparing categorical data.</p>	A	<p>Students are required to:</p> <ul style="list-style-type: none"> collect and record information in a table. 	<p>Learning objective: Record data in a table.</p> <p>CMC Level A Presentation Book 3. Lessons: 116 to 119.</p> <p>Lessons 116.2, 117.1, 118.9IW, 119.8IW</p>
	B	<p>Students are required to:</p> <ul style="list-style-type: none"> organise data into a frequency table with up to 4 categories answer questions about the data points (e.g. how many total data points, how many in each category, how many more, or how many less are in one category than another). 	<p>Learning objective: Organise, record and answer questions about data and questions that compare categories.</p> <p>CMC B Presentation Book C. Lessons: 122-125.</p> <p>Lessons: 122.3, 123.4, 124.8, 125.5</p>
	C	<p>Students are required to:</p> <ul style="list-style-type: none"> use one-to-one displays (picture graphs and bar graphs) to answer questions about categories and comparisons combine all categories based on one-to-one displays create and interpret bar graphs. 	<p>Learning objective: Collect, record, represent, interpret, and compare data using frequencies.</p> <p>CMC C Presentation Book 2. Lessons: 116-125.</p> <p>Lessons: 116.4, 117.3, 118.3, 119.3, 120.4, 121.7, 122.4, 123.5, 125.5, 126.5</p>

8.3 Sequence of Content: Year 3 Programme of Study

Table 4: National curriculum in England for Year 3 Statutory requirements mapped to Connecting Math Concepts Levels.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Number – Number and Place Value			
Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.	B	Students are required to: <ul style="list-style-type: none"> count by forwards and backwards by 10s add 10 to 10s and 2-digit numbers identify missing numbers in a number line for skip counting by 10s. 	Learning objective: Count by tens. Add 10 to a number. CMC Level B Presentation Book 1. Lessons: 1 to 31 Lessons 1.6, 2.5, 3.7, 4.6, 5.5, 6.7, 7.4, 8.1, 9.7, 10.11, 11.10, 12.11, 13.11, 14.10, 14.1W, 24.1W, 26.1W, 31.1W
		Students are required to: <ul style="list-style-type: none"> count by 5s, initially using a patterned vertical display. 	Learning objective: Count by fives. CMC Level B Presentation Book 2. Lessons: 48 to 53. Lesson 48.4, 49.2, 50.2, 53.1
		Students are required to: <ul style="list-style-type: none"> count by 2s, * using a patterned pair of number lines. 	Learning objective: Count by twos. CMC Level B Presentation Book 3. Lessons: 93 to 100. Lessons: 93.2, 94.1, 95.3, 96.1, *97.4, *98.1, *99.3, *100.1
		Students are required to: <ul style="list-style-type: none"> skip count by 10s, 5s, 2s, 100's, and 25s, continuing the pattern sequence by extrapolation to new number ranges. 	Learning objective: Mixed counting. CMC Level B Presentation Book 3. Lessons: 97 to 107. Sample lessons: 97.3, 98.4, 99.1, 101.4, 102.2, 103.8, 104.2, 105.2, 106.3, 107.4
Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).	D	Students are required to: <ul style="list-style-type: none"> identify the place value of numbers with two to four digits read and write 4-digit numbers read the underlined part of a 4-digit number first and then say the whole number. 	Learning objective: Read and write 4-digit numbers based on a deep understanding of place value. CMC Level D Presentation Books 1 and 2. Lessons 1 to 62 (with independent work through 109). Lessons 1.2, 1.7, 1.8, 2.3, 2.4, 2.8, 3.5, 3.7, 4.5, 5.5, 6.5, 7.5, 8.3, 8IW, 9.6, 9IW, 10.4, 10IW, 11.3, 11.5, 11IW, 12.4, 13.5, 16IW, 17IW, 18IW, 23IW, 26IW, 27IW, 29IW, 31IW, 35.5, 37.4, 37IW, 38.6, 39.5, 40.7, 41.5, 42.8, 43IW, 44IW, 45IW, 46IW, 47IW, 50IW, 51IW, 54IW, 56IW, 58.9, 59.8, 60.8, 60IW, 61.2, 62.7, 63IW, 64IW, 65IW, 66.7, 66IW, 67.5, 67IW, 68IW, 69IW, 70IW, 71IW, 72IW, 73IW, 74IW, 75IW, 76IW, 77IW, 78IW, 80IW, 83IW, 84IW, 85IW, 86IW, 88IW, 90IW, 95IW, 96IW, 97IW, 100IW, 102IW, 105IW, 109IW
Compare and order numbers up to 1000. Identify, represent and estimate numbers using different representations. Read and write numbers up to 1000 in numerals and in words.	C	Students are required to: <ul style="list-style-type: none"> read and write numbers to one thousand order numbers from least to greatest write place-value equations for 2- and 3-digit numbers rename place value equations to represent the same number two ways 	Learning objective: Read and write numbers to 1000 using base-ten numerals, number names and expanded form. CMC Level C Presentation Books 1 and 2. Lessons: 1-93. Lessons 1.7, 1.8, 2.5, 2.8, 3.2, 3.8, 3.10, 4.5, 4.8, 5.8, 6.5, 7.4, 8.4, 9.2, 10.5, 11.6, 11.7, 11.11, 12.3, 12.7, 13.3, 13.8, 14.2, 14.7, 15.6, 15.8, 15.9, 16.3, 16.5, 16.9, 17.3, 17.10, 18.2, 18.9, 19.1, 19.8, 20.1, 21.2, 21.8, 22.7, 23.2, 23.8, 24.2, 24.8, 25.3, 25.5, 26.5, 26.8, 26.9, 27.4, 27.8, 28.2, 29.2, 29.1W, 30.9, 31.7, 32.4, 32.10, 33.7, 33.10, 34.5, 34.9, 35.5, 36.5, 36.9, 37.5, 37.9, 38.1, 38.6, 39.1, 39.6, 40.5, 42.4, 42.8, 43.10, 47.8, 49.4, 49.9, 50.9, 51.9, 54.9, 58.8, 59.8, 68.9, 74.1W, 80.1W, 85.1W, 89.1W, 91.1W, 93.1W, 118.1W

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity		
Solve number problems and practical problems involving these ideas.		<ul style="list-style-type: none"> add or subtract 2-digit values and compare the results using $>$, $=$, and $<$. 			
		Students are required to: <ul style="list-style-type: none"> order 3-digit numbers compare 3-digit numbers using $>$, $=$, and $<$. 	Learning objective: Compare 3-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons. CMC Level C Presentation Books 1 and 2. Lessons: 31-93 Lessons 31.4, 36.9, 112.3, 113.3, 115.IW 126.9		
		Students are required to: <ul style="list-style-type: none"> write numbers for number names read 4-digit numbers write place-value column addition problems for 4-digit numbers. 	Learning objective: Read and write numbers to thousands using base-ten numerals, number names, and expanded form. CMC Level C Presentation Book 2. Lessons: 88-117. Lessons 82.6, 88.1, 89.1, 90.1, 90.7, 91.1, 92.1, 116.6, 117.6,		
		Number – Addition and Subtraction			
		Add and subtract numbers mentally, including: <ul style="list-style-type: none"> a three-digit number and ones a three-digit number and tens a three-digit number and hundreds. Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.	B	Students are required to: <ul style="list-style-type: none"> count by forwards and backwards by 10s add 10 to 10s and 2-digit numbers identify missing numbers in a number line for skip counting by 10s. 	Learning objective: Count by tens. Add 10 to a number. CMC Level B Presentation Book 1. Lessons: 1 to 31 Lessons 1.6, 2.5, 3.7, 4.6, 5.5, 6.7, 7.4, 8.1, 9.7, 10.11, 11.10, 12.11, 13.11, 14.10, 14.IW, 24.IW, 26.IW, 31.IW,
				C	Students are required to <ul style="list-style-type: none"> do, without a calculator, column addition and subtraction: <ul style="list-style-type: none"> with 2-digit numbers involving no carrying or renaming with 2-digit numbers involving carrying with 2-digit numbers involving renaming with 3-digit numbers involving both carrying and renaming with 2-digit and 3-digit numbers in vertical or horizontal form write and solve addition problems based on pictures mentally add 10 and 9 to 2-digit numbers.
Students are required to: <ul style="list-style-type: none"> add and subtract through 20 using fact-family relationships for related facts 	Learning objective: Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written method. CMC Level C Presentation Books 1 and 2. Lessons: 1-129.				

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> work 2- and 3-digit column subtraction problems with and without renaming work 2- and 3-digit column addition problems with and without carrying add and subtract 10 mentally from any 2-digit value check answers by adding 3 values in a different order use a ruler diagram to determine the missing addend in a number sentence check answers using the inverse operation show addition and subtraction on a number line add and subtract using place-value pictures. 	Lessons 1.3, 2.2, 3.6, 4.4, 4.6, 5.1, 5.2, 5.4, 5.5, 5.9, 6.2, 6.8, 7.3, 7.8, 8.6, 8.8, 9.3, 9.5, 10.2, 10.4, 10.6, 11.3, 11.5, 11.7, 11.9, 11.10, 12.2, 12.6, 12.8, 12.10, 13.2, 13.4, 13.7, 13.9, 13.10, 14.1, 14.4, 14.8, 15.1, 15.2, 15.9, 16.2, 16.6, 16.9, 17.4, 18.3, 18.9, 19.2, 20.3, 20.9, 21.1, 21.4, 21.6, 21.7, 21.8, 22.1, 22.3, 22.5, 22.6, 22.7, 23.1, 23.4, 23.6, 23.7, 23.8, 24.1, 24.4, 24.6, 24.7, 24.8, 25.1, 25.2, 25.4, 25.6, 25.7, 25.8, 25.9, 26.1, 26.2, 26.3, 26.6, 26.7, 26.9, 27.1, 27.3, 27.5, 27.6, 27.7, 27.8, 28.1, 28.3, 28.5, 28.6, 28.8, 28.9, 29.1, 29.3, 29.6, 29.7, 29.8, 30.1, 30.3, 30.7, 30.9, 31.1, 31.3, 31.6, 31.7, 32.1, 32.3, 32.9, 32.10, 33.2, 33.6, 33.9, 33.10, 34.6, 34.8, 34.9, 35.6, 35.8, 36.2, 36.6, 36.8, 36.9, 37.2, 37.6, 37.8, 37.9, 38.3, 38.7, 38.9, 39.3, 39.7, 39.9, 39.10, 40.7, 40.9, 41.4, 41.8, 41.9, 41.11, 42.3, 42.6, 42.8, 43.3, 43.8, 43.10, 44.3, 44.8, 45.1, 45.2, 45.4, 45.10, 46.1, 46.3, 46.4, 46.8, 46.9, 47.1, 47.3, 47.5, 47.8, 48.1, 48.3, 48.6, 48.9, 49.1, 49.2, 49.3, 49.6, 49.9, 50.1, 50.4, 50.7, 50.9, 51.2, 51.3, 51.9, 52.2, 52.6, 52.8, 53.1, 53.3, 53.8, 54.5, 54.9, 55.1, 55.7, 56.1, 56.4, 56.7, 57.1, 57.5, 58.4, 58.8, 58.1, 58.6, 58.8, 59.1, 59.5, 59.8, 60.1, 60.3, 60.6, 60.8, 61.1, 61.2, 61.4, 61.5, 61.8, 62.1, 62.3, 62.4, 62.6, 62.8, 63.1, 63.3, 63.4, 63.6, 63.9, 64.1, 64.4, 64.5, 64.7, 64.8, 65.3, 65.4, 65.8, 66.2, 66.1, 66.4, 66.9, 67.1, 67.2, 67.4, 67.9, 68.1, 68.2, 68.4, 68.9, 69.1, 69.2, 69.4, 69.9, 70.3, 70.6, 70.8, 71.8, 73.7, 73.8, 74.4, 74.7, 74.8, 75.9, 76.2, 76.3, 76.4, 76.5, 76.6, 76.8, 77.3, 77.4, 77.5, 77.7, 77.9, 78.2, 78.4, 78.6, 78.7, 78.9, 79.3, 79.5, 79.8, 80.2, 80.5, 80.7, 80.8, 81.5, 81.7, 81.8, 82.1, 82.2, 82.5, 82.8, 83.3, 83.7, 84.2, 84.3, 84.8, 85.2, 85.6, 85.8, 86.4, 86.9, 87.2, 87.9, 88.2, 88.5, 88.8, 89.7, 89.8, 90.5, 90.7, 90.9, 91.6, 92.4, 92.8, 93.3, 93.5, 93.7, 94.3, 94.5, 94.7, 95.3, 95.4, 95.8, 96.7, 96.8, 97.6, 97.8, 98.9, 99.4, 99.8, 100.4, 100.8, 101.7, 102.4, 102.7, 103.1, 103.5, 103.8, 104.1, 104.5, 104.7, 105.1, 105.6, 105.7, 106.3, 106.7, 107.3, 107.7, 108.1, 108.7, 109.1, 109.5, 109.7, 110.7, 111.1, 111.3, 111.6, 111.7, 112.1, 112.5, 112.7, 113.1, 113.5, 113.6, 114.1, 114.3, 114.6, 114.7, 115.1, 115.3, 115.7, 116.7, 117.7, 119.6, 120.6, 121.8, 122.8, 123.8, 124.7, 125.1, 125.7, 126.1, 126.9, 127.2, 127.8, 127.9, 128.1, 128.2, 128.5, 128.7, 129.2, 129.4
Estimate the answer to a calculation and use inverse operations to check answers.	C	Students are required to: <ul style="list-style-type: none"> estimate to the nearest 10 estimate to the nearest 10s with column problems and solve estimate in word problems estimate measurements in inches given a length in centimetres estimate measurements in pictures using proportion given a measurement of one picture. 	Learning objective: Estimate quantities using proportional pictures and measurements. CMC Level C Presentation Book 2. Lessons 79 to 127. 79.7, 80.5, 81.2 81.IW, 82.2, 82.IW, 83.1, 85.1, 85.3, 86.1, 86.3, 87.1, 87.3, 88.3, 89.2, 90.2, 91.2, 92.2, 93.1, 94.1, 125.7, 126.8, 127.8.
	D	Students are required to: <ul style="list-style-type: none"> identify decade numbers on either side of a given number (e.g., 78 is flanked by 70 and 80) round numbers to the nearest decade (0, 10, 20, and so on) 	Learning objective: Use rounding to estimate answers and check reasonableness of answers. CMC Level D Presentation Books 1 and 2. Lessons 22 to 122. Lessons 22.3, 23.4, 24.7, 25.5, 26.4, 31.8, 32.6, 33.6, 34.IW, 35.IW, 36.3, 37.5, 38.2, 39.2, 40.2, 41.4, 42.4, 43.3, 44.5, 45.6, 46.5, 47.7, 48.5, 49.5, 50.4, 51.5, 52.6, 53.6, 54.6, 55.4, 56.2, 57.3, 58.3, 59.3, 60.IW, 65.7, 66.5, 67.7, 97.3, 98.7, 99.5, 100.5, 101.3, 101.8, 102.4, 102.8, 103.2, 104.2, 105.2, 106.2, 107.2, 108.2,

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> • round money amounts to the nearest dollar and solve estimation column problems • estimate and determine exact amount in money column problems • estimate to solve multiplication problems • determine reasonableness of answers. 	109.3, 110.2, 111.2, 112.2, 113.6, 114.4, 115.5, 118.3, 119.6, 120.5, 121.6, 122.8, 127.7, 128.5, 129.8, 130.8.
Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	B	<p>Students are required to:</p> <ul style="list-style-type: none"> • translate action story problems into addition and subtraction problems (including column problems) and solve • translate comparison pictures and story problems into subtraction problems and solve for the difference • translate story problems into equations with a missing addend, minuend or subtrahend and solve • represent problems with number family diagrams. 	<p>Learning objective: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, and comparing.</p> <p>CMC Level B Presentation Books 1, 2, and 3. Lessons:12 to 125.</p> <p>Lessons 12.3, 13.6, 14.3, 15.8, 16.10, 17.8, 18.6, 19.6, 20.5, 21.8, 22.9, 23.10, 24.9, 25.10, 27.10, 28.8, 29.9, 30.8, 31.8, 32.10, 33.10, 34.10, 36.9, 37.9, 43.9, 44.7, 45.7, 46.6, 47.8, 49.9, 50.8, 51.8, 52.7, 53.8, 54.9, 105.6, 107.6, 108.8, 110.8, 111.6, 114.7, 115.10, 116.6, 117.6, 119.5, 120.5, 122.7, 123.5, 124.7, 125.7</p>
Number – Multiplication and Division			
Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	D	<p>Students are required to:</p> <ul style="list-style-type: none"> • recall and practice multiplication and division facts using: <ul style="list-style-type: none"> - arrays - count bys • multiply three numbers e.g. $5 \times 3 \times 2$ using parenthesis and applying commutative, associative and distributive properties (begins L106) • solve word problems using multiplication and division by: • drawing on their knowledge of number families • exploring the word ‘times’ within problems • assessing reasonableness of answers by using mental computation and estimation strategies including rounding • completing multiplication and division column problems with regrouping • applying properties of operations as strategies to multiply and divide and using parenthesis and applying commutative, associative and distributive properties. 	<p>Learning objective: Multiply and divide one and 2-digit numbers with regrouping; use commutative, associative and distributive properties.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 64 to 129.</p> <p>Lessons 64.2, 65.3, 65.4, 66.2, 66.3, 67.2, 67.3, 68.2, 68.4, 68.8, 69.2, 69.8, 70.2, 70.3, 71.2, 71.3, 71IW, 72.4, 72.6, 72IW, 73.6, 73IW, 74.5, 74.7, 74IW, 75.4, 75.7, 76.2, 76.7, 76IW, 77.2, 77IW, 78.2, 78.8, 78IW, 79.7, 79.8, 79IW, 80IW, 81IW, 82IW, 83IW, 84IW, 85IW, 86IW, 87IW, 88IW, 89.3, 89IW, 90.3, 90IW, 91.7, 91IW, 92.5, 92.6, 92IW, 93.6, 93.7, 93IW, 94.6, 94IW, 95.7, 95.9, 95IW, 96.2, 96.6, 96.7, 96IW, 97.2, 97.3, 97.6, 97IW, 98.2, 98.3, 98.4, 98.6, 98.7, 98IW, 99.2, 99.5, 99.6, 99.7, 99IW, 100.2, 100.5, 100.6, 100.7, 100IW, 101.2, 101.8, 101IW, 102.8, 102IW, 103.8, 103IW, 104.7, 104IW, 105.7, 105IW, 106.3, 106.7, 106IW, 107.3, 107.6, 107IW, 108.6, 108IW, 109IW, 110IW, 111IW, 112IW, 113IW, 114.2, 114IW, 115.2, 115IW, 116.4, 116IW, 117.2, 117.3, 117IW, 118.2, 118.3, 118IW, 119.3, 119.6, 119IW, 120.2, 120.5, 120IW, 121.2, 121IW, 122IW, 123IW, 124IW, 125IW, 126IW, 127IW, 128IW, 129IW</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
<p>Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.</p> <p>Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.</p>	E	<p>Students are required to:</p> <ul style="list-style-type: none"> • use multiplication families and relate to division • learn multiplication facts • explore the relationship between numbers that are multiplies and the number of zeros • solve multiplication family word problems using three types of problems: <ul style="list-style-type: none"> - times problems - each-every problems - measurement fact problems • work with column multiplication to: <ul style="list-style-type: none"> - review multiplying 2 digit numbers by 1-digit numbers - multiply by a 10s number and become familiar with the use of 'zero' - multiply 2 digit by 2 digit numbers - multiply 2 digit by 3 digit numbers - relating multiples to establishing remainders as 'leftovers'. 	<p>Learning objective: Multiples of 10.</p> <p>CMC Level E Presentation Book 1. Lessons 40 to 47.</p> <p>Lessons 40.7, 41.2, 42.3, 43.8, 44.7, 45.2, 46.6, 47.6</p>
			Number – Fractions
<p>Count up and down in tenths.</p> <p>Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.</p>	C	<p>Students are required to:</p> <ul style="list-style-type: none"> • name fractional parts of a whole • recognise that fractional parts are equal parts of a whole, including halves, thirds, fourths, fifths, sixths, eighths • connect halves and fourths through halving • connect thirds and sixths through halving. 	<p>Learning objective: Identify fractions from diagrams.</p> <p>CMC Level C Presentation Book 2. Lessons: 121-126.</p> <p>Lessons 121.5, 122.6, 123.1, 124.1, 125.6, 126.6, 126IW</p>
	D	<p>Student are required to:</p> <ul style="list-style-type: none"> • read fractions from shape diagrams • write fractions from shape diagrams • write the fraction for a subset of objects • add fractions from pictures. 	<p>Learning objective: Construct proper and improper fractions from pictures.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons: 29-122.</p> <p>Lessons 29.5, 30.3, 31.2, 32.2, 33.3, 33.9, 34.3, 34.10IW, 35.6, 36. IW7, 37.8,IW 38.9IW, 39IW, 40.4, 40.8IW, 42.2, 42.9IW, 43.6, 44.6, 44.9IW, 45.5, 46.6, 46.7,IW, 51IW, 47.3, 48.4, 48.7, 49.3, 51.7, 52.5, 53.3, 54.8, 55.8, 56.8, 57.8, 59.9, 61.9, 62.9, 63.9, 65.9, 69.8, 70.8, 72.8, 76.8, 77.9, 81.8IW, 82.8IW,, 86.10, 89.9,IW, 91.9IW, 93.8, 95.9, 98.7, 99.3, 100.3, 101.4, 102.5, 103.4, 103.9IW, 104.4, 104.8,IW, 105.4, 105.8, 106.5, 106.8, 107.7, 107.8,IW, 109.8IW, 110.7IW, 111.8IW, 112.5, 112.8IW, 114.7, 115.4, 116.2,116IW 116.9, 117.9, 118.4, 119.2, 120.3, 122.9, 122IW, 123.5, 124.6, 124.9, 125.9, 126.4, 127.3, 128.2, 129.2, 129.9, 130.2, 130.9</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		Student are required to: <ul style="list-style-type: none"> • read fractions on a number line • write fractions on a number line • compare fractions to whole numbers on a number line • write fractions for whole numbers on a number line • write mixed numbers from a number line. 	Learning objective: Relate fractions and mixed numbers to whole numbers on a number line diagram. CMC Level D Presentation Books 1 and 2. Lessons: 42-123. Lessons 42.2, 43.6, 44.6, 45.5, 46.6, 47.3, 48.4, 49.3, 51.7, 52.5, 53.3, 54.8, 55.8, 56IW, 57 IW, 59 IW, 61IW, 62IW, 63IW, 69IW, 70IW, 72IW, 76.IW, 77IW, 82IW, 86 IW, 93 IW, 95 IW, 98. IW, 99.3, 100.3, 101.4, 102.5, 103.4, 104.4, 111.5, 112.5, 113. 5, 114.5, 115.6, 116IW, 117IW, 118IW, 119IW, 120IW, 121IW, 122IW, 123IW
Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.	D	Student are required to: <ul style="list-style-type: none"> • identify fractions equal to one • compare fractions to one • create equivalent fractions from pictures. 	Learning objective: Develop understanding of fractions as numbers. Explain equivalence of fractions in special cases and compare fractions by reasoning about their size. CMC Level D Presentation Books 1 and 2. Lessons: 34-120. Lessons 34.3, 35.10, 36.2, 37.2, 38.3, 39.4, 40.4, ,41.8, 43.8, 45IW, 60.IW, , 118.4, 119.2 120.3
Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.	D	Students are required to: <ul style="list-style-type: none"> • represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ... • represent fractions equivalent to whole numbers on a number line diagram. 	Learning objective: Represent whole numbers on a number line. CMC Level D Presentation Book 2. Lessons 99 to 104. Lessons 99.3, 100.3, 101.4, 102.5, 103.4, 104.4
Recognise and show, using diagrams, equivalent fractions with small denominators.	D	Student are required to: <ul style="list-style-type: none"> • identify fractions equal to one • compare fractions to one • create equivalent fractions from pictures. 	Learning objective: Develop understanding of fractions as numbers. Explain equivalence of fractions in special cases and compare fractions by reasoning about their size. CMC Level D Presentation Books 1 and 2. Lessons: 34-120. Lessons 34.3, 35.10, 36.2, 37.2, 38.3, 39.4, 40.4, ,41.8, 43.8, 45IW, 60.IW, , 118.4, 119.2 120.3
Add and subtract fractions with the same denominator within one whole [for example, $5/7 + 1/7 = 6/7$]. Compare and order unit fractions, and fractions with the same denominators. Solve problems that involve all of the above.	E	Students then extend their knowledge of working equivalence (after learning to multiply fractions) by: <ul style="list-style-type: none"> • learning about multiplying by fractions of one • analysing fraction multiplication equations to determine whether the starting value and the answer are equal • working fraction multiplication problems that have two missing values and then larger numbers • drawing on their knowledge of equivalence to compare fractions using $<$, $>$, $=$. Fractions have both like and unlike denominators. Justify conclusion, e.g. by visual model • comparing fractions with like numerators 	Learning objective: Equivalent fractions. CMC Level E Presentation Book 1 and 2. Lessons 68 to 128. Lessons 68.3, 69.2, 70.3, 71.3, 72.3, 73.6, 74.6, 74IW, 75.9, 76.2, 76.5, 76.8, 76IW, 77.2, 77.5, 77.9, 78.5, 78.7, 78.9, 79.3, 79.8, 79IW, 80.3, 80.9, 81.6, 81IW, 82.8, 82IW, 83.7, 83IW, 84.7, 85.5, 85IW, 86.4, 86.5, 87.5, 88.7, 88IW, 89.5, 90.5, 90IW, 91.7, 92.4, 92IW, 93.4, 93.7, 94.3, 94.5, 95.4, 96.6, 96IW, 97.4, 98.8, 98IW, 99.4, 99IW, 100IW, 101.3, 102.8, 102IW, 103.8, 104.3, 104IW, 105.3, 105IW, 106.7, 107.3, 107IW, 108.3, 108IW, 109.6, 109IW, 110.6, 111.4, 111IW, 113IW, 114IW, 119IW, 125IW, 128IW

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
	F	<ul style="list-style-type: none"> comparing fractions by drawing on division. <p>Students are required to:</p> <ul style="list-style-type: none"> add or subtract fractions with like denominators multiply fractions focus on fractional comparisons add, subtract, multiply and divide fractions, including mixed numbers. 	<p>Learning objective: Order and write fractions involving subtraction, addition, multiplication and division of mixed numbers with related denominator.</p> <p>CMC Level F Presentation Books 1 and 2. Lessons 71 to 119.</p> <p>Lessons 71.1, 72.1, 73.1, 74.1, 75.1, 76.1W, 77.1W, 78.1W, 79.1, 80.2, 81.1W, 84.1W, 113.5, 114.1, 115.1, 116.1, 117.1, 118.5, 119.5</p>
Number – Measurement			
<p>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).</p> <p>Measure the perimeter of simple 2-D shapes.</p>	C	<p>Students are required to:</p> <ul style="list-style-type: none"> measure horizontal length with a ruler measure vertical length with a ruler measure sides of a rectangle estimate the length of a line and measure to verify. <p>(Note: For the Australian context, measurements have been adapted from imperial units to metric units.)</p>	<p>Learning objective: Measure the length of an object using appropriate tools.</p> <p>CMC Level C Presentation Books 1 and 2. Lessons: 30-87.</p> <p>Lessons 30.8, 31.7, 32.8, 33.4, 34.7, 35.7, 36.7, 37.7, 38.8, 39.8, 40.3, 41.5, 43.10, 44.8, 46.1W, 49.1W, 51.1W, 53.1W, 54.1W, 59.2, 60.2, 61.3, 62.2, 63.2, 64.3, 65.5, 66.3, 67.3, 68.3, 85.3, 86.3, 87.3, 124.4, 125.4, 126.4, 127.4,</p>
		D	<p>Students are required to:</p> <ul style="list-style-type: none"> identify an appropriate unit based on size.
	<p>Students are required to:</p> <ul style="list-style-type: none"> compare length by measuring two lines and calculating the difference compare the length of three lines. 		<p>Learning objective: Compare line lengths.</p> <p>CMC Level C Presentation Book 2. Lessons: 87-124.</p> <p>87.9, 88.8, 88.9, 116.5, 117.1W, 118.1W, 119.1W, 120.1W, 122.1W, 124.1W,</p>
	<p>Students are required to:</p> <ul style="list-style-type: none"> estimate the length in feet of a distance given in metres estimate the length in feet of an object measured in metres. 		<p>Learning objective: Estimate lengths using feet and metres.</p> <p>CMC Level C Presentation Book 2. Lessons: 125-127.</p> <p>125.7, 126.8, 127.8</p>
	<p>Students are required to:</p> <ul style="list-style-type: none"> determine the mass of an object in kilograms shown on a scale with divisions on a circular dial determine the mass of objects based on the number of identical objects shown estimate the number of litres in a tank, interpolating between 10-liter marks. 		<p>Learning objective: Read the weight in kg of (pictures of) objects.</p> <p>CMC Level D Presentation Book 2. Lessons: 121-123.</p> <p>Lessons 121.4, 122.2, 123.2</p>
	<p>Students are required to:</p> <ul style="list-style-type: none"> review measurement facts 		<p>Learning objective: Measure objects; calculate perimeter, volume, weight, capacity and cost; solve word problems using measurements of time, space, weight and money.</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> establish equivalent amounts of weight, capacity, time, money and length compare $<$ $>$ = units of time compare metric units compared to imperial units measure and estimate liquid volumes and masses of objects in g, kg and L add, subtract, multiply and divide to solve one-step word problems involving mass and volume understand concepts of area and relate to multiplication and addition measure perimeter measure volume. 	CMC Level D Presentation Books 1 and 2. Lessons 1 to 130. Lessons 13.6, 14.3, 15.3, 15.5, 16.2, 16.6, 17.3, 17.6, 18.5, 19.6, 20.7, 21.7, 22.6, 23.5, 23IW, 24.5, 24IW, 25.5, 25IW, 26.5, 26IW, 27.5, 27IW, 28.6, 29.7, 30.6, 30IW, 31.7, 32.7, 32IW, 33.7, 33IW, 34.7, 34IW, 35.2, 35IW, 36.6, 36IW, 37.6, 37IW, 38.5, 38IW, 39.6, 39IW, 40.8, 40IW, 41.7, 41IW, 42.6, 43.7, 43IW, 44.3, 44IW, 45.2, 45IW, 46.4, 46.7, 46IW, 47.4, 47IW, 48.3, 48.6, 48IW, 49.4, 49.6, 49IW, 50.3, 50.6, 50IW, 51.4, 51.6, 52.7, 52IW, 103.8, 103IW, 104.7, 104IW, 105.7, 105IW, 106.7, 106IW, 107.6, 107IW, 108.6, 108IW, 109.7, 109IW, 110.6, 110IW, 111.7, 111IW, 112.4, 112IW, 113.2, 113IW, 114.6, 114IW, 115IW, 116.6, 116.8, 116IW, 117.5, 117.7, 117IW, 118.3, 118.5, 118.7, 118IW, 119.4, 119.6, 119IW, 120.4, 120.5, 120.7, 120IW, 121.5, 121.6, 121IW, 122.3, 122.4, 122.8, 122IW, 123.3, 123.4, 123.5, 123IW, 124.3, 124.5, 124.6, 124IW, 125.4, 125.5, 125IW, 126IW, 127.6, 127.7, 127IW, 128.4, 128.5, 128.9, 128IW, 129.8, 129.9, 129IW, 130.8, 130.9, 130IW
Add and subtract amounts of money to give change, using both £ and p in practical contexts.	D	Students are required to: <ul style="list-style-type: none"> calculate the total amount of money in different sized coins using multiplication and addition calculate the total cost of purchases of two items or more calculate the number of hours in elapsed time (e.g., between 7 am and 3 pm) by creating two problems to sum for the answer (12-7 and 0+3, summed equals 8) calculate how much different people earned for different periods of time given daily earnings by creating a data table from which to work. 	Learning objective: Use mathematical thinking to solve practical problems involving counting money, purchasing items and calculating elapsed time. CMC Level D Presentation Books 1 and 2. Lessons 17 to 86. Lessons 17.8, 18.8, 19.4, 20.3, 20.8, 21.3, 21.8, 22.5, 23.7, 24.6, 25.7, 26.6, 27.6, 28.8, 29.8, 61.7, 62.5, 63.4, 64.5, 65.6, 66.6, 67.6, 72.8, 73.8, 75.9, 81.8, 82.8, 83.9, 84.8, 85.9, 86.8
Tell and write the time from an analogue clock, including using Roman Numerals from I to XII, and 12-hour and 24-hour clocks . Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight .	C	Students are required to: <ul style="list-style-type: none"> read the time on analogue and digital clocks to the minute calculate elapsed time (in hours) including AM to PM or PM to AM. No equivalent content found.	Learning objective: Tell time to the minute. CMC Level C Presentation Book 2. Lessons: 79-130. Lessons 79.2, 80.3, 81.3, 82.4, 83.5, 84.5, 85.5, 86.6, 87.6, 88.7, 89.7, 90.6, 91.4, 92.5, 93.6, 94.6, 95.6, 96.5, 97.5, 98.8, 98IW, 99.6, 99IW, 101IW, 103IW, 104IW, 106IW, 108IW, 109IW, 111IW, 112IW, 114IW, 115IW, 117IW, 118IW, 119.5, 119IW, 120.5, 121.6, 121IW, 122.7, 123.7, 123IW, 124IW, 125IW, 126IW, 127IW, 130IW
	C	Students are required to:	Learning objective: Tell and write time from analogue and digital clocks to the minute, using a.m. and p.m. CMC Level C Presentation Book 2. Lessons: 79-130.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
<p>Know the number of seconds in a minute and the number of days in each month, year and leap year.</p> <p>Compare durations of events [for example to calculate the time taken by particular events or tasks].</p>		<ul style="list-style-type: none"> • use digital and analogue clocks to tell the exact time • tell time to the hour • tell time to the nearest 5 minutes • tell time to the minute • tell how much time has elapsed • compare numbers of weeks, days, hours, minutes to determine which is more. 	<p>Lessons 79.2, 80.3, 81.3, 82.4, 83.5, 84.5, 85.5, 86.6, 87.6, 88.7, 89.7, 90.6, 91.4, 92.5, 93.6, 94.6, 95.6, 96.5, 97.5, 98.8, 98IW, 99.6, 99IW, 101IW, 103IW, 104IW, 106IW, 108IW, 109IW, 111IW, 112IW, 114IW, 115IW, 117IW, 118IW, 119.5, 119IW, 120.5, 121.6, 121IW, 122.7, 123.7, 123IW, 124IW, 125IW, 126IW, 127IW, 130IW</p> <p>CMC Level C Presentation Book 2. Lessons 79 to 130.</p> <p>Lessons 79.2, 80.3, 81.3, 82.4, 83.5, 84.5, 85.5, 86.6, 87.6, 88.7, 89.7, 90.6, 91.4, 92.5, 93.6, 94.6, 95.6, 96.5, 97.5, 98.8, 98IW, 99.6, 99IW, 103IW, 106IW, 108IW, 112IW, 117IW, 118IW, 119.5, 120.5, 121.6, 121IW, 122.7, 123.7, 123IW, 127IW, 130.1</p>
Geometry – Properties of Shape			
<p>Draw 2-D shapes and make 3-D shapes using modelling materials.</p> <p>Recognise 3-D shapes in different orientations and describe them.</p>	B	<p>Students are required to:</p> <ul style="list-style-type: none"> • distinguish defining attributes of triangle, square, rectangle, hexagon • distinguish defining attributes of 3-dimensional shapes. • compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles and quarter-circles) or three-dimensional shapes (cubes, right rectangle prisms, right circular cones and right circular cylinders) to create a composite shape • compose new shapes from the composite shape. 	<p>Learning objective: Distinguish between defining versus non-defining attributes. Build and draw shapes to possess defining attributes.</p> <p>CMC Level B Presentation Book 2. Lessons 61 to 74.</p> <p>Lesson 61.2, 62.4, 63.3, 64.2, 65.5, 66.4, 67.5, 68.4, 69.4, 70.3, 71.2, 72.2, 73.2, 74.3</p>
<p>Recognise angles as a property of shape or a description of a turn.</p> <p>Identify right angles.</p> <p>Recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn.</p> <p>Identify whether angles are greater than or less than a right angle.</p>	E	<p>Students explore angles by:</p> <ul style="list-style-type: none"> • recognising that angles are formed when two lines meet, are shown as part of a circle and expressed in degrees • establishing 90, 180, 270 and 360 multiples • working problems that show degrees of two nested angles related to multiples of 90 degrees (including supplementary and complimentary angles. • learning supplementary and vertically opposite angles (but does not teach the names of these angles) • learning the 90-degree angles are called right angles and within triangles are right-angled triangles • identifying acute angles and relate to right angles as well as triangles. 	<p>Learning objective: Estimate, measure and compare angles using degrees.</p> <p>CMC Level E Presentation Books 1 and 2. Lessons 61 to 130.</p> <p>Lessons 61.3, 62.2, 63.6, 63.9, 64.3, 64.9, 64IW, 65.6, 65IW, 66.6, 66IW, 67.6, 68.2, 69.6, 69IW, 70.5, 70IW, 71.5, 72.5, 72IW, 73.5, 74.5, 75.6, 75IW, 76IW, 77.6, 77IW, 78.2, 78IW, 79.2, 79IW, 80.8, 81IW, 82IW, 83IW, 84IW, 87IW, 90IW, 91IW, 93IW, 95IW, 97IW, 99IW, 103IW, 107.4, 108.4, 109.4, 109IW, 110.4, 111IW, 112.4, 112IW, 113.4, 114.3, 115.2, 115IW, 116.6, 117.4, 118.7, 119IW, 120.5, 121.5, 121IW, 122.6, 122IW, 123.4, 123IW, 124.2, 125.7, 125IW, 126.5, 126IW, 127.4, 127IW, 128.4, 129.2, 130.3</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> identifying obtuse angles and relate to right angles as well as triangles learning to use a 180-degree protractor to measure and draw angles learning related vocabulary – line segments, intersect. 	
Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	C	<p>Students are required to:</p> <ul style="list-style-type: none"> classify 2-dimensional shapes: rectangle, triangle, circle, square, pentagon, hexagon, quadrilateral learn classify 3- dimensional shapes: cube, pyramid, sphere, rectangular prism, and partition shapes into their component parts shapes, include, cubes, rectangular prisms, right circular cones, right circular cylinders, pyramids, decompose complex shapes into familiar component shapes spheres. 	<p>Learning objective: Recognise shapes having specified attributes, such as a given number of angles or sides, or identical faces.</p> <p>CMC Level C Presentation Books 1 and 2. Lessons: 43-129.</p> <p>Lessons 43.2, 44.2, 45.3, 46.2, 47.2, 48.2, 49.9, 50.6, 50.9, 51.6, 51.9, 52.5, 53.6, 53.8, 54.6, 55.4, 56.2, 56.7, 57.2, 57.8, 58.2, 59.8, 60.8, 66.9, 68.9, 69.3, 70.8, 107.7, 110.3, 111.2, 112.2, 113.2, 114.2, 115.2, 115.7, 116.2, 117.2, 117.7, 118.2, 123.6, 124.6, 125.3, 126.2, 127.1, 127.6, 128.3, 128.6, 129.1, 129.3</p>
Statistics			
Interpret and present data using bar charts, pictograms and tables.	D	<p>Students are required to:</p> <ul style="list-style-type: none"> create data tables (spreadsheets) and solve for missing data create pictographs (frequency tables) of data and answer questions solve one- and two-step ‘how many more’ and ‘how many less’ problems using information presented in scaled bar graphs. <p>Students are required to analyse and create:</p> <ul style="list-style-type: none"> picture graphs represent one unit and multiple units bar graphs one and multiple unit divisions line plots using mixed numbers data tables. 	<p>Learning objective: Record data in spreadsheet and frequency tables.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 30 to 130.</p> <p>Lessons 30.5, 31.4, 32.4, 33.2, 33.4, 34.2, 34.6, 35.3, 35.7, 36.3, 37.5, 37.8, 38.2, 38.8, 39.2, 39.8, 40.2, 41.2, 41.8, 42.7, 43.2, 44.4, 45.4, 46.2, 47.2, 48.2, 49.2, 50.2, 66IW, 71.4, 72.5, 73.5, 74.8, 75.6, 75IW, 76.3, 77.5, 78.8, 78IW, 79.8, 79IW, 80.6, 81.6, 82.5, 82.8, 82IW, 83.6, 83.9, 83IW, 84.6, 84.8, 84IW, 85.8, 85.9, 85IW, 86.10, 86IW, 87.6, 88.7, 88IW, 89.8, 90.8, 90IW, 91.9, 91IW, 92.8, 92IW, 93.8, 93IW, 94.7, 94.9, 94IW, 95.6, 96.9, 97.9, 97IW, 98IW, 99IW, 104IW, 105.8, 105IW, 106.8, 106IW, 108IW, 110.7, 110IW, 111.8, 111IW, 112IW, 113.8, 113IW, 114IW, 115.8, 115IW, 120.8, 120IW, 124.2, 124.9, 124IW, 125.3, 126.3, 126IW, 129.3, 129.5, 130.3, 130.4</p> <p>Learning objective: Interpret bar graphs, picture graphs and tables. Students complete tables given key information.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 30 to 130.</p> <p>Lessons 30.5, 31.4, 32.4, 33.2, 33.4, 34.2, 34.6, 35.3, 35.7, 36.3, 37.5, 37.8, 38.2, 38.8, 39.2, 39.8, 40.2, 41.2, 41.8, 42.7, 43.2, 44.4, 45.4, 46.2, 47.2, 48.2, 49.2, 50.2, 66IW, 71.4, 72.5, 73.5, 74.8, 75.6, 75.9, 76.3, 77.5, 78.7, 78.8, 79.6, 79.8, 80.6, 81.6, 82.5, 82.8, 83.6, 83.9, 84.6, 84.8, 85.8, 85.9, 86.2, 86.10, 87.6, 88.7, 89.8, 90.8, 91.9, 92.8, 93.8, 94.7, 94.9, 95.6, 96.9, 97.8, 99.7, 105.8, 106.8, 108.8, 110.7, 111.8, 113.8, 115.8, 120.8, 124.2, 124.9, 125.3, 126.3, 129.3, 130.4Lessons 30.5, 31.4, 32.4, 33.2, 33.4, 34.2, 34.6, 35.3, 35.7, 36.3, 37.5, 37.8, 38.2, 38.8, 39.2, 39.8, 40.2, 41.2, 41.8, 42.7, 43.2, 44.4, 45.4, 46.2, 47.2, 48.2, 49.2, 50.2, 66IW, 71.4, 72.5, 73.5, 74.8, 75.6, 75IW, 76.3, 77.5, 78.8, 78IW, 79.8, 79IW, 80.6, 81.6, 82.5, 82.8, 82IW, 83.6, 83.9, 83IW, 84.6, 84.8, 84IW, 85.8, 85.9, 85IW, 86.10, 86IW, 87.6, 88.7, 88IW, 89.8,</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
			90.8, 90IW, 91.9, 91IW, 92.8, 92IW, 93.8, 93IW, 94.7, 94.9, 94IW, 95.6, 96.9, 97.9, 97IW, 98IW, 99IW, 104IW, 105.8, 105IW, 106.8, 106IW, 108IW, 110.7, 110IW, 111.8, 111IW, 112IW, 113.8, 113IW, 114IW, 115.8, 115IW, 120.8, 120IW, 124.2, 124.9, 124IW, 125.3, 126.3, 126IW, 129.3, 129.5, 130.3, 130.4
Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	D	<p>Students represent and interpret data by:</p> <ul style="list-style-type: none"> • drawing a scaled picture graph and bar graph to represent a data set with several categories • solve one and two step “how many more/less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent five pets • represent data for categorical and numerical values in data tables, on bar graphs, on line plots and in picture graphs • interpret the data and answer questions about findings. 	<p>Learning objective: Students interpret bar graphs, picture graphs and tables. Students complete tables given key information.</p> <p>CMC Level D Presentation Book 2. Lessons 124 to 130.</p> <p>124.2, 125.3, 126.2, 127.4, 128.3, 129.3, 130.4 Lessons 71.4, 72.5, 73.5, 74.8, 75.6, 75.9, 76.3, 77.5, 78.7, 78.8, 79.6, 79.8, 80.6, 81.6, 82.5, 82.8, 83.6, 83.9, 84.6, 84.8, 85.8, 85.9, 86.2, 86.10, 87.6, 88.7, 89.8, 90.8, 91.9, 92.8, 93.8, 94.7, 94.9, 95.6, 96.9, 97.8, 99.7, 105.8, 106.8, 108.8, 110.7, 111.8, 113.8, 115.8, 120.8, 124.2, 124.9, 125.3, 126.3, 129.3, 130.4</p>

8.4 Sequence of Content: Year 4 Programme of Study

Table 5: National curriculum in England for Year 4 Statutory requirements mapped to Connecting Math Concepts Levels.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Number – Number and Place Value			
Count in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number.	C	Students are required to: <ul style="list-style-type: none"> • skip count by 10s to 100 • skip count by 100s to 1000 • skip count by 5s to 50 • skip count by 2s to 20 • skip count by 9s to 90 • skip count by 4s to 40 • skip count by 25s to 100 • skip count from a given number • extend skip-counting patterns to new number ranges. 	Lesson objective: Count within 1000, skip count by fives, tens, and hundreds.
			CMC Level C Presentation Books 1 and 2. Lessons: 1-96. Lessons 1.6, 2.3, 3.4, 4.3, 5.6, 6.3, 7.6, 8.2, 8.3, 9.1, 9.7, 10.1, 10.8, 11.2, 11.4, 12.1, 12.5, 13.1, 13.6, 14.3, 15.7, 16.1, 16.4, 17.1, 17.7, 17IW, 18.1, 18.5, 18IW, 19.5, 19IW, 20.5, 20IW, 21.5, 21IW, 22.2, 22IW, 23.3, 23IW, 24.3, 24IW, 25.4, 25IW, 26.2, 26IW, 27.3, 27IW, 30.5, 30IW, 31IW, 32.5, 33.1, 33.6, 34.1, 34.3, 34.6, 35.1, 35.3, 35.6, 36.1, 36.3, 36.6, 37.1, 37.3, 37.6, 38.2, 38.4, 38.7, 38IW, 39.2, 39.4, 39.7, 39IW, 40.2, 40.4, 40.7, 40.8, 40IW, 41.1, 41.4, 41.8, 41IW, 42.3, 42.8, 43.3, 43.6, 43IW, 44IW, 45.1, 45IW, 46IW, 48IW, 49.1, 50.7, 51.7, 52.6, 53.1, 54.1, 54.3, 55.2, 55.5, 56.5, 57.3, 58.4, 59.3, 59.5, 59IW, 60.3, 60IW, 62IW, 65.1, 66.7, 67.7, 68.7, 69.7, 70.1, 75.1, 76.1, 77.1, 78.1, 79.1, 80.1, 81.1, 84.1, 87.4, 91.1, 91.3, 92.1, 92.3, 93.2, 94.2, 95.5, 96.4
Count backwards through zero to include negative numbers.	B	Students are required to: <ul style="list-style-type: none"> • count by ones from a number to a number • count forwards and backwards. No equivalent content found.	Learning objective: Count by ones.
			CMC Level B Presentation Books 1, 2 and 3. Lessons: 1 to 125. Sample Lessons: 1.2, 2.2, 3.2, 4.7, 5.3, 6.2, 7.1, 8.6, 9.1, 10.3, 11.4, 12.5, 13.2, 14.6, 15.2, 16.12, 17.1, 18.1, 19.3, 20.3, 21.4, 22.6, 23.6, 24.5, 25.5
Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). Order and compare numbers beyond 1000.	D	Students are required to: <ul style="list-style-type: none"> • identify the place value of numbers with two to four digits • read and write 4-digit numbers • read the underlined part of a 4-digit number first and then say the whole number. 	Learning objective: Read and write 4-digit numbers based on a deep understanding of place value.
			CMC Level D Presentation books 1 and 2. Lessons 1 to 62 (with independent work through 109). Lessons 1.2, 1.7, 1.8, 2.3, 2.4, 2.8, 3.5, 3.7, 4.5, 5.5, 6.5, 7.5, 8.3, 8IW, 9.6, 9IW, 10.4, 10IW, 11.3, 11.5, 11IW, 12.4, 13.5, 16IW, 17IW, 18IW, 23IW, 26IW, 27IW, 29IW, 31IW, 35.5, 37.4, 37IW, 38.6, 39.5, 40.7, 41.5, 42.8, 43IW, 44IW, 45IW, 46IW, 47IW, 50IW, 51IW, 54IW, 56IW, 58.9, 59.8, 60.8, 60IW, 61.2, 62.7, 63IW, 64IW, 65IW, 66.7, 66IW, 67.5, 67IW, 68IW, 69IW, 70IW, 71IW, 72IW, 73IW, 74IW, 75IW, 76IW, 77IW, 78IW, 80IW, 83IW, 84IW, 85IW, 86IW, 88IW, 90IW, 95IW, 96IW, 97IW, 100IW, 102IW, 105IW, 109IW
	E	Students are required to: <ul style="list-style-type: none"> • read, write and order 5-digit numerals by reviewing reading and writing four-digit numbers • reading and writing numbers that have five digits and six-digit numbers using base-ten numerals, number names, and expanded form 	Learning objective: Read and write ten- and hundred-thousand numbers.
			CMC Level E Presentation Book 1. Lessons 5 to 19. Lessons 5.7, 6.4, 7.7, 8.7, 10.7, 11.7, 12.6, 13.7, 14.4, 15.4, 16.8, 19.8

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Identify, represent and estimate numbers using different representations.	C	Students are required to: <ul style="list-style-type: none"> estimate to the nearest 10 estimate to the nearest 10s with column problems and solve estimate in word problems estimate measurements in inches given a length in centimetres estimate measurements in pictures using proportion given a measurement of one picture. 	Learning objective: Estimate quantities using proportional pictures and measurements.
			CMC Level C Presentation Book 2. Lessons 79 to 127.
			79.7, 80.5, 81.2 81.IW, 82.2, 82.IW,83.1, 85.1, 85.3, 86.1, 86.3, 87.1, 87.3, 88.3, 89.2, 90.2, 91.2, 92.2, 93.1, 94.1, 125.7, 126.8, 127.8.
Round any number to the nearest 10, 100 or 1000.	E	Students are required to: <ul style="list-style-type: none"> work with rounding and estimating to the nearest ten, hundred, thousand, and then to larger numbers apply this knowledge to decimals and explore the use of number names. 	Learning objective: Use estimation and rounding to check the reasonableness of answers to calculations.
			CMC Level D Presentation Book 1. Lessons 29-88.
			Lessons 29.2, 30.7, 31.8, 32.6, 33.6, 34IW, 35IW, 36IW, 37IW, 38IW, 39.3, 40.6, 40IW, 41.4, 42.4, 42IW, 43.3, 44.5, 44IW, 45.6, 46.5, 47.7, 48.5, 49.5, 50.4, 51.6, 52.6, 53.6, 54IW, 55IW, 56.7, 57.8, 57IW, 58IW, 59IW, 60IW, 61IW, 62IW, 64IW, 68IW, 73IW, 74IW, 84IW, 88IW
Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	D	Students are required to: <ul style="list-style-type: none"> identify decade numbers on either side of a given number (e.g., 78 is flanked by 70 and 80) round numbers to the nearest decade (0, 10, 20, and so on) round money amounts to the nearest dollar and solve estimation column problems estimate and determine exact amount in money column problems estimate to solve multiplication problems determine reasonableness of answers. 	Learning objective: Use rounding to estimate answers and check reasonableness of answers.
			CMC Level D Presentation Books 1 and 2. Lessons 22 to 122.
			Lessons 22.3, 23.4, 24.7, 25.5, 26.4, 31.8, 32.6, 33.6, 34.IW, 35.IW, 36.3, 37.5, 38.2, 39.2, 40.2, 41.4, 42.4, 43.3, 44.5, 45.6, 46.5, 47.7, 48.5, 49.5, 50.4, 51.5, 52.6, 53.6, 54.6, 55.4, 56.2, 57.3, 58.3, 59.3, 60.IW, 65.7, 66.5, 67.7, 97.3, 98.7, 99.5, 100.5, 101.3, 101.8, 102.4, 102.8, 103.2, 104.2, 105.2, 106.2, 107.2, 108.2, 109.3, 110.2, 111.2, 112.2, 113.6, 114.4, 115.5, 118.3, 119.6, 120.5, 121.6, 122.8 127.7, 128.5, 129.8, 130.8.
	C	Students are required to: <ul style="list-style-type: none"> estimate to the nearest 10 estimate to the nearest 10s with column problems and solve estimate in word problems estimate measurements in inches given a length in centimetres estimate measurements in pictures using proportion given a measurement of one picture. 	Learning objective: Estimate quantities using proportional pictures and measurements.
			CMC Level C Presentation Book 2. Lessons 79 to 127.
			79.7, 80.5, 81.2 81.IW, 82.2, 82.IW,83.1, 85.1, 85.3, 86.1, 86.3, 87.1, 87.3, 88.3, 89.2, 90.2, 91.2, 92.2, 93.1, 94.1, 125.7, 126.8, 127.8.
Read Roman numerals to 100 (I to C) and know that over time, the numeral		No equivalent content found.	

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
system changed to include the concept of zero and place value.			
Number – Addition and Subtraction			
Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	C	Students are required to: <ul style="list-style-type: none"> write numbers for number names read 4-digit numbers write place-value column addition problems for 4-digit numbers. 	Learning objective: Read and write numbers to thousands using base-ten numerals, number names, and expanded form. CMC Level C Presentation Book 2. Lessons: 88-117. Lessons 82.6, 88.1, 89.1, 90.1, 90.7, 91.1, 92.1, 116.6, 117.6
		Students are required to <ul style="list-style-type: none"> do, without a calculator, column addition and subtraction: <ul style="list-style-type: none"> with 2-digit numbers involving no carrying or renaming with 2-digit numbers involving carrying with 2-digit numbers involving renaming with 3-digit numbers involving both carrying and renaming with 2-digit and 3-digit numbers in vertical or horizontal form write and solve addition problems based on pictures mentally add 10 and 9 to 2-digit numbers. 	Learning objective: Apply knowledge of place value to regrouping (carrying and renaming) in addition and subtraction problems. CMC Level C Presentation Books 1 and 2. Lessons 3 to 90. Lessons 3.1, 3.3, 3.4, 4.1, 4.3, 4.4, 5.1, 5.4, 5.6, 5.7, 6.1, 6.3, 6.4, 6.7, 7.1, 7.6, 8.1, 8.2, 8.4, 9.1, 9.2, 9.7, 10.1, 10.2, 10.8, 11.1, 11.2, 11.4, 11.11, 12.1, 12.5, 12.10, 13.1, 13.6, 13.7, 14.1, 14.4, 15.1, 15.7, 16.1, 16.4, 16.9, 17.1, 17.2, 17.5, 17.7, 17.9, 17.10, 18.1, 18.4, 18.5, 18.8, 18.9, 18IW, 19.1, 19.4, 19.5, 19.8, 19IW, 20.1, 20.2, 20.5, 20.8, 20.9, 21.1, 21.3, 21.4, 21.5, 21.8, 22.1, 22.2, 22.4, 22.7, 22IW, 23.1, 23.3, 23.5, 23.8, 24.1, 24.3, 24.5, 24.8, 25.1, 25.5, 25.6, 25IW, 26.1, 26.2, 26.3, 26.5, 26.IW, 27.7, 27.IW, 28.7, 28.9, 28IW, 29.8, 30.5, 30IW, 31.4, 31.7, 31IW, 32.4, 32.5, 32.6, 32.10, 33.1, 33.2, 33.3, 33.10, 34.1, 34.3, 34.6, 35.1, 35.3, 36.1, 36.3, 36.9, 37.1, 37.3, 37.5, 38.1, 38.6, 39.1, 39.6, 39.IW, 40.1, 40.5, 40.7, 40.IW, 41.2, 41.4, 41.IW, 42.1, 42.IW, 43.1, 43.5, 44.1, 45.7, 46.1, 46.5, 47.1, 47.IW, 48.1, 49.2, 49.4, 49.IW, 50.2, 50.IW, 51.3, 51.IW, 52.IW, 53.IW, 54.5, 54.IW, 55.IW, 57.IW, 58.6, 58.IW, 59.5, 59.IW, 60.3, 60.IW, 61.5, 61.IW, 62.4, 62.IW, 63.4, 63.IW, 64.5, 65.3, 65.IW, 66.2, 67.2, 67.IW, 68.2, 68.IW, 69.2, 69.IW, 70.3, 70.4, 70.7, 84.2, 84.IW, 85.1, 85.2, 85.IW, 86.1, 86.4, 86.IW, 87.2, 87.IW, 88.2, 88.IW, 89.3, 89.IW, 90.8, 90.IW
Estimate and use inverse operations to check answers to a calculation.	C	Students are required to: <ul style="list-style-type: none"> use addition/subtraction fact number families to find the missing difference or missing sum read and write the four problems that derive from one number family (e.g., 4. 2 →6: 4+2=6, 2+4=6, 6-2=4, 6-4=2) find a missing minuend or addend using the inverse operation. (E.g., solve ___-3=9 as 9+3) check answers to multidigit addition and subtraction problems using the inverse operation. 	Learning objective: Use addition and subtraction within 100 to solve problems with unknowns in all positions. CMC Level C Presentation Book 1. Lessons 33 to 70. Lessons 1.3, 2.2, 4.6, 5.9, 6.8, 7.8, 8.6, 8.IW, 9.IW, 10.6, 10.IW, 11.9, 11.IW, 14.1, 15.IW, 16.IW, 17.2,18.IW, 20.IW, 30. 1,31. 1, 32.9, 34.IW, 35.IW, 46. 3, 47. 3, 61.4, 62.3, 63. 3, 64.4, 65.4, 68.TB1, 69.tb1, 70.tb2, 71IW (TB), 72IW (TB), 73IW (TB), 85IW (TB), 87IW (TB), 89IW (TB), 92IW,101IW (TB), 105IW (TB), 106.2, 107.2, 107.4, 108.5, 109.5, 110.6, 111.6, 112.5, 113.5, 113 IW (TB), 114.6, 114IW (TB), 115.7, 119IW (TB), 125IW (TB), 127IW (TB),128IW (TB)
Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	C	Students are required to: <ul style="list-style-type: none"> write numbers for number names read 4-digit numbers 	Learning objective: Read and write numbers to thousands using base-ten numerals, number names, and expanded form. CMC Level C Presentation Book 2. Lessons: 88-117. Lessons 82.6, 88.1, 89.1, 90.1, 90.7, 91.1, 92.1, 116.6, 117.6

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> write place-value column addition problems for 4-digit numbers. <p>Students are required to:</p> <ul style="list-style-type: none"> solve action word problems solve comparison word problems solve classification word problems work estimation word problems. 	<p>Learning objective: Represent and solve problems involving addition and subtraction. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart and comparing, with unknowns in all positions.</p> <p>CMC Level C Presentation Books 1 and 2. Lessons: 33-130.</p> <p>Lessons 33.5, 34.2, 35.2, 36.2, 37.2, 38.3, 39.3, 40.10, 41.7, 42.7, 43.9, 44.7, 45.8, 46.6, 46.9, 47.8, 48.8, 49.8, 49.9, 50.5, 50.8, 51.5, 51.8, 52.4, 52.7, 53.5, 53.7, 54.2, 54.8, 55.3, 55.6, 56.3, 56.6, 57.4, 57.7, 58.3, 58.7, 59.4, 59.7, 60.4, 60.7, 61.6, 61.8, 62.5, 62.8, 63.5, 63.7, 63.9, 64.2, 64.6, 64.8, 65.2, 65.7, 65.8, 66.8, 66.9, 67.8, 67.9, 68.8, 68.9, 69.6, 69.9, 70.7, 70.8</p>
	D	<p>Students are required to:</p> <ul style="list-style-type: none"> represent word problems with <i>each</i> and <i>every</i> using a number-family diagram; calculate to solve discriminate between problems solved by addition/subtraction and those solved by multiplication/division represent and solve two-step problems involving multiplication convert units of measurement divide to show different equal-sized groups for a total number of objects. 	<p>Learning objective: Represent and solve problems involving multiplication and division. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays and measurement quantities.</p> <p>CMC Level D Presentation Books 2. Lessons: 72 to 130.</p> <p>Lessons 72.4, 72.6, 73.6, 74.7, 75.7, 76.7, 77.4, 78.8, 79.8, 80.7, 81.7, 82.7, 83.7, 84.7, 85.7, 86.10, 87.8, 88.1W, 89.1W, 90.1W, 91.1W, 92.1W, 93.1W, 94.1W, 95.1W, 96.1W, 97.1W, 98.1W, 98.1W, 99.1W, 100.1W, 104.1W, 105.1W, 106.7, 106.1W, 107.6, 108.6, 109.7, 109.1W, 110.6, 110.1W, 111.7, 111.1W, 112.4, 112.1W, 113.1W, 114.6, 114.1W, 115.3, 115.1W, 116.6, 117.5, 117.7, 117.1W, 118.5, 118.1W, 119.4, 119.1W, 120.7, 121.1W, 122.1W, 123.1W, 124.1W, 125.1W, 127.9, 127.1W, 128.9, 128.1W, 129.9, 129.1W, 130.9, 130.1W</p>
Number – Multiplication and Division			
Recall multiplication and division facts for multiplication tables up to 12×12 .	E	<p>Students are required to:</p> <ul style="list-style-type: none"> learn multiplication and division facts through the use of number families via written and verbal exercises. Students focus on all facts up to 10×10. 	<p>Learning objective: Use and apply properties of numbers and operations to find unknown values in numerical equations with multiplication and division.</p> <p>CMC Level E Presentation Books 1 and 2. Lessons 1-85.</p> <p>Lessons 1.2, 2.6, 3.6, 4.3, 5., 6.1, 7.1, 8., 9.1, 9.3, 9.6, 10.1, 10.2, 11.1, 11.2, 11.6, 12.1, 12.3, 12.7, 13.1, 13.5, 14.3, 15.3, 16.4, 17.1, 17.5, 18.5, 19.4, 20.1, 20.2, 20.5, 21.1, 21.5, 22.1, 22.4, 23.1, 23.4, 24.1, 24.4, 25.1, 25.3, 26.1, 26.4, 26.6, 27.1, 27.3, 28.1, 28.3, 29.1, 29.4, 30.1, 30.3, 31.1, 31.4, 32.1, 32.4, 33.1, 33.5, 34.1, 34.5, 35.1, 35.5, 36.1, 36.4, 37.1, 37.4, 38.1, 38.4, 39.1, 39.5, 40.1, 40.4, 41.1, 41.4, 42.1, 42.5, 43.1, 43.4, 44.1, 44.3, 45.1, 45.4, 46.1, 46.3, 47.1, 47.3, 48.1, 48.4, 49.1, 49.4, 50.1, 50.3, 51.1, 51.3, 52.1, 52.4, 53.1, 53.3, 54.1, 54.3, 55.1, 55.4, 56.1, 56.3, 57.1, 57.3, 58.1, 58.3, 59.1, 59.3, 60.1, 60.3, 61.1, 61.4, 62.1, 62.4, 63.1, 63.4, 64.1, 64.4, 65.1, 65.3, 66.1, 66.3, 67.1, 67.3, 68.1, 68.4, 69.1, 69.3, 70.1, 70.4, 71.1, 71.4, 72.1, 72.4, 73.1, 73.3, 74.1, 74.3, 75.2, 75.4, 76.1, 76.4, 77.1, 77.4, 78.1, 78.4, 79.1, 79.4, 80.1, 80.4, 81.1, 81.3, 82.1, 82.4, 83.1, 83.3, 84.1, 84.3, 85.1, 85.3</p>
Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1;	D	Students are required to:	<p>Learning objective: Multiply and divide one and 2-digit numbers with regrouping; use commutative, associative and distributive properties.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 64 to 129.</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
<p>dividing by 1; multiplying together three numbers.</p> <p>Recognise and use factor pairs and commutativity in mental calculations.</p> <p>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.</p> <p>Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.</p>		<ul style="list-style-type: none"> ● recall and practice multiplication and division facts using: <ul style="list-style-type: none"> - arrays - count bys ● multiply three numbers e.g. $5 \times 3 \times 2$ using parenthesis and applying commutative, associative and distributive properties (begins L106) ● solve word problems using multiplication and division by: <ul style="list-style-type: none"> - drawing on their knowledge of number families - exploring the word 'times' within problems - assessing reasonableness of answers by using mental computation and estimation strategies including rounding - completing multiplication and division column problems with regrouping - applying properties of operations as strategies to multiply and divide and using parenthesis and applying commutative, associative and distributive properties. 	<p>Lessons 64.2, 65.3, 65.4, 66.2, 66.3, 67.2, 67.3, 68.2, 68.4, 68.8, 69.2, 69.8, 70.2, 70.3, 71.2, 71.3, 71W, 72.4, 72.6, 72W, 73.6, 73W, 74.5, 74.7, 74W, 75.4, 75.7, 76.2, 76.7, 76W, 77.2, 77W, 78.2, 78.8, 78W, 79.7, 79.8, 79W, 80W, 81W, 82W, 83W, 84W, 85W, 86W, 87W, 88W, 89.3, 89W, 90.3, 90W, 91.7, 91W, 92.5, 92.6, 92W, 93.6, 93.7, 93W, 94.6, 94W, 95.7, 95.9, 95W, 96.2, 96.6, 96.7, 96W, 97.2, 97.3, 97.6, 97W, 98.2, 98.3, 98.4, 98.6, 98.7, 98W, 99.2, 99.5, 99.6, 99.7, 99W, 100.2, 100.5, 100.6, 100.7, 100W, 101.2, 101.8, 101W, 102.8, 102W, 103.8, 103W, 104.7, 104W, 105.7, 105W, 106.3, 106.7, 106W, 107.3, 107.6, 107W, 108.6, 108W, 109W, 110W, 111W, 112W, 113W, 114.2, 114W, 115.2, 115W, 116.4, 116W, 117.2, 117.3, 117W, 118.2, 118.3, 118W, 119.3, 119.6, 119W, 120.2, 120.5, 120W, 121.2, 121W, 122W, 123W, 124W, 125W, 126W, 127W, 128W, 129W</p>
	E	<p>Students are required to:</p> <ul style="list-style-type: none"> ● use multiplication families and relate to division ● learn multiplication facts ● explore the relationship between numbers that are multiples and the number of zeros ● solve multiplication family word problems using three types of problems: <ul style="list-style-type: none"> - times problems - each-every problems - measurement fact problems ● work with column multiplication to: <ul style="list-style-type: none"> - review multiplying 2 digit numbers by 1-digit numbers - multiply by a 10s number and become familiar with the use of 'zero.' - multiply 2 digit by 2 digit numbers - multiply 2 digit by 3 digit numbers 	<p>Learning objective: Patterns for multiples.</p> <p>CMC Level E Presentation Book 2. Lessons 101-119.</p> <p>Lessons 101.2, 102.2, 103.2, 104.2, 105.1, 111.6, 112.7, 113.2, 114.2, 115.7, 118.2, 119.1</p> <p>Learning objective: Solve a variety of problems involving addition, subtraction, multiplication and division.</p> <p>CMC Level E Presentation Book 1 and 2. Lessons 3 to 81.</p> <p>Lessons 3W, 4W, 6.5, 6.7, 7.7, 7.8, 8.9, 9.8, 10.6, 11W, 12W, 13W, 14W, 15W, 16W, 17W, 18W, 19W, 20.4, 20.6, 21.3, 21.7, 21W, 22.3, 22.5, 22.7, 23.2, 23.3, 23W, 24.2, 24.7, 25.2, 25.7, 25.9, 26.3, 26.5, 26.9, 27.4, 27.6, 27W, 28.5, 28.7, 28W, 29.6, 29.8, 29W, 30.5, 30.7, 30W, 31.3, 31.6, 31.9, 32.7, 32W, 33.8, 33W, 34.8, 35W, 36W, 37.6, 37.9, 37W, 38.6, 38W, 39.8, 39W, 40.6, 40.7, 40W, 41.2, 42.3, 42.8, 42W, 43.8, 43W, 44.7, 45.2, 45.7, 45W, 46.6, 46.7, 47.6, 47.7, 47W, 48.2, 48.7, 48W, 49.2, 49.8, 49W, 50.2, 50.9, 50W, 51.2, 51.6, 51W, 52.2, 52.8, 52W, 53.6, 53.9, 54.7, 54W, 55.2, 55W, 56.2, 56W, 57.2, 57.6, 58.2, 58.8, 58W, 59.5, 59.7, 60.5, 60.7, 61.6, 61.8, 61W, 62.6, 62.8, 62W, 63.7, 63.8, 63W, 64.6, 64.7, 64W, 65.7, 65.8, 65W, 66.7, 66W, 67.8, 67W, 68.6, 68W, 69.5, 69.7, 70.2, 70W, 71.2, 71.6, 71.8, 72.2, 72.8, 72W, 73.8, 74.8, 74W, 75.7, 76.8, 76W, 77.5, 77W, 78W, 79W, 81W</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		- relating multiples to establishing remainders as 'leftovers'.	
Number – Fractions			
Recognise and show, using diagrams, families of common equivalent fractions.	D	<p>Student are required to:</p> <ul style="list-style-type: none"> identify fractions equal to one compare fractions to one create equivalent fractions from pictures. 	<p>Learning objective: Develop understanding of fractions as numbers. Explain equivalence of fractions in special cases and compare fractions by reasoning about their size.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons: 34-120.</p> <p>Lessons 34.3, 35.10, 36.2, 37.2, 38.3, 39.4, 40.4, 41.8, 43.8, 45IW, 60.IW, , 118.4, 119.2 120.3</p>
Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	E	<p>Students are required to:</p> <ul style="list-style-type: none"> apply place value and partitioning to complete column subtraction with regrouping work dollars and cents problems involving regrouping across more than three digits identify place value to tenths and hundredths by: reviewing decimal operations by working addition and subtraction problems involving dollar and cents amounts reading and writing decimals for tenths and hundredths adding and subtracting decimal values. 	<p>Learning objective: Apply place value to partition, rearrange and regroup numbers to tenths and hundredths in decimal form.</p> <p>CMC Level E Presentation Books 1 and 2. Lessons 27-129.</p> <p>Lessons 27.2, 28.4, 31.5, 32.6, 33.2, 33.6, 34.2, 34.6, 35.3, 35.6, 35.9, 36.5, 36.7, 36.9, 37.2, 37.5, 38.5, 39.6, 39IW, 40.8, 41.8, 41IW, 42.9, 42IW, 43.9, 43IW, 44.8, 44IW, 45.3, 46.2, 46IW, 47.2, 47IW, 48.3, 49.7, 49IW, 50IW, 51IW, 52IW, 53IW, 54IW, 55IW, 56IW, 57IW, 58IW, 59IW, 60.9, 61.9, 62.10, 62IW, 63IW, 66IW, 67IW, 68IW, 70IW, 74IW, 76.2, 77.2, 77IW, 78.3, 78.7, 78IW, 79.3, 79.9, 80.3, 80.7, 81.5, 81IW, 82.2, 83.6, 83IW, 84.9, 85.9, 85IW, 86.2, 86.4, 87.2, 87.4, 88.7, 88IW, 89.5, 89IW, 90.5, 90IW, 91.7, 91IW, 92.4, 92IW, 93.4, 93.7, 94.3, 94.5, 95.4, 95IW, 96.6, 96IW, 97.4, 97IW, 98.8, 98IW, 99.4, 99IW, 100.4, 100IW, 101.3, 101.4, 101IW, 102.6, 102.8, 103.6, 103.8, 103IW, 104.3, 104.7, 104IW, 105.3, 105IW, 106.7, 106IW, 107.3, 107IW, 108.3, 108IW, 109.6, 109IW, 110.2, 110.6, 110IW, 111.1, 111.4, 112.1, 112IW, 113.1, 113IW, 114IW, 115IW, 116IW, 119IW, 120IW, 121IW, 123.3, 123IW, 124.5, 125.1, 125IW, 126.2, 127.5, 128IW, 129IW</p>
<p>Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.</p> <p>Add and subtract fractions with the same denominator recognise and write decimal equivalents of any number of tenths or hundredths.</p>	F	<p>In Level F, students engage in many exercises requiring them to add, subtract, multiply and divide fractions, including mixed numbers</p> <p>Students are required to:</p> <ul style="list-style-type: none"> add or subtract fractions with like denominators multiply fractions. focus on fractional comparisons. add, subtract, multiply and divide fractions, including mixed numbers. 	<p>Learning objective: Order and write fractions involving subtraction, addition, multiplication and division of mixed numbers with related denominator.</p> <p>CMC Level F Presentation Books 1 and 2. Lessons 71 to 119.</p> <p>Lessons 71.1, 72.1, 73.1, 74.1, 75.1, 76.IW, 77.IW, 78.IW, 79.1, 80.2, 81.IW, 84.IW, 113.5, 114.1, 115.1, 116.1, 117.1, 118.5, 119.5</p>
Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.	E	<p>Students then extend their knowledge of working equivalence (after learning to multiply fractions) by:</p> <ul style="list-style-type: none"> learning about multiplying by fractions of one analysing fraction multiplication equations to determine whether the starting value and the answer are equal 	<p>Learning objective: Understand decimal notation for fractions and compare decimal fractions.</p> <p>CMC Level E Presentation Book 1. Lessons 43 to 70</p> <p>Lessons 43.9, 44.8, 45.3, 46.2, 46.9, 47.2, 47.10, 48.3, 49.7, 50.9, 51.10, 52.9, 53.9, 54.9, 55.9, 56.8, 57.8, 58.8, 59.8, 60.9, 61.9, 62.10, 63.10, 66.9, 68.9, 70.8</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> working fraction multiplication problems that have two missing values and then larger numbers drawing on their knowledge of equivalence to compare fractions using $<$, $>$, $=$. Fractions have both like and unlike denominators. Justify conclusion, e.g. by visual model comparing fractions with like numerators comparing fractions by drawing on division. 	
Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	F	<p>Students are required to:</p> <ul style="list-style-type: none"> explore decimal operations by multiplying and dividing by base 10 explore exponents using base 10. 	<p>Learning objective: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10. Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.</p> <p>CMC Level F Presentation Book 1. Lessons 63 to 117.</p> <p>Lessons 63.6, 63.7, 64.3, 65.3, 66.4, 67.6, 68.7, 69.4, 69IW, 70.3, 70.9, 71.5, 72.5, 72IW, 76.1, 81.2, 82.2, 83.3, 84.3, 85.3, 86.2, 87.9, 88.7, 89.7, 93.7, 95.7, 96.7, 97.8, 98.7, 101.2, 101IW, 102.2, 103.7, 104.7, 105.6, 106.3, 106.6, 107.4, 108.4, 108.7, 109.4, 109IW, 110.4, 110IW, 111.7, 111IW, 112.5, 112IW, 113, 113IW, 115IW, 117W</p>
Round decimals with one decimal place to the nearest whole number.	D	<p>Students are required to:</p> <ul style="list-style-type: none"> review decimal operations by working addition and subtraction problems involving dollar and cents amounts work dollars and cents problems involving regrouping across more than three digits work with rounding and estimating money. 	<p>Learning objective: Use estimation and rounding to check the reasonableness of answers to calculations.</p> <p>CMC Level D Presentation Book 1. Lessons 29-88.</p> <p>Lessons 29.2, 30.7, 31.8, 32.6, 33.6, 34IW, 35IW, 36IW, 37IW, 38IW, 39.3, 40.6, 40IW, 41.4, 42.4, 42IW, 43.3, 44.5, 44IW, 45.6, 46.5, 47.7, 48.5, 49.5, 50.4, 51.6, 52.6, 53.6, 54IW, 55IW, 56.7, 57.8, 57IW, 58IW, 59IW, 60IW, 61IW, 62IW, 64IW, 68IW, 73IW, 74IW, 84IW, 88IW</p>
Compare numbers with the same number of decimal places up to two decimal places.	E	<p>Students are required to:</p> <ul style="list-style-type: none"> work with rounding and estimating to the nearest ten, hundred, thousand, and then to larger numbers apply this knowledge to decimals and explore the use of number names. 	<p>Learning objective: Check reasonableness using estimation strategies.</p> <p>CMC Level E Presentation Book 1. Lesson 130.</p> <p>Lesson 130.7</p>
Solve simple measure and money problems involving fractions and decimals to two decimal places.	E	<p>Students are required to:</p> <ul style="list-style-type: none"> apply place value and partitioning to complete column subtraction with regrouping. work dollars and cents problems involving regrouping across more than three digits identify place value to tenths and hundredths by: 	<p>Learning objective: Apply place value to partition, rearrange and regroup numbers to tenths and hundredths in decimal form.</p> <p>CMC Level E Presentation Books 1 and 2. Lessons 27-129.</p> <p>Lessons 27.2, 28.4, 31.5, 32.6, 33.2, 33.6, 34.2, 34.6, 35.3, 35.6, 35.9, 36.5, 36.7, 36.9, 37.2, 37.5, 38.5, 39.6, 39IW, 40.8, 41.8, 41IW, 42.9, 42IW, 43.9, 43IW, 44.8, 44IW, 45.3, 46.2, 46IW, 47.2, 47IW, 48.3, 49.7, 49IW, 50IW, 51IW, 52IW, 53IW, 54IW, 55IW, 56IW, 57IW, 58IW, 59IW, 60.9, 61.9, 62.10, 62IW, 63IW, 66IW, 67IW, 68IW, 70IW, 74IW, 76.2, 77.2, 77IW, 78.3, 78.7, 78IW, 79.3, 79.9, 80.3, 80.7, 81.5, 81IW, 82.2, 83.6, 83IW, 84.9, 85.9, 85IW, 86.2, 86.4, 87.2, 87.4, 88.7, 88IW, 89.5,</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> - reviewing decimal operations by working addition and subtraction problems involving dollar and cents amounts - reading and writing decimals for tenths and hundredths - adding and subtracting decimal values. 	89IW, 90.5, 90IW, 91.7, 91IW, 92.4, 92IW, 93.4, 93.7, 94.3, 94.5, 95.4, 95IW, 96.6, 96IW, 97.4, 97IW, 98.8, 98IW, 99.4, 99IW, 100.4, 100IW, 101.3, 101.4, 101IW, 102.6, 102.8, 103.6, 103.8, 103IW, 104.3, 104.7, 104IW, 105.3, 105IW, 106.7, 106IW, 107.3, 107IW, 108.3, 108IW, 109.6, 109IW, 110.2, 110.6, 110IW, 111.1, 111.4, 112.1, 112IW, 113.1, 113IW, 114IW, 115IW, 116IW, 119IW, 120IW, 121IW, 123.3, 123IW, 124.5, 125.1, 125IW, 126.2, 127.5, 128IW, 129IW
Number – Measurement			
Pupils should be taught to: Convert between different units of measure [for example, kilometre to metre; hour to minute].	D	<p>Students are required to:</p> <ul style="list-style-type: none"> • represent word problems with <i>each</i> and <i>every</i> using a number-family diagram; calculate to solve • discriminate between problems solved by addition/subtraction and those solved by multiplication/division • represent and solve two-step problems involving multiplication • convert units of measurement • divide to show different equal-sized groups for a total number of objects. 	<p>Learning objective: Represent and solve problems involving multiplication and division. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays and measurement quantities.</p> <p>CMC Level D Presentation Books 2. Lessons: 72 to 130.</p> <p>Lessons 72.4, 72.6, 73.6, 74.7, 75.7, 76.7, 77.4, 78.8, 79.8, 80.7, 81.7, 82.7, 83.7, 84.7, 85.7, 86.10, 87.8, 88.IW, 89.IW, 90.IW, 91.IW, 92.IW, 93.IW, 94.IW, 95.IW, 96.IW, 97.IW, 98.IW, 98IW, 99.IW, 100.IW, 104.IW, 105.IW, 106.7, 106.IW, 107.6, 108.6, 109.7, 109.IW, 110.6, 110.IW, 111.7, 111.IW, 112.4, 112.IW, 113.IW, 114.6, 114.IW, 115.3, 115.IW, 116.6, 117.5, 117.7, 117.IW, 118.5, 118.IW, 119.4, 119.IW, 120.7, 121.IW, 122.IW, 123. IW, 124. IW, 125. IW, 127.9, 127.IW, 128.9, 128.IW,129.9, 129.IW, 130.9, 130.IW</p>
	F	<p>Students are required to:</p> <ul style="list-style-type: none"> • connect decimal representations to the metric system when solving problems involving length and area • connect decimal representations to the metric system to calculate volume of rectangular prisms and complex figures • convert units of measurement between kilometres, metres and centimetres. 	<p>Learning objective: Convert days into hours and minutes.</p> <p>CMC Level F Presentation Book 2 Lessons 90-109.</p> <p>Lessons 90.5, 91.5, 92.5, 93.6, 94.6, 95.5, 96.4, 96IW, 97.5, 98.5, 99.5, 100.4, 101.IW, 102.IW, 103.5, 103.7, 104.5, 104.7, 104IW, 105.6, 105IW, 107.2, 108.5, 109.5, 109IW</p> <p>Learning objective: Convert units of measurement.</p> <p>CMC Level F Presentation Book 2 Lessons 106-116.</p> <p>Lessons 106.6, 107.6, 108.7, 108IW, 109.IW, 110.5, 110IW, 112IW, 113.IW, 116.IW</p>
	D	<p>Students are required to:</p> <ul style="list-style-type: none"> • review measurement facts • establish equivalent amounts of weight, capacity, time, money and length • compare $<$ $>$ $=$ units of time • compare metric units compared to imperial units • measure and estimate liquid volumes and masses of objects in g, kg and L • add, subtract, multiply and divide to solve one-step word problems involving mass and volume 	<p>Learning objective: Measure objects; calculate perimeter, volume, weight, capacity and cost; solve word problems using measurements of time, space, weight and money.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 1 to 130.</p> <p>Lessons 13.6, 14.3, 15.3, 15.5, 16.2, 16.6, 17.3, 17.6, 18.5, 19.6, 20.7, 21.7, 22.6, 23.5, 23IW, 24.5, 24IW, 25.5, 25IW, 26.5, 26IW, 27.5, 27IW, 28.6, 29.7, 30.6, 30IW, 31.7, 32.7, 32IW, 33.7, 33IW, 34.7, 34IW, 35.2, 35IW, 36.6, 36IW, 37.6, 37IW, 38.5, 38IW, 39.6, 39IW, 40.8, 40IW, 41.7, 41IW, 42.6, 43.7, 43IW, 44.3, 44IW, 45.2, 45IW, 46.4, 46.7, 46IW, 47.4, 47IW, 48.3, 48.6, 48IW, 49.4, 49.6, 49IW, 50.3, 50.6, 50IW, 51.4, 51.6, 52.7, 52IW, 103.8, 103IW, 104.7, 104IW, 105.7, 105IW, 106.7, 106IW, 107.6, 107IW, 108.6, 108IW, 109.7, 109IW, 110.6, 110IW, 111.7, 111IW, 112.4, 112IW, 113.2, 113IW, 114.6, 114IW, 115IW, 116.6, 116.8, 116IW, 117.5, 117.7, 117IW, 118.3, 118.5, 118.7, 118IW, 119.4, 119.6, 119IW, 120.4, 120.5,</p>
	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	D	<p>Students are required to:</p> <ul style="list-style-type: none"> • review measurement facts • establish equivalent amounts of weight, capacity, time, money and length • compare $<$ $>$ $=$ units of time • compare metric units compared to imperial units • measure and estimate liquid volumes and masses of objects in g, kg and L • add, subtract, multiply and divide to solve one-step word problems involving mass and volume

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> • understand concepts of area and relate to multiplication and addition • measure perimeter • measure volume. 	120.7, 120IW, 121.5, 121.6, 121IW, 122.3, 122.4, 122.8, 122IW, 123.3, 123.4, 123.5, 123IW, 124.3, 124.5, 124.6, 124IW, 125.4, 125.5, 125IW, 126IW, 127.6, 127.7, 127IW, 128.4, 128.5, 128.9, 128IW, 129.8, 129.9, 129IW, 130.8, 130.9, 130IW
Find the area of rectilinear shapes by counting squares estimate, compare and calculate different measures, including money in pounds and pence.	D	Students are required to: <ul style="list-style-type: none"> • review measurement facts • establish equivalent amounts of weight, capacity, time, money and length • compare $<$ $>$ $=$ units of time • compare metric units compared to imperial units • measure and estimate liquid volumes and masses of objects in g, kg and L • add, subtract, multiply and divide to solve one-step word problems involving mass and volume • understand concepts of area and relate to multiplication and addition • measure perimeter • measure volume. 	Learning objective: Measure objects; calculate perimeter, volume, weight, capacity and cost; solve word problems using measurements of time, space, weight and money. CMC Level D Presentation Books 1 and 2. Lessons 1 to 130. Lessons 13.6, 14.3, 15.3, 15.5, 16.2, 16.6, 17.3, 17.6, 18.5, 19.6, 20.7, 21.7, 22.6, 23.5, 23IW, 24.5, 24IW, 25.5, 25IW, 26.5, 26IW, 27.5, 27IW, 28.6, 29.7, 30.6, 30IW, 31.7, 32.7, 32IW, 33.7, 33IW, 34.7, 34IW, 35.2, 35IW, 36.6, 36IW, 37.6, 37IW, 38.5, 38IW, 39.6, 39IW, 40.8, 40IW, 41.7, 41IW, 42.6, 43.7, 43IW, 44.3, 44IW, 45.2, 45IW, 46.4, 46.7, 46IW, 47.4, 47IW, 48.3, 48.6, 48IW, 49.4, 49.6, 49IW, 50.3, 50.6, 50IW, 51.4, 51.6, 52.7, 52IW, 103.8, 103IW, 104.7, 104IW, 105.7, 105IW, 106.7, 106IW, 107.6, 107IW, 108.6, 108IW, 109.7, 109IW, 110.6, 110IW, 111.7, 111IW, 112.4, 112IW, 113.2, 113IW, 114.6, 114IW, 115IW, 116.6, 116.8, 116IW, 117.5, 117.7, 117IW, 118.3, 118.5, 118.7, 118IW, 119.4, 119.6, 119IW, 120.4, 120.5, 120.7, 120IW, 121.5, 121.6, 121IW, 122.3, 122.4, 122.8, 122IW, 123.3, 123.4, 123.5, 123IW, 124.3, 124.5, 124.6, 124IW, 125.4, 125.5, 125IW, 126IW, 127.6,
	E	Students are required to: <ul style="list-style-type: none"> • work perimeter problems involving different shapes by writing the answers as a number followed by the word units • review area by: <ul style="list-style-type: none"> - focusing on the number of squares inside a figure - creating connections to multiplying length by - width - establish the answer in square units - create links between area and perimeter and the formal units of measurement - work area problems using formal units • consolidate their knowledge by working problems on area and perimeter • work backwards to find the value of unknown sides when given the area • apply the area and perimeter formulas for rectangles in real world and mathematical problems. 	Learning objective: Measure and approximate the perimeter and area of shapes using a variety of metric units. CMC Level E Presentation Books 1 and 2. Lessons 3-129. Lessons 3.4, 4.6, 5.6, 6.8, 7.6, 7IW, 8.2, 8.5, 8IW, 9.5, 9IW, 10IW, 11.5, 12.4, 12IW, 13.6, 14.5, 15.7, 16.6, 17.8, 18.8, 19.6, 20.10, 21IW, 22IW, 23IW, 24IW, 25.8, 26IW, 29IW, 31IW, 33IW, 34IW, 37IW, 39IW, 41IW, 44IW, 48IW, 53IW, 55IW, 58IW, 62IW, 67.1, 67IW, 71IW, 75IW, 82IW, 85IW, 88IW, 89IW, 90.7, 91.3, 92.5, 93.3, 94.1, 95.6, 96.7, 97.3, 98.4, 99.8, 100.8, 101IW, 102IW, 104IW, 106IW, 108IW, 110IW, 112IW, 114IW, 117IW, 121IW, 124.3, 124IW, 125.3, 126.6, 127.3, 129IW

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
			127.7, 127IW, 128.4, 128.5, 128.9, 128IW, 129.8, 129.9, 129IW, 130.8, 130.9, 130IW
Geometry – Properties of Shape			
Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	B	<p>Students are required to:</p> <ul style="list-style-type: none"> compare and classify circles, triangles, rectangles, squares, hexagons, and pentagons identify the shapes of street signs (triangle, rectangle, circle) compare and classify cubes, pyramids, prisms, and cylinders identify component parts of a composite two-dimensional figure label faces of three-dimensional figures. 	<p>Learning objective: Make, compare and classify two- and three-dimensional shapes and describing their obvious features.</p> <p>CMC Level B Presentation Book 2 and 3. Lessons: 61 to 119.</p> <p>Lessons 61.2, 62.4, 63.3, 64.2, 65.4, 66.4, 67.5, 68.4, 69.2, 70.3, 71.2, 72.2, 73.2, 74.3, 75.2, 76.3, 76.5, 77.1, 77.6, 78.5, 79.6, 80IW, 81IW, 82IW, 83IW, 84IW, 85IW, 86.2, 86IW, 87.5, 87IW, 88.5, 88IW, 89IW, 90IW, 91IW, 92IW, 93IW, 94IW, 95.2, 96.3, 96IW, 97.10, 97IW, 98.9, 98IW, 99.8, 99IW, 100.3, 100IW, 101.7, 101IW, 102.8, 102IW, 103.7, 103IW, 104.7, 104IW, 105.3, 105IW, 106.7, 107.8, 107IW, 108.4, 108IW, 109.5, 109IW, 110.4, 110IW, 111.8, 111IW, 112.6, 112IW, 113.8, 113IW, 114.2, 114IW; 115.2; 116.3, 116IW, 117IW, 118IW, 119IW</p>
	C	<p>Students are required to:</p> <ul style="list-style-type: none"> classify 2-dimensional shapes: rectangle, triangle, circle, square, pentagon, hexagon, quadrilateral learn classify 3- dimensional shapes: cube, pyramid, sphere, rectangular prism, and partition shapes into their component parts shapes, include, cubes, rectangular prisms, right circular cones, right circular cylinders, pyramids, decompose complex shapes into familiar component shapes spheres. 	<p>Learning objective: Recognise shapes having specified attributes, such as a given number of angles or sides, or identical faces.</p> <p>CMC Level C Presentation Books 1 and 2. Lessons: 43-129.</p> <p>Lessons 43.2, 44.2, 45.3, 46.2, 47.2, 48.2, 49.9, 50.6, 50.9, 51.6, 51.9, 52.5, 53.6, 53.8, 54.6, 55.4, 56.2, 56.7, 57.2, 57.8, 58.2, 59.8, 60.8, 66.9, 68.9, 69.3, 70.8, 107.7, 110.3, 111.2, 112.2, 113.2, 114.2, 115.2, 115.7, 116.2, 117.2, 117.7, 118.2, 123.6, 124.6, 125.3, 126.2, 127.1, 127.6, 128.3, 128.6, 129.1, 129.3</p>
	D	<p>Students are required to:</p> <ul style="list-style-type: none"> classify two-dimensional objects (quadrilateral, rectangle, square, triangle, circle, pentagon and hexagon) classify three-dimensional objects (cube, sphere and pyramid). 	<p>Learning objective: Identify two-dimensional shapes and their attributes.</p> <p>CMC Level D Presentation Book 1. Lessons 27 to 34.</p> <p>Lessons 27.4, 28.5, 29.4, 30.8, 31.5, 32.8, 33.8, 34.8</p>
Identify acute and obtuse angles and compare and order angles up to two right angles by size.	E	<p>Students explore angles by:</p> <ul style="list-style-type: none"> recognising that angles are formed when two lines meet, are shown as part of a circle and expressed in degrees establishing 90, 180, 270 and 360 multiples working problems that show degrees of two nested angles related to multiples of 90 degrees (including supplementary and complimentary angles) 	<p>Learning objective: Estimate, measure and compare angles using degrees.</p> <p>CMC Level E Presentation Books 1 and 2. Lessons 61 to 130.</p> <p>Lessons 61.3, 62.2, 63.6, 63.9, 64.3, 64.9, 64IW, 65.6, 65IW, 66.6, 66IW, 67.6, 68.2, 69.6, 69IW, 70.5, 70IW, 71.5, 72.5, 72IW, 73.5, 74.5, 75.6, 75IW, 76IW, 77.6, 77IW, 78.2, 78IW, 79.2, 79IW, 80.8, 81IW, 82IW, 83IW, 84IW, 87IW, 90IW, 91IW, 93IW, 95IW, 97IW, 99IW, 103IW, 107.4, 108.4, 109.4, 109IW, 110.4, 111IW, 112.4, 112IW, 113.4, 114.3, 115.2, 115IW, 116.6, 117.4, 118.7, 119IW, 120.5, 121.5, 121IW, 122.6, 122IW, 123.4, 123IW, 124.2, 125.7, 125IW, 126.5, 126IW, 127.4, 127IW, 128.4, 129.2, 130.3</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> learning supplementary and vertically opposite angles (but does not teach the names of these angles) learning the 90-degree angles are called right angles and within triangles are right-angled triangles identifying acute angles and relate to right angles as well as triangles identifying obtuse angles and relate to right angles as well as triangles learning to use a 180-degree protractor to measure and draw angles learning related vocabulary – line segments, intersect. 	
Identify lines of symmetry in 2-D shapes presented in different orientations.		No equivalent content found.	
Complete a simple symmetric figure with respect to a specific line of symmetry.		No equivalent content found.	
Geometry – Position and Direction			
<p>Describe positions on a 2-D grid as coordinates in the first quadrant.</p> <p>Describe movements between positions as translations of a given unit to the left/right and up/down.</p> <p>Plot specified points and draw sides to complete a given polygon.</p>	E	<p>Students are required to:</p> <ul style="list-style-type: none"> use a grid reference system to describe locations and routes using landmarks and directional language compare aerial views of country and desert paintings and maps with grid references create a grid reference system for the classroom and using it to locate objects and describe routes from one object to another. 	<p>Learning objective: Coordinate system.</p> <p>CMC Level E Presentation Book 2. Lessons 82-103.</p> <p>Lessons 82.3, 83.2, 84.2, 85.2, 86.1, 87.1, 88.1, 89.6, 90.3, 91.8, 92.2, 93.IW, 94.IW, 95.IW, 96.IW, 97.IW, 98.IW, 99.IW, 103.IW</p>
	Oz-e-maths Top-ups Year 5	<p>Students are required to:</p> <ul style="list-style-type: none"> describe and identify translations, reflections and rotations of shapes. <p>Note: The lesson involves the concepts of transformation, rotation and reflection.</p>	<p>Learning objective: Identify different transformations (i.e. translations, reflections and rotations) a shape undergoes. Apply the concept of transformation to real-life problems.</p> <p>Oz-e-maths Top-ups Supplementary Materials for Connecting Maths Concepts Teaching Guide Years 4–6. Lesson: 23.</p> <p>Lessons 23.1, 23.2, 23.3, Mastery Test 23</p>
	F	Students are required to:	<p>Learning objective: Use grid reference system.</p> <p>CMC Level F Presentation Book 1. Lessons 21-67.</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> • explore the coordinate system by: <ul style="list-style-type: none"> - plotting points - completing ratio problems - exploring rules - identifying x and y points - plotting x and y points - write coordinates for a point (4 quadrants) (L43-44) - connecting a series of points to draw a straight line that goes through zero - completing simple function tables to describe points shown on a line (L37- 54) - matching equations with the corresponding line (based on the slope). 	Lessons 21.3, 22.3, 23.3, 24.5, 26.2, 27.2, 28.2, 29.2, 30.6, 31.7, 32.6, 33.6, 34.6, 64.2, 65.2, 66.2, 67.3
Statistics			
<p>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.</p> <p>Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</p>	C	<p>Students represent and interpret data by:</p> <ul style="list-style-type: none"> • drawing a scaled picture graph and bar graph to represent a data set with several categories • solve one and two step “how many more/less” problems using information presented in scaled bar graphs • analyse and create: <ul style="list-style-type: none"> • picture graphs (L61): pictures represent one unit and multiple units • bar graphs (L75): one and multiple unit divisions • line plots (L125): using mixed numbers • data tables (L30-50). 	<p style="background-color: #D3D3D3;">Learning objective: Line plots.</p> <p>CMC C Level Presentation Book 2. Lessons 114-127.</p> <p>Lessons 114.7, 115.8, 124.4, 125.4, 126.4, 127.4</p>
	D	<p>Students represent and interpret data by:</p> <ul style="list-style-type: none"> • drawing a scaled picture graph and bar graph to represent a data set with several categories • solve one and two step “how many more/less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent five pets • represent data for categorical and numerical values in data tables, on bar graphs, on line plots and in picture graphs 	<p style="background-color: #D3D3D3;">Learning objective: Line plots, bar graphs and find averages on line plots.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 61-130.</p> <p>61.3, 62.4, 63.6, 64.6, 65.5, 66.8, 68.6, 69.5, 70.4, 71.4, 72.5, 73.5, 74.8, 75.6, 75.9, 76.3, 77.5, 78.7, 78.8, 79.6, 79.8, 80.6, 81.6, 82.5, 82.8, 83.6, 83.9, 84.6, 84.8, 85.8, 85.9, 86.2, 86.10, 87.6, 88.7, 89.8, 90.8, 91.9, 92.8, 93.8, 94.7, 94.9, 95.6, 96.9, 97.8, 98.8, 99.7, 105.8, 106.8, 108.8, 110.7, 111.8, 113.8, 115.8, 120.8, 124.2, 124.9, 125.3, 126.3, 129.3, 130.4</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none">interpret the data and answer questions about findings.	

8.5 Sequence of Content: Year 5 Programme of Study

Table 6: National curriculum in England for Year 5 Statutory requirements mapped to Connecting Math Concepts Levels.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Number – Number and Place Value			
Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.	E	Students are required to: <ul style="list-style-type: none"> • read, write and order 5-digit numerals by • reviewing reading and writing four-digit numbers • reading and writing numbers that have five digits and six-digit numbers using base-ten numerals, number names, and expanded form. 	Learning objective: Read and write ten- and hundred-thousand numbers.
			CMC Level E Presentation Book 1. Lessons 5 to 19.
			Lessons 5.7, 6.4, 7.7, 8.7, 10.7, 11.7, 12.6, 13.7, 14.4, 15.4, 16.8, 19.8
Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.	E	Students are required to: <ul style="list-style-type: none"> • use multiplication families and relate to division • learn multiplication facts • explore the relationship between numbers that are multiplies and the number of zeros • solve multiplication family word problems using three types of problems: <ul style="list-style-type: none"> – times problems – each-every problems – measurement fact problems • work with column multiplication to: <ul style="list-style-type: none"> – review multiplying 2 digit numbers by 1-digit numbers – multiply by a 10s number and become familiar with the use of 'zero' – multiply 2 digit by 2 digit numbers – multiply 2 digit by 3 digit numbers – relating multiples to establishing remainders as 'leftovers'. 	Learning objective: Multiples of 10.
			CMC Level E Presentation Book 1. Lessons 40 to 47.
			Lessons 40.7, 41.2, 42.3, 43.8, 44.7, 45.2, 46.6, 47.6
Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.		No equivalent content found.	
Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.	E	Students are required to: <ul style="list-style-type: none"> • work with rounding and estimating to the nearest ten, hundred, thousand, and then to larger numbers 	Learning objective: Check reasonableness using estimation strategies.
			CMC Level E Presentation Book 1. Lesson 130.
			Lesson 130.7

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity	
		<ul style="list-style-type: none"> apply this knowledge to decimals and explore the use of number names. 		
Solve number problems and practical problems that involve all of the above.	E	Students are required to: <ul style="list-style-type: none"> read, write and order 5-digit numerals by reviewing reading and writing four-digit numbers reading and writing numbers that have five digits and six-digit numbers using base-ten numerals, number names, and expanded form. 	Learning objective: Read and write ten- and hundred-thousand numbers.	
			CMC Level E Presentation Book 1. Lessons 5 to 19.	
			Lessons 5.7, 6.4, 7.7, 8.7, 10.7, 11.7, 12.6, 13.7, 14.4, 15.4, 16.8, 19.8	
	E	Students are required to: <ul style="list-style-type: none"> use multiplication families and relate to division learn multiplication facts explore the relationship between numbers that are multiples and the number of zeros solve multiplication family word problems using three types of problems: <ul style="list-style-type: none"> – times problems – each-every problems – measurement fact problems work with column multiplication to: <ul style="list-style-type: none"> – review multiplying 2 digit numbers by 1-digit numbers – multiply by a 10s number and become familiar with the use of ‘zero’ – multiply 2 digit by 2 digit numbers – multiply 2 digit by 3 digit numbers – relating multiples to establishing remainders as ‘leftovers’. 	Learning objective: Multiples of 10.	
		CMC Level E Presentation Book 1. Lessons 40 to 47.		
		Lessons 40.7, 41.2, 42.3, 43.8, 44.7, 45.2, 46.6, 47.6		
Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.		No equivalent content found.		
Number – Addition and Subtraction				
Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).	C	Students are required to: <ul style="list-style-type: none"> add and subtract through 20 using fact-family relationships for related facts work 2- and 3-digit column subtraction problems with and without renaming work 2- and 3-digit column addition problems with and without carrying 	Learning objective: Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written method.	
				CMC Level C Presentation Books 1 and 2. Lessons: 1-129.
				Lessons 1.3, 2.2, 3.6, 4.4, 4.6, 5.1, 5.2, 5.4, 5.5, 5.9, 6.2, 6.8, 7.3, 7.8, 8.6, 8.8, 9.3, 9.5, 10.2, 10.4, 10.6, 11.3, 11.5, 11.7, 11.9, 11.10, 12.2, 12.6, 12.8, 12.10, 13.2, 13.4, 13.7, 13.9, 13.10, 14.1, 14.4, 14.8, 15.1, 15.2, 15.9, 16.2, 16.6, 16.9,

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> add and subtract 10 mentally from any 2-digit value check answers by adding 3 values in a different order use a ruler diagram to determine the missing addend in a number sentence check answers using the inverse operation show addition and subtraction on a number line add and subtract using place-value pictures. 	17.4, 18.3, 18.9, 19.2, 20.3, 20.9, 21.1, 21.4, 21.6, 21.7, 21.8, 22.1, 22.3, 22.5, 22.6, 22.7, 23.1, 23.4, 23.6, 23.7, 23.8, 24.1, 24.4, 24.6, 24.7, 24.8, 25.1, 25.2, 25.4, 25.6, 25.7, 25.8, 25.9, 26.1, 26.2, 26.3, 26.6, 26.7, 26.9, 27.1, 27.3, 27.5, 27.6, 27.7, 27.8, 28.1, 28.3, 28.5, 28.6, 28.8, 28.9, 29.1, 29.3, 29.6, 29.7, 29.8, 30.1, 30.3, 30.7, 30.9, 31.1, 31.3, 31.6, 31.7, 32.1, 32.3, 32.9, 32.10, 33.2, 33.6, 33.9, 33.10, 34.6, 34.8, 34.9, 35.6, 35.8, 36.2, 36.6, 36.8, 36.9, 37.2, 37.6, 37.8, 37.9, 38.3, 38.7, 38.9, 39.3, 39.7, 39.9, 39.10, 40.7, 40.9, 41.4, 41.8, 41.9, 41.11, 42.3, 42.6, 42.8, 43.3, 43.8, 43.10, 44.3, 44.8, 45.1, 45.2, 45.4, 45.10, 46.1, 46.3, 46.4, 46.8, 46.9, 47.1, 47.3, 47.5, 47.8, 48.1, 48.3, 48.6, 48.9, 49.1, 49.2, 49.3, 49.6, 49.9, 50.1, 50.4, 50.7, 50.9, 51.2, 51.3, 51.9, 52.2, 52.6, 52.8, 53.1, 53.3, 53.8, 54.5, 54.9, 55.1, 55.7, 56.1, 56.4, 56.7, 57.1, 57.5, 57.8, 58.1, 58.6, 58.8, 59.1, 59.5, 59.8, 60.1, 60.3, 60.6, 60.8, 61.1, 61.2, 61.4, 61.5, 61.8, 62.1, 62.3, 62.4, 62.6, 62.8, 63.1, 63.3, 63.4, 63.6, 63.9, 64.1, 64.4, 64.5, 64.7, 64.8, 65.3, 65.4, 65.8, 66.2, 66.1, 66.4, 66.9, 67.1, 67.2, 67.4, 67.9, 68.1, 68.2, 68.4, 68.9, 69.1, 69.2, 69.4, 69.9, 70.3, 70.6, 70.8, 71.8, 73.7, 73.8, 74.4, 74.7, 74.8, 75.9, 76.2, 76.3, 76.4, 76.5, 76.6, 76.8, 77.3, 77.4, 77.5, 77.7, 77.9, 78.2, 78.4, 78.6, 78.7, 78.9, 79.3, 79.5, 79.8, 80.2, 80.5, 80.7, 80.8, 81.5, 81.7, 81.8, 82.1, 82.2, 82.5, 82.8, 83.3, 83.7, 84.2, 84.3, 84.8, 85.2, 85.6, 85.8, 86.4, 86.9, 87.2, 87.9, 88.2, 88.5, 88.8, 89.7, 89.8, 90.5, 90.7, 90.9, 91.6, 92.4, 92.8, 93.3, 93.5, 93.7, 94.3, 94.5, 94.7, 95.3, 95.4, 95.8, 96.7, 96.8, 97.6, 97.8, 98.9, 99.4, 99.8, 100.4, 100.8, 101.7, 102.4, 102.7, 103.1, 103.5, 103.8, 104.1, 104.5, 104.7, 105.1, 105.6, 105.7, 106.3, 106.7, 107.3, 107.7, 108.1, 108.7, 109.1, 109.5, 109.7, 110.7, 111.1, 111.3, 111.6, 111.7, 112.1, 112.5, 112.7, 113.1, 113.5, 113.6, 114.1, 114.3, 114.6, 114.7, 115.1, 115.3, 115.7, 116.7, 117.7, 119.6, 120.6, 121.8, 122.8, 123.8, 124.7, 125.1, 125.7, 126.1, 126.9, 127.2, 127.8, 127.9, 128.1, 128.2, 128.5, 128.7, 129.2, 129.4
Add and subtract numbers mentally with increasingly large numbers.	C	Students are required to: <ul style="list-style-type: none"> say the facts for each addition/subtraction number family know all the sums of any two 1-digit numbers use knowledge of addition facts to identify a missing addend (subtract) use number family principles with 2-digit numbers. 	Learning objective: Add and subtract within 20. Fluently add and subtract within 20 using mental strategies. By end of Year 2, know from memory all sums of two 1-digit numbers. CMC Level C Presentation Book 1. Lessons 1 to 40. Lessons 1.3, 1.5, 1.10, 2.2, 2.7, 2.9, 3.6, 3.9, 3.11, 4.2, 4.9, 4.10, 5.2, 5.3, 5.4, 5.10, 6.1, 6.4, 6.6, 6.7, 6.8, 7.1, 7.2, 7.3, 7.5, 7.7, 7.8, 8.1, 8.3, 8.5, 8.6, 8.7, 8.8, 9.1, 9.3, 9.4, 9.5, 9.6, 9.8, 10.1, 10.2, 10.3, 10.4, 10.6, 10.7, 10.9, 11.2, 11.3, 11.5, 11.8, 11.9, 11.10, 12.1, 12.2, 12.4, 12.6, 12.8, 12.9, 12.10, 13.1, 13.2, 13.4, 13.5, 13.7, 13.9, 14.1, 14.4, 14.5, 14.8, 15.1, 15.2, 15.3, 15.5, 15.9, 16.2, 16.6, 16.7, 16.8, 16.10, 17.2, 17.4, 17.6, 17.8, 17.9, 17.10, 18.3, 18.4, 18.6, 18.7, 18.10, 19.2, 19.3, 19.4, 19.6, 19.7, 19.10, 20.3, 20.4, 20.6, 20.7, 20.10, 21.1, 21.6, 21.7, 21.10, 22.1, 22.5, 22.6, 22.8, 23.1, 23.6, 23.7, 23.8, 24.1, 24.6, 24.7, 24.8, 25.1, 25.2, 25.7, 25.8, 25.10, 26.1, 26.6, 26.7, 26.10, 27.1, 27.5, 27.6, 27.10, 28.1, 28.3, 28.6, 28.8, 28.10, 29.1, 29.3, 29.7, 29.10, 30.1, 30.10, 31.1, 31.3, 31.10, 32.1, 32.3, 32.9, 32.10, 33.2, 33.6, 33.9, 33.10, 34.6, 34.8, 34.10, 35.6, 35.8, 36.8, 36.10, 37.8, 38.7, 38.9, 39.9, 39.10, 40.7, 40.10
	D	Students are required to:	Learning objective: Add and subtract numbers, beginning with number family facts to column addition and subtraction and mental computation. CMC Level D Presentation Books 1 and 2. Lessons 1 to 126.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> use addition and subtraction Number Families to show the connection between addition and subtraction add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction work on number-family tables to reinforce connection. 	Lessons 1.4, 2.2, 2.5, 3.3, 3.6, 3.8, 4.1, 4.6, 5.1, 5.3, 5.7, 6.1, 6.7, 7.1, 7.4, 8.1, 8.5, 9.1, 10.1, 10.2, 11.1, 12.1, 12.5, 13.1, 14.1, 14.4, 14.6, 15.1, 16.1, 17.1, 17.5, 17IW, 18.1, 18IW, 19.1, 19.5, 20.1, 20.5, 21.1, 22.1, 23.1, 24.1, 24IW, 25.1, 26.1, 27.1, 28.1, 29.1, 30.1, 31.1, 32.1, 33.1, 34.1, 35.1, 44.8, 45.8, 48.7, 49.7, 50.5, 51.2, 52.5, 53.8, 69.7, 70.8, 71.6, 72.7, 73.3, 74.2, 75.2, 89.3, 90.3, 91.7, 92.7, 93.6, 94.6, 95., 96.7, 116.7, 117.4, 118.8, 119.7, 120.8, 121.8, 122.9, 123.9, 124.9, 125.9, 126.9
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.	D	<p>Students are required to:</p> <ul style="list-style-type: none"> focus heavily on multiplication and division number families show the connection between multiplication and division work on number-family tables to reinforce connection solve word problems using multiplication and division by: <ul style="list-style-type: none"> drawing on their knowledge of number families exploring the word ‘times’ within problems assessing reasonableness of answers by using mental computation and estimation strategies including rounding completing multiplication and division column problems with regrouping applying properties of operations as strategies to multiply and divide and using parenthesis and applying commutative, associative and distributive properties. 	<p>Learning objective: Multiplication/division facts.</p> <p>CMC Level D Presentation Book 1. Lessons 1-40.</p> <p>Lessons 1.3, 2.1, 2.6, 3.2, 3IW, 4.2, 5.2, 6.6, 6IW, 7.7, 8.7, 8IW, 9.4, 9.8, 9IW, 10.5, 10.8, 10IW, 11.6, 11.9, 11IW, 12.2, 12.7, 12IW, 13.3, 13IW, 14.7, 14IW, 15.4, 16.5, 17.4, 17IW, 18.7, 18IW, 19.8, 19IW, 20.9, 21.IW, 22.IW, 23., 24., 25., 26., 27.7, 28.3, 29.3, 30.4, 31.3, 31.6, 32.3, 32.5, 33.5, 34.4, 35.4, 36.1, 36.4, 36IW, 37.1, 37IW, 38.1, 385IW, 39.1, 40.1</p> <p>Learning objective: Multiplication/division.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 40-130.</p> <p>Lessons 40.3, 40.5, 40IW, 41.1, 41.3, 41IW, 42.1, 42.3, 42IW, 43.1, 43IW, 44.1, 44IW, 45.1, 45IW, 46.1, 46IW, 47.1, 47IW, 48.1, 48IW, 49.1, 49IW, 50.1, 50IW, 51.1, 51.3, 51IW, 52.1, 52.4, 52IW, 53.1, 53.4, 53IW, 54.1, 54.7, 54IW, 55.1, 55.8, 55IW, 56.1, 57.1, 57IW, 58.1, 58.7, 58IW, 59.1, 59.7, 59IW, 60.1, 61.1, 61IW, 62.1, 62.2, 62IW, 63.1, 63.2, 63.8, 63IW, 64.1, 64.8, 64IW, 65.1, 65.8, 65IW, 66.1, 66IW, 67.1, 67IW, 68.1, 68.7, 68IW, 69.1, 69.7, 69IW, 70.1, 70.9, 70IW, 71.1, 71IW, 72.1, 72IW, 73.1, 73.7, 73IW, 74.1, 74.6, 74.9, 74IW, 75.1, 75.8, 75IW, 76.1, 76.4, 76IW, 77.1, 77.3, 77.8, 77IW, 78.1, 78.3, 78IW, 79.1, 79.3, 79IW, 80.1, 80.3, 80IW, 81.1, 81.5, 82.1, 82.2, 83.1, 83.2, 83.8, 84.1, 84.3, 85.1, 85.2, 86.1, 86.4, 87.1, 87.3, 88.1, 88.4, 89.1, 89.6, 90.1, 90.9, 91.1, 92.1, 93.1, 94.1, 94.3, 95.1, 95.4, 95.9, 96.1, 97.1, 97IW, 98.1, 98IW, 99.1, 100.1, 101.1, 102.1, 103.1, 104.1, 105.1, 106.1, 107.1, 108.1, 108.8, 108IW, 109.1, 110.1, 110IW, 111.1, 111.8, 111IW, 112.1, 112.6, 112IW, 113.1, 113.4, 113IW, 114.1, 114IW, 115.1, 115.8, 115IW, 116.1, 116.3, 116IW, 117.1, 117.8, 117IW, 118.1, 118IW, 119.1, 119IW, 120.1, 120IW, 121.1, 121IW, 122.1, 122IW, 123.1, 123.8, 123IW, 124.1, 124IW, 125.1, 125IW, 126.1, 126.7, 126IW, 127.1, 127.8, 127IW, 128.1, 128.6, 128IW, 129.1, 129IW, 130.1, 130IW</p>
Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	E	<p>Students are required to:</p> <ul style="list-style-type: none"> apply place value and partitioning to complete column subtraction with regrouping work dollars and cents problems involving regrouping across more than three digits identify place value to tenths and hundredths by: 	<p>Learning objective: Apply place value to partition, rearrange and regroup numbers to tenths and hundredths in decimal form.</p> <p>CMC Level E Presentation Books 1 and 2. Lessons 27-129.</p> <p>Lessons 27.2, 28.4, 31.5, 32.6, 33.2, 33.6, 34.2, 34.6, 35.3, 35.6, 35.9, 36.5, 36.7, 36.9, 37.2, 37.5, 38.5, 39.6, 39IW, 40.8, 41.8, 41IW, 42.9, 42IW, 43.9, 43IW, 44.8, 44IW, 45.3, 46.2, 46IW, 47.2, 47IW, 48.3, 49.7, 49IW, 50IW, 51IW, 52IW, 53IW, 54IW, 55IW, 56IW, 57IW, 58IW, 59IW, 60.9, 61.9, 62.10, 62IW, 63IW, 66IW, 67IW, 68IW, 70IW, 74IW, 76.2, 77.2, 77IW, 78.3, 78.7, 78IW, 79.3, 79.9, 80.3, 80.7, 81.5, 81IW, 82.2, 83.6, 83IW, 84.9, 85.9, 85IW, 86.2,</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> reviewing decimal operations by working addition and subtraction problems involving dollar and cents amount reading and writing decimals for tenths and hundredths adding and subtracting decimal values. <p>Students are required to:</p> <ul style="list-style-type: none"> identify missing numbers within work on number families throughout the program explore inverse operations by: <ul style="list-style-type: none"> analysing addition-subtraction problems that have a missing number decoding missing numbers in number sentences represented by letters applying their knowledge of missing numbers to multiplication and division number sentences identify unknown quantities within function tables using the values X and Y. These are related to the Coordinate System and plotted. 	86.4, 87.2, 87.4, 88.7, 88IW, 89.5, 89IW, 90.5, 90IW, 91.7, 91IW, 92.4, 92IW, 93.4, 93.7, 94.3, 94.5, 95.4, 95IW, 96.6, 96IW, 97.4, 97IW, 98.8, 98IW, 99.4, 99IW, 100.4, 100IW, 101.3, 101.4, 101IW, 102.6, 102.8, 103.6, 103.8, 103IW, 104.3, 104.7, 104IW, 105.3, 105IW, 106.7, 106IW, 107.3, 107IW, 108.3, 108IW, 109.6, 109IW, 110.2, 110.6, 110IW, 111.1, 111.4, 112.1, 112IW, 113.1, 113IW, 114IW, 115IW, 116IW, 119IW, 120IW, 121IW, 123.3, 123IW, 124.5, 125.1, 125IW, 126.2, 127.5, 128IW, 129IW Learning objective: To solve inverse operations. CMC Level E Presentation Book 2. Lessons 107-116. Lessons 107.6, 108.6, 109.7, 110.5, 111.3, 112.6, 113IW, 114IW, 115IW, 116.5 Learning objective: Multiplication/division. CMC Level E Presentation Book 2. Lessons 111-114. Lessons 111.6; 112.3; 113.IW; 114.7; Learning objective: Integrations. CMC Level E Presentation Book 2. Lessons 115-127. Lessons 115.5, 116.5, 117.7, 118IW, 120IW, 123IW, 127IW
Number – Multiplication and Division			
Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.	F	Students are required to: <ul style="list-style-type: none"> explore multiples and factors including GCF explore factors and multiples using number sequences using simple divisibility tests. 	Learning objective: Prime numbers/multiples. CMC Level F Presentation Book 1. Lessons 41 to 77. Lessons 41.1, 42.1, 43.1, 44.1, 45.1, 46.1, 47.1, 48.2, 49.1, 50.1, 50IW, 51.2, 51IW, 52.2, 52IW, 53.5, 53IW, 54.IW, 56.IW, 58.IW, 59.IW, 61.IW, 74.IW, 77.IW Learning objective: GCF/Factor. CMC Level F Presentation Book 1. Lessons 2 to 80. Lessons 62.6, 63.4, 64.4, 65.5, 66.6, 67.IW, 68.IW, 70.IW, 75.1, 76.1, 79.8, 80.9 (then simplification required for all fraction/mixed number answers) Learning objective: Fraction simplification using prime factorisation. CMC Level F Presentation Book 1. Lessons 50-61. Lessons 50.4, 51.4, 52.4, 53.3, 54.3, 55.3, 56.2, 57.2, 58.IW, 59.IW, 61.IW
Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers.	E	Students are required to: <ul style="list-style-type: none"> identify whole numbers that are not prime are called composite numbers identify the difference between prime numbers and composite numbers. 	Learning objective: Composite numbers. CMC Level E presentation book 2. 124-125. Lessons 124.6, 125.6

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Establish whether a number up to 100 is prime and recall prime numbers up to 19.			
Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.	E	Students solve simple problems by: <ul style="list-style-type: none"> word problems of whole numbers column multiplication x 2 digits division with 1-digit divisor division with 1-digit divisor (mental maths) and 1-, 2-, and 3-digit answer division with 2-digit divisor and 1- and 2-digit answers. 	Learning objective: Solve problems involving the multiplication of large numbers by one- or 2-digit numbers using a variety of strategies. CMC Level E Presentation Book 1. Lessons 21 to 109. Lessons 21.7, 22.5, 23.2, 24.2, 25.7, 26.3, 27.6, 28.7, 29.8, 30.5, 31.6, 32.7, 33.8, 34.8, 39.IW, 40.IW, 42.IW, 45.IW, 47.IW, 48.2, 49.2, 50.2, 50.9, 51.2, 51.6, 52.2, 52.8, 53.6, 53.9, 54.7, 55.2, 55IW, 56.2, 56IW, 57.2, 58.2, 58IW, 59.5, 60.7, 60IW, 61.6, 61IW, 62.6, 62IW, 63.IW, 64.IW, 66.IW, 68.IW, 70.IW, 72.IW, 74.IW, 76.IW, 77.IW, 78.IW, 79.IW, 90.IW, 94.IW, 97.IW, 99.IW, 106.IW, 109.IW
Multiply and divide numbers mentally drawing upon known facts.			
Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.	F	Students are required to: <ul style="list-style-type: none"> solve division equations with 1-digit divisor solve division equations with 1-digit divisor (mental maths) and 1-, 2-, and 3-digit answer solve division with 2-digit divisor and 1- and 2-digit answers practice mental maths. 	Learning objective: Solve problems involving division by a 1-digit number, including a remainder. CMC Level F Presentation Books 1 and 2. Lessons 1 to 119. Lessons 1.7, 2.5, 3.5, 4.6, 5.7, 6.5, 6.8, 7.4, 8.4, 9.8, 10.8, 11.1, 11.5, 12.2, 12.6, 13.1, 13.4, 14.2, 14.5, 14IW, 15.IW, 16.4, 17.4, 18.3, 19.5, 20.7, 21.1, 21.4, 22.4, 23.IW, 28.IW, 30.IW, 31.4, 31IW, 32.5, 32IW, 33.4, 33IW, 34.4, 34IW, 35.4, 36.3, 37.3, 37IW, 38.4, 38IW, 39.5, 39IW, 40.3, 40IW, 41.6, 41IW, 42.2, 42IW, 43.2, 43.5, 43IW, 44.2, 44.5, 44IW, 45.2, 45.4, 46.3, 47.3, 48.7, 48IW, 49.6, 49IW, 50.6, 60IW, 51.3, 51IW, 52.6, 52IW, 53.7, 53IW, 54.1, 54.7, 54IW, 55.1, 55.6, 55IW, 56.1, 56.7, 56IW, 57.1, 57.6, 57IW, 58.1, 58IW, 59.1, 59IW, 60.1, 60IW, 61.1, 61.2, 61IW, 62.1, 62.5, 62IW, 63.1, 63.3, 63IW, 64.1, 64IW, 65.1, 65IW, 66.1, 66.3, 66.5, 66IW, 67.1, 67.2, 67.4, 67IW, 68.2, 68.4, 69.2, 69.5, 70.2, 70.6, 71.2, 71.4, 72.4, 73.IW, 75.IW, 77.IW, 79.IW, 80.IW, 82.IW, 83.3, 84.3, 84IW, 85.3, 85IW, 86.2, 86IW, 87.IW, 88.IW, 89.IW, 90.IW, 91.IW, 93.2, 93IW, 94.2, 95.2, 95IW, 96.3, 99.IW, 101.2, 101.4, 101IW, 102.2, 102.3, 102IW, 103.7, 103IW, 104.7, 104IW, 105.6, 105IW, 106.IW, 107.IW, 109.4, 110.4, 111.3, 112.3, 117.IW, 118.IW, 119.IW
Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.	F	Students are required to: <ul style="list-style-type: none"> explore decimal operations by multiplying and dividing by base 10 explore exponents using base 10. 	Learning objective: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10. Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. CMC Level F Presentation Book 1. Lessons 63 to 117. Lessons 63.6, 63.7, 64.3, 65.3, 66.4, 67.6, 68.7, 69.4, 69IW, 70.3, 70.9, 71.5, 72.5, 72IW, 76.1, 81.2, 82.2, 83.3, 84.3, 85.3, 86.2, 87.9, 88.7, 89.7, 93.7, 95.7, 96.7, 97.8, 98.7, 101.2, 101IW, 102.2, 103.7, 104.7, 105.6, 106.3, 106.6, 107.4, 108.4, 108.7, 109.4, 109IW, 110.4, 110IW, 111.7, 111IW, 112.5, 112IW, 113, 113IW, 115IW, 117W
Number – Fractions			
	E	Students then extend their knowledge of working equivalence (after learning to multiply fractions) by:	Learning objective: Equivalent fractions. CMC Level E Presentation Book 1 and 2. Lessons 68 to 128.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
<p>Compare and order fractions whose denominators are all multiples of the same number.</p> <p>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</p> <p>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$].</p>		<ul style="list-style-type: none"> • learning about multiplying by fractions of one • analysing fraction multiplication equations to determine whether the starting value and the answer are equal • working fraction multiplication problems that have two missing values and then larger numbers • drawing on their knowledge of equivalence to compare fractions using $<$, $>$, $=$. Fractions have both like and unlike denominators. Justify conclusion, e.g. by visual model • comparing fractions with like numerators • comparing fractions by drawing on division. <p>Students are required to:</p> <ul style="list-style-type: none"> • read and write mixed numbers for fractions on a number line • continue to focus on quarters, halves and thirds, as well as others • understanding and representing a fraction as a number on the number line. 	<p>Lessons 68.3, 69.2, 70.3, 71.3, 72.3, 73.6, 74.6, 74IW, 75.9, 76.2, 76.5, 76.8, 76IW, 77.2, 77.5, 77.9, 78.5, 78.7, 78.9, 79.3, 79.8, 79IW, 80.3, 80.9, 81.6, 81IW, 82.8, 82IW, 83.7, 83IW, 84.7, 85.5, 85IW, 86.4, 86.5, 87.5, 88.7, 88IW, 89.5, 90.5, 90IW, 91.7, 92.4, 92IW, 93.4, 93.7, 94.3, 94.5, 95.4, 96.6, 96IW, 97.4, 98.8, 98IW, 99.4, 99IW, 100IW, 101.3, 102.8, 102IW, 103.8, 104.3, 104IW, 105.3, 105IW, 106.7, 107.3, 107IW, 108.3, 108IW, 109.6, 109IW, 110.6, 111.4, 111IW, 113IW, 114IW, 119IW, 125IW, 128IW</p> <p>Learning objective: Understand decimal notation for fractions and compare decimal fractions.</p> <p>CMC Level E Presentation Book 1. Lessons 43 to 70</p> <p>Lessons 43.9, 44.8, 45.3, 46.2, 46.9, 47.2, 47.10, 48.3, 49.7, 50.9, 51.10, 52.9, 53.9, 54.9, 55.9, 56.8, 57.8, 58.8, 59.8, 60.9, 61.9, 62.10, 63.10, 66.9, 68.9, 70.8</p> <p>Learning objective: Count and represent fractions on number line.</p> <p>CMC Level E Presentation Book 1 and 2. Lessons 1 to 123.</p> <p>Lessons 1.3, 2.2, 2.4, 3.2, 4.4, 4.8, 5.2, 5.8, 5IW, 6.3, 6IW, 7.2, 7IW, 8.4, 8IW, 9.2, 9IW, 10.3, 11.3, 12.2, 13.2, 13.8, 14.2, 14.7, 14IW, 15.8, 16.3, 16IW, 17.9, 17IW, 18IW, 19IW, 20IW, 21.4, 21IW, 22.8, 22IW, 23.5, 23IW, 24.5, 24IW, 25.4, 25IW, 26.8, 26IW, 27.7, 27IW, 28.2, 28IW, 29.3, 29IW, 30.4, 30IW, 31.2, 31IW, 32.2, 32IW, 33.4, 33IW, 34.3, 34IW, 35.2, 35IW, 36.8, 36.10, 36IW, 37.7, 37IW, 38.8, 38IW, 39.2, 39IW, 40.2, 40IW, 41.7, 41IW, 42.2, 42.6, 42IW, 43.2, 43.3, 43IW, 44.3, 44.5, 44IW, 45.3, 45.5, 45IW, 46.5, 46.9, 46IW, 47.4, 47.9, 47IW, 48.6, 48IW, 49.3, 49IW, 50.4, 50.8, 50IW, 51.5, 51.9, 51IW, 52.3, 52.7, 52IW, 53.2, 53.7, 53IW, 54.2, 54.4, 54.8, 54IW, 55.3, 55.7, 55.9, 55IW, 56.6, 57.5, 57.7, 57IW, 58.4, 58.6, 58IW, 59.2, 59.4, 59IW, 60.2, 60.8, 60IW, 61.7, 61IW, 62.3, 62.7, 62IW, 63.2, 63.3, 63IW, 64.2, 64.5, 64IW, 65.2, 65.7, 65IW, 66.2, 66.7, 66IW, 67.2, 67.5, 67IW, 68.5, 68.8, 69.2, 69.7, 69IW, 70.8, 70IW, 71.8, 71IW, 72.6, 73.2, 73.4, 73IW, 74.2, 74.4, 74.8, 75.2, 75.3, 75.5, 75.7, 75IW, 76.3, 76.4, 76IW, 77.4, 77IW, 78.3, 78IW, 79IW, 80IW, 81IW, 82.7, 82IW, 83IW, 84.4, 85.4, 86.5, 86.8, 86IW, 87.8, 87IW, 88.2, 88IW, 89.2, 89IW, 90.2, 90IW, 91IW, 92IW, 93IW, 94IW, 95.2, 95.5, 95.9, 95IW, 96.2, 96.5, 96.9, 97.6, 98.2, 98.3, 98.6, 98IW, 99.2, 99.7, 99.9, 99IW, 100.2, 100.6, 100IW, 101.1, 101.6, 101.8, 101IW, 102.1, 102.4, 102.7, 102IW, 103.3, 103.4, 103.7, 103IW, 104.4, 104.8, 104IW, 105.2, 105.8, 105IW, 106.4, 106.6, 107.7, 107.8, 107IW, 108.7, 109.5, 109.8, 109IW, 110IW, 111.7, 111IW, 112.8, 112IW, 113., 113IW, 114., 114IW, 115IW, 116IW, 117IW, 118IW, 119IW, 120., 121.2, 121.3, 121.7, 121IW, 122.2, 122.3, 122.7, 122IW, 123.2, 123.3, 123.6</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		Students are required to: <ul style="list-style-type: none"> complete an equation to show equivalent fractions complete an equation to show a fraction and the equivalent mixed number. 	Learning objectives: Equivalence decimal/fraction/percent. CMC Level F Presentation Books 1. Lessons 23 to 104. Lessons 23.4, 24.4, 25.4, 26.7, 27.1W, 28.3, 28.1W, 29.4, 29.1W, 30.2, 30.1W, 31.2, 32.2, 32.1W, 33.3, 33.1W, 34.3, 34.1W, 35.3, 35.1W, 36.2, 36.1W, 37.1W, 39.1W, 42.1W, 43.1W, 44.1W, 45.1W, 46.1W, 47.1W, 48.1W, 49., 53.1W, 54.1W, 56.3, 56.1W, 57.7, 58.7, 58.1W, 59.3, 59.1W, 60.4, 60.1W, 61.1W, 62.1W, 63.1W, 64.1W, 65.1W, 67.1W, 69.1W, 70.1, 70.1W, 72.1W, 74.1W, 75.1W, 77.1W, 81.1W, 84.1W, 88.1W, 93.1W, 95.1W, 98.1W, 100.1W, 104.1W
Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	F	Students are required to: <ul style="list-style-type: none"> add or subtract fractions with like denominators multiply fractions focus on fractional comparisons add, subtract, multiply and divide fractions, including mixed numbers. 	Learning objective: Order and write fractions involving subtraction, addition, multiplication and division of mixed numbers with related denominator. CMC Level F Presentation Books 1 and 2. Lessons 71 to 119. Lessons 71.1, 72.1, 73.1, 74.1, 75.1, 76.1W, 77.1W, 78.1W, 79.1, 80.2, 81.1W, 84.1W, 113.5, 114.1, 115.1, 116.1, 117.1, 118.5, 119.5
Read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$]. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	E	Students are required to: <ul style="list-style-type: none"> apply place value and partitioning to complete column subtraction with regrouping work dollars and cents problems involving regrouping across more than three digits identify place value to tenths and hundredths by: <ul style="list-style-type: none"> reviewing decimal operations by working addition and subtraction problems involving dollar and cents amounts reading and writing decimals for tenths and hundredths adding and subtracting decimal values. 	Learning objective: Apply place value to partition, rearrange and regroup numbers to tenths and hundredths in decimal form. CMC Level E Presentation Books 1 and 2. Lessons 27-129. Lessons 27.2, 28.4, 31.5, 32.6, 33.2, 33.6, 34.2, 34.6, 35.3, 35.6, 35.9, 36.5, 36.7, 36.9, 37.2, 37.5, 38.5, 39.6, 39.1W, 40.8, 41.8, 41.1W, 42.9, 42.1W, 43.9, 43.1W, 44.8, 44.1W, 45.3, 46.2, 46.1W, 47.2, 47.1W, 48.3, 49.7, 49.1W, 50.1W, 51.1W, 52.1W, 53.1W, 54.1W, 55.1W, 56.1W, 57.1W, 58.1W, 59.1W, 60.9, 61.9, 62.10, 62.1W, 63.1W, 66.1W, 67.1W, 68.1W, 70.1W, 74.1W, 76.2, 77.2, 77.1W, 78.3, 78.7, 78.1W, 79.3, 79.9, 80.3, 80.7, 81.5, 81.1W, 82.2, 83.6, 83.1W, 84.9, 85.9, 85.1W, 86.2, 86.4, 87.2, 87.4, 88.7, 88.1W, 89.5, 89.1W, 90.5, 90.1W, 91.7, 91.1W, 92.4, 92.1W, 93.4, 93.7, 94.3, 94.5, 95.4, 95.1W, 96.6, 96.1W, 97.4, 97.1W, 98.8, 98.1W, 99.4, 99.1W, 100.4, 100.1W, 101.3, 101.4, 101.1W, 102.6, 102.8, 103.6, 103.8, 103.1W, 104.3, 104.7, 104.1W, 105.3, 105.1W, 106.7, 106.1W, 107.3, 107.1W, 108.3, 108.1W, 109.6, 109.1W, 110.2, 110.6, 110.1W, 111.1, 111.4, 112.1, 112.1W, 113.1, 113.1W, 114.1W, 115.1W, 116.1W, 119.1W, 120.1W, 121.1W, 123.3, 123.1W, 124.5, 125.1, 125.1W, 126.2, 127.5, 128.1W, 129.1W
Round decimals with two decimal places to the nearest whole number and to one decimal place.	F	Students are required to: <ul style="list-style-type: none"> round a decimal value to the nearest whole number, tenth, hundredth, or thousandth add or subtract decimal values explore decimal operations by multiplying and dividing by base 10 explore exponents using base 10. 	Learning objective: Multiply and divide decimals by powers of 10. CMC Level F Presentation Book 2. Lessons 81-105. Lessons 81.2, 82.2, 83.3, 84.3, 85.3, 86.2, 87.1W, 88.1W, 89.1W, 91.1W, 101.2, 101.2, 103.7, 104.7, 105.6, 106.1W, 108.1W, 109.1W, 111.1W, 112.1W, 113.1W, 115.1W
	E	Students are required to:	Learning objective: Apply place value to partition, rearrange and regroup numbers to tenths and hundredths in decimal form.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Read, write, order and compare numbers with up to three decimal places.		<ul style="list-style-type: none"> apply place value and partitioning to complete column subtraction with regrouping work dollars and cents problems involving regrouping across more than three digits identify place value to tenths and hundredths by: <ul style="list-style-type: none"> reviewing decimal operations by working addition and subtraction problems involving dollar and cents amounts reading and writing decimals for tenths and hundredths adding and subtracting decimal values. 	<p>CMC Level E Presentation Books 1 and 2. Lessons 27-129.</p> <p>Lessons 27.2, 28.4, 31.5, 32.6, 33.2, 33.6, 34.2, 34.6, 35.3, 35.6, 35.9, 36.5, 36.7, 36.9, 37.2, 37.5, 38.5, 39.6, 39IW, 40.8, 41.8, 41IW, 42.9, 42IW, 43.9, 43IW, 44.8, 44IW, 45.3, 46.2, 46IW, 47.2, 47IW, 48.3, 49.7, 49IW, 50IW, 51IW, 52IW, 53IW, 54IW, 55IW, 56IW, 57IW, 58IW, 59IW, 60.9, 61.9, 62.10, 62IW, 63IW, 66IW, 67IW, 68IW, 70IW, 74IW, 76.2, 77.2, 77IW, 78.3, 78.7, 78IW, 79.3, 79.9, 80.3, 80.7, 81.5, 81IW, 82.2, 83.6, 83IW, 84.9, 85.9, 85IW, 86.2, 86.4, 87.2, 87.4, 88.7, 88IW, 89.5, 89IW, 90.5, 90IW, 91.7, 91IW, 92.4, 92IW, 93.4, 93.7, 94.3, 94.5, 95.4, 95IW, 96.6, 96IW, 97.4, 97IW, 98.8, 98IW, 99.4, 99IW, 100.4, 100IW, 101.3, 101.4, 101IW, 102.6, 102.8, 103.6, 103.8, 103IW, 104.3, 104.7, 104IW, 105.3, 105IW, 106.7, 106IW, 107.3, 107IW, 108.3, 108IW, 109.6, 109IW, 110.2, 110.6, 110IW, 111.1, 111.4, 112.1, 112IW, 113.1, 113IW, 114IW, 115IW, 116IW, 119IW, 120IW, 121IW, 123.3, 123IW, 124.5, 125.1, 125IW, 126.2, 127.5, 128IW, 129IW</p>
Solve problems involving number up to three decimal places.	F	<p>Students are required to:</p> <ul style="list-style-type: none"> round a decimal value to the nearest whole number, tenth, hundredth, or thousandth add or subtract decimal values explore decimal operations by multiplying and dividing by base 10 explore exponents using base 10. 	<p>Learning objective: Multiply and divide decimals by powers of 10.</p> <p>CMC Level F Presentation Book 2. Lessons 81-105.</p> <p>Lessons 81.2, 82.2, 83.3, 84.3, 85.3, 86.2, 87.IW, 88.IW, 89.IW, 91.IW, 101.2, 101.2, 103.7, 104.7, 105.6, 106.IW, 108.IW, 109IW, 111.IW, 112.IW, 113.IW, 115.IW</p>
Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.	F	<p>Students are required to:</p> <ul style="list-style-type: none"> complete an equation to show equivalent fractions complete an equation to show a fraction and the equivalent mixed number complete a table to show a hundredths fraction and the equivalent decimal and percent values. 	<p>Learning objectives: Equivalence decimal/fraction/percent.</p> <p>CMC Level F Presentation Books 1. Lessons 23 to 104.</p> <p>Lessons 23.4, 24.4, 25.4, 26.7, 27.IW, 28.3, 28IW, 29.4, 29IW, 30.2, 30IW, 31.2, 32.2, 32IW, 33.3, 33IW, 34.3, 34IW, 35.3, 35IW, 36.2, 36IW, 37.IW, 39.IW, 42.IW, 43.IW, 44.IW, 45.IW, 46.IW, 47.IW, 48.IW, 49., 53.IW, 54.IW, 56.3, 56IW, 57.7, 58.7, 58IW, 59.3, 59IW, 60.4, 60IW, 61.IW, 62.IW, 63.IW, 64.IW, 65.IW, 67.IW, 69.IW, 70.1, 70IW, 72.IW, 74.IW, 75.IW, 77.IW, 81.IW, 84.IW, 88.IW, 93.IW, 95.IW, 98.IW, 100.IW, 104.IW,</p>
Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	F	<p>Students are required to:</p> <ul style="list-style-type: none"> analyse fractions using half, fourths, thirds and fifths identify fractions equal to 1 multiply fractions. 	<p>Learning objective: Factors and multiples of fraction denominators.</p> <p>CMC Level F Presentation Books 1 and 2. Lessons 1-119.</p> <p>Lessons 1.4, 1.7, 2.1, 3.IW, 4.IW, 5.IW, 10.IW, 12.IW, 66.2, 67.3, 68.1, 69.1, 70.1, 71.1, 72.1, 73.1, 74.1, 74IW, 75.2, 75IW, 76.IW, 79.1, 80.2, 81.IW, 84.IW, 85.IW, 87.2, 87IW, 88.2, 89.2, 89IW, 90.2, 91.2, 91IW, 92.6, 93.4, 94.4, 94IW, 95.IW, 96.IW, 98.IW, 99.IW, 101.IW, 105.IW, 107.IW, 114.1, 115.1, 116.1, 117.1, 118.5, 119.5</p>
Number – Measurement			
Convert between different units of metric measure (for example,	F	<p>Students are required to:</p>	<p>Learning objective: Convert days into hours and minutes.</p> <p>CMC Level F Presentation Book 2 Lessons 90-109.</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.		<ul style="list-style-type: none"> connect decimal representations to the metric system when solving problems involving length and area connect decimal representations to the metric system to calculate volume of rectangular prisms and complex figures convert units of measurement between kilometres, metres and centimetres. 	Lessons 90.5, 91.5, 92.5, 93.6, 94.6, 95.5, 96.4, 96IW, 97.5, 98.5, 99.5, 100.4, 101.IW, 102.IW, 103.5, 103.7, 104.5, 104.7, 104IW, 105.6, 105IW, 107.2, 108.5, 109.5, 109IW
Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes.	E	<p>Students are required to:</p> <ul style="list-style-type: none"> work perimeter problems involving different shapes by writing the answers as a number followed by the word units focus on the number of squares inside a figure creating connections to multiplying length by width and establish the answer in square units create links between area and perimeter and the formal units of measurement create links between area and perimeter and the formal units of measurement work area problems using formal units consolidate their knowledge by working problems on area and perimeter work backwards to find the value of unknown sides when given the area apply the area and perimeter formulas for rectangles in real world and mathematical problems. 	Learning objective: Convert units of measurement.
			CMC Level F Presentation Book 2 Lessons 106-116.
			Lessons 106.6, 107.6, 108.7, 108IW, 109.IW, 110.5, 110IW, 112IW, 113.IW, 116.IW
			Learning objective: Measure and approximate the perimeter and area of shapes using a variety of metric units.
			CMC Level E Presentation Books 1 and 2. Lessons 3-129.
			Lessons 3.4, 4.6, 5.6, 6.8, 7.6, 7IW, 8.2, 8.5, 8IW, 9.5, 9IW, 10IW, 11.5, 12.4, 12IW, 13.6, 14.5, 15.7, 16.6, 17.8, 18.8, 19.6, 20.10, 21IW, 22IW, 23IW, 24IW, 25.8, 26IW, 29IW, 31IW, 33IW, 34IW, 37IW, 39IW, 41IW, 44IW, 48IW, 53IW, 55IW, 58IW, 62IW, 67.1, 67IW, 71IW, 75IW, 82IW, 85IW, 88IW, 89IW, 90.7, 91.3, 92.5, 93.3, 94.1, 95.6, 96.7, 97.3, 98.4, 99.8, 100.8, 101IW, 102IW, 104IW, 106IW, 108IW, 110IW, 112IW, 114IW, 117IW, 121IW, 124.3, 124IW, 125.3, 126.6, 127.3, 129IW
Estimate volume [for example, using 1 cm ³ blocks to build cuboids (including cubes)] and capacity [for example, using water].	D	<p>Students are required to:</p> <ul style="list-style-type: none"> estimate the number of litres in a tank, interpolating between 10-litre marks. <p>Students are required to:</p> <ul style="list-style-type: none"> review measurement facts establish equivalent amounts of weight, capacity, time, money and length compare < > = units of time compare metric units compared to imperial units measure and estimate liquid volumes and masses of objects in g, kg and L 	Learning objective: Estimate volume in litres.
			CMC Level D Presentation Book 2. Lessons: 123-130.
			Lessons 123.6, 124.4, 125.6, 127.5, 129.5, 130.3
			Learning objective: Measure objects; calculate perimeter, volume, weight, capacity and cost; solve word problems using measurements of time, space, weight and money.
			CMC Level D Presentation Books 1 and 2. Lessons 1 to 130.
			Lessons 13.6, 14.3, 15.3, 15.5, 16.2, 16.6, 17.3, 17.6, 18.5, 19.6, 20.7, 21.7, 22.6, 23.5, 23IW, 24.5, 24IW, 25.5, 25IW, 26.5, 26IW, 27.5, 27IW, 28.6, 29.7, 30.6, 30IW, 31.7, 32.7, 32IW, 33.7, 33IW, 34.7, 34IW, 35.2, 35IW, 36.6, 36IW, 37.6, 37IW, 38.5, 38IW, 39.6, 39IW, 40.8, 40IW, 41.7, 41IW, 42.6, 43.7, 43IW, 44.3, 44IW, 45.2, 45IW, 46.4, 46.7, 46IW, 47.4, 47IW, 48.3, 48.6, 48IW, 49.4, 49.6, 49IW, 50.3, 50.6, 50IW, 51.4, 51.6, 52.7, 52IW, 103.8, 103IW, 104.7,

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> add, subtract, multiply and divide to solve one-step word problems involving mass and volume understand concepts of area and relate to multiplication and addition measure perimeter measure volume. 	104IW, 105.7, 105IW, 106.7, 106IW, 107.6, 107IW, 108.6, 108IW, 109.7, 109IW, 110.6, 110IW, 111.7, 111IW, 112.4, 112IW, 113.2, 113IW, 114.6, 114IW, 115IW, 116.6, 116.8, 116IW, 117.5, 117.7, 117IW, 118.3, 118.5, 118.7, 118IW, 119.4, 119.6, 119IW, 120.4, 120.5, 120.7, 120IW, 121.5, 121.6, 121IW, 122.3, 122.4, 122.8, 122IW, 123.3, 123.4, 123.5, 123IW, 124.3, 124.5, 124.6, 124IW, 125.4, 125.5, 125IW, 126IW, 127.6, 127.7, 127IW, 128.4, 128.5, 128.9, 128IW, 129.8, 129.9, 129IW, 130.8, 130.9, 130IW
<p>Solve problems involving converting between units of time.</p> <p>Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</p>	F	<p>Students are required to:</p> <ul style="list-style-type: none"> connect decimal representations to the metric system when solving problems involving length and area connect decimal representations to the metric system to calculate volume of rectangular prisms and complex figures convert units of measurement between kilometres, metres and centimetres. 	<p>Learning objective: Convert days into hours and minutes.</p> <p>CMC Level F Presentation Book 2 Lessons 90-109.</p> <p>Lessons 90.5, 91.5, 92.5, 93.6, 94.6, 95.5, 96.4, 96IW, 97.5, 98.5, 99.5, 100.4, 101.IW, 102.IW, 103.5, 103.7, 104.5, 104.7, 104IW, 105.6, 105IW, 107.2, 108.5, 109.5, 109IW</p> <p>Learning objective: Convert units of measurement.</p> <p>CMC Level F Presentation Book 2 Lessons 106-116.</p> <p>Lessons 106.6, 107.6, 108.7, 108IW, 109.IW, 110.5, 110IW, 112IW, 113.IW, 116.IW</p>
	D	<p>Students are required to:</p> <ul style="list-style-type: none"> use the four operations to solve word problems involving time calculate the time spent at school during a normal school day calculate the time required to travel between two locations determining arrival time given departure time. 	<p>Learning objective: Solve problems involving units including 12- and 24-hour time systems of time.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 61 to 119.</p> <p>Lessons 61.7, 62.5, 63.4, 64.5, 65.6, 66.6, 67.5, 68.5, 69.6, 70.6, 71.7, 72.8, 73.8, 74IW, 75IW, 76IW, 77IW, 80IW, 82IW, 84IW, 85IW, 88IW, 90IW, 91.8, 92.7, 93.8, 94.8, 95.8; 96.8, 97.4, 97IW, 98IW, 99IW, 101.7, 102.7, 103IW, 104IW, 105IW, 106IW, 107IW; 111IW, 116IW, 119IW</p>
	E	<p>Students are required to:</p> <ul style="list-style-type: none"> solve word problems to relate to ratio in the form of 'each/every' problems and fractional wording problems apply area and perimeter formulas for rectangles in real world and mathematical problems solve multiplication family word problems using three types of problems: <ul style="list-style-type: none"> times problems each-every problems measurement fact problems solve multistep word problems posed with whole numbers and having whole number answers using the four operations, and interpret remainders. 	<p>Learning objective: Convert units of time.</p> <p>CMC Level D Presentation Book 2. Lessons 110 to 130.</p> <p>Lessons 110.4, 111.3, 112.3, 113.2, 114.6, 115.3, 116.8, 120.4, 121IW, 122IW, 123IW, 127IW, 130IW.</p> <p>Learning objective: Multiplication and division word problems.</p> <p>CMC Level E Presentation Books 1 and 2 Lessons 43-129.</p> <p>Lessons 43.6, 44.6, 45.6, 46.4, 46.8, 47.5, 47.8, 48.5, 48.8, 49.5, 49.8, 50.5, 50.7, 50IW, 51.4, 51.7, 51IW, 52.5, 52.8, 52IW, 53.5, 53.8, 54.6, 55.6, 55IW, 56.7, 56IW, 57.8, 57IW, 58.7, 59.8, 59IW, 60.6, 60IW, 61.5, 61.10, 61IW, 62.5, 62.9, 62IW, 63.5, 63.10, 64.8, 65.5, 66.5, 66.8, 67.4, 67.9, 67IW, 68.6, 69.5, 70.7, 70IW, 71.9, 71IW, 72.9, 72IW, 73IW, 74IW, 75IW, 76IW, 77IW, 78IW, 79IW, 80IW, 81., 82IW, 83IW, 84IW, 85IW, 86IW, 87IW, 88IW, 89IW, 105.6, 106.3, 106IW, 107.9, 108.8, 108IW, 109.2, 111IW, 112.5, 112IW, 113.6, 114.4, 114IW, 117IW, 118IW, 121IW, 124.3, 125.3, 125IW, 126.6, 127.3, 127IW, 129IW</p> <p>Learning objective: Add/subtract word problems.</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
			CMC Level E Presentation Books 1 and 2 Lessons 10-124. Lessons 10.8, 13.9, 16.9, 17.7, 18.7, 19.9, 20.7, 20.9, 21.6, 22.6, 23.7, 24.6, 25.5, 26.7, 27.8, 28.6, 29.5, 30.6, 31.8, 32.5, 33.7, 34.7, 35.7, 36.6, 37.8, 38.7, 39.7, 40.5, 107.5, 108.2, 109.3, 110.7, 111.2, 112.2, 113.3, 114.6, 115.8, 116.3, 117.3, 118.5, 120.4, 122IW, 123IW, 124IW, Learning objective: Financial contexts. CMC Level E Presentation Books 1 and 2 Lessons 27-125. Lessons 27.2, 28.4, 29.2, 30.2, 31.5, 32.6, 32.9, 33IW, 34IW, 41IW, 42IW, 43., 44IW, 56IW, 57., 58., 59IW, 63IW, 70IW, 75IW, 79IW, 83IW, 85IW, 87IW, 88IW, 90IW, 91IW, 92., 105IW, 106IW, 112IW, 115IW, 121IW, 122IW, 123IW, 125IW
Geometry – Properties of Shape			
Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (o). Identify: <ul style="list-style-type: none"> angles at a point and one whole turn (total 360o) angles at a point on a straight line and use the properties of rectangles to deduce related facts and find missing lengths and angles Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Other multiples of 90o.	B	Students are required to: <ul style="list-style-type: none"> distinguish defining attributes of triangle, square, rectangle, hexagon distinguish defining attributes of 3-dimensional shapes. Students are required to: <ul style="list-style-type: none"> compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles and quarter-circles) or three-dimensional shapes (cubes, right rectangle prisms, right circular cones and right circular cylinders) to create a composite shape compose new shapes from the composite shape. 	Learning objective: Distinguish between defining versus non-defining attributes. Build and draw shapes to possess defining attributes. CMC Level B Presentation Book 2. Lessons 61 to 74. Lesson 61.2, 62.4, 63.3, 64.2, 65.5, 66.4, 67.5, 68.4, 69.4, 70.3, 71.2, 72.2, 73.2, 74.3 Learning objective: Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape. CMC Level B Presentation Book 2. Lessons 75 to 85. Lessons 75.2, 76.5, 77.6, 78.5, 79.6, 80.IW, 81.IW, 82.IW, 82.IW, 83.IW, 84.IW, 85.IW,
	D	Students are required to: <ul style="list-style-type: none"> classify two-dimensional objects (quadrilateral, rectangle, square, triangle, circle, pentagon and hexagon) classify three-dimensional objects (cube, sphere and pyramid). 	Learning objective: Identify two-dimensional shapes and their attributes. CMC Level D Presentation Book 1. Lessons 27 to 34. Lessons 27.4, 28.5, 29.4, 30.8, 31.5, 32.8, 33.8, 34.8
	D	Students are required to: <ul style="list-style-type: none"> recognise angles as measures of turn and compare angle sizes in everyday situations compare the angles created by opening doors partially and fully recognise that analogue clocks use the turning of arms to indicate time, and comparing the size of angles between the arms for familiar times 	Learning objective: Identify two-dimensional shapes and their attributes. CMC Level D Presentation Book 2. Lessons 27 to 81. Lessons: 27.4, 28.5, 29.4, 30.8, 31.5, 32.8, 33.8, 34.8, 78.4, 79.4, 80.4, 81.3

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> identify the number of angles in a shape. (The number of angles equals the number of sides.) 	
	E	Students are required to: <ul style="list-style-type: none"> understand that angles are formed where two lines come to a point compare bigger angles with smaller angles examine angles in 2D shapes: number of sides a figure has tells the number of angles the figure has. 	Learning objective: Recognise angle measure as additive. CMC Level E Presentation Books 1 and 2. Lessons 61 to 123. Lessons 61.3, 62.2, 63.6, 63.9, 64.3, 64.9, 64IW, 65.6, 65IW, 66.5, 66IW, 67.6, 68.2, 69.6, 69IW, 70.5, 70IW, 71.5, 72.5, 72IW, 73.5, 74.5, 75.6, 75IW, 76IW, 77.6, 77IW, 78.2, 78IW, 79.2, 79IW, 80.8, 81IW, 82IW, 83IW, 84IW, 87IW, 90IW, 91IW, 93IW, 95IW, 97IW, 99IW, 103IW, 107.4, 108.4, 109.4, 109IW, 110.4, 111IW, 112.4, 112IW, 113.4, 114.3, 115.2, 115IW, 116.6, 117.4, 118.7, 119IW, 120.5, 121.5, 121IW, 122.6, 122IW, 123.4, 123IW
Geometry – Position and Direction			
Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	E	Students are required to: <ul style="list-style-type: none"> use a grid reference system to describe locations and routes using landmarks and directional language compare aerial views of country and desert paintings and maps with grid references create a grid reference system for the classroom and using it to locate objects and describe routes from one object to another. 	Learning objective: Coordinate system. CMC Level E Presentation Book 2. Lessons 82-103. Lessons 82.3, 83.2, 84.2, 85.2, 86.1, 87.1, 88.1, 89.6, 90.3, 91.8, 92.2, 93.IW, 94.IW, 95.IW, 96.IW, 97.IW, 98.IW, 99.IW, 103.IW
	F	Students are required to: <ul style="list-style-type: none"> explore the coordinate system by: <ul style="list-style-type: none"> plotting points completing ratio problems exploring rules identifying x and y points plotting x and y points write coordinates for a point (4 quadrants) (L43-44) connecting a series of points to draw a straight line that goes through zero completing simple function tables to describe points shown on a line (L37- 54) matching equations with the corresponding line (based on the slope). 	Learning objective: Use grid reference system. CMC Level F Presentation Book 1. Lessons 21-67. Lessons 21.3, 22.3, 23.3, 24.5, 26.2, 27.2, 28.2, 29.2, 30.6, 31.7, 32.6, 33.6, 34.6, 64.2, 65.2, 66.2, 67.3
Statistics			
Solve comparison, sum and difference problems using information presented in a line graph.	D	Students are required to <ul style="list-style-type: none"> interpret and use timetables by planning a trip involving one or more modes of public transport develop a timetable of daily activities. 	Learning objective: Interpret and use timetables. CMC Level D Presentation Book 2 Lessons 61-116. Lessons 61.7, 62.5, 63.4, 63IW, 64.5, 64IW, 65.6, 66.6, 66IW, 67.6, 67IW, 68.5, 68IW, 69.6, 70.6, 70IW, 71.7, 71IW, 72.8, 73.8, 75.IW, 76.IW, 77.IW, 78.IW,

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Complete, read and interpret information in tables, including timetables.	E	Students are required to: <ul style="list-style-type: none"> create and analyse picture graphs that represent one unit and multiple units create and analyse bar graphs of one and multiple unit divisions create and analyse line plots using mixed numbers. 	80.IW, 82.IW, 84.IW, 85.IW, 88.IW, 90.IW, 91.8, 92.7, 94.8, 95.8, 95IW, 96.8, 96IW, 97.8, 97IW, 98.3, 98IW, 99.IW, 100.IW, 101.7, 102.7, 103.IW, 104.IW, 105.IW, 106.IW, 107.IW, 116.IW
			Learning objective: Represent and interpret data on graphs and line plots.
			CMC Level E Presentation Book 2. Lessons 129-130. Lessons 129.3, 130.5
	F	Students are required to: <ul style="list-style-type: none"> refer to tables or graphs to interpret information and then write a rate equation and solve it. 	Learning objective: compare and explain data sets involving diverse numerical variables.
			CMC Level F Presentation Books 1 and 2. Lessons 18-118. Lessons 18.7, 19.8, 20.3, 21.7, 22.6, 22IW, 23.5, 24.6, 25.6, 25IW, 26.3, 26IW, 27.3, 27IW, 28.4, 28IW, 29.3, 29IW, 30.8, 30IW, 31.IW, 33.IW, 38.IW, 44.IW, 57.IW, 60.IW, 81.5, 82.5, 83.7, 84.7, 85.6, 86.6, 87.5, 88.6, 89.6, 90.3, 90IW, 91.3, 92.2, 93.3, 93IW, 94.3, 94IW, 95.4, 96.7, 96IW, 97.3, 97IW, 98.3, 98IW, 99.3, 99IW, 100.2, 100IW, 101.IW, 102.IW, 103.2, 103IW, 104.2, 104IW, 105.2, 105IW, 106.2, 106IW, 107.1, 108.1, 108IW, 109.1, 109IW, 110.1, 110IW, 111.1, 111.3, 112.1, 112.4, 112IW, 113.4, 113.5, 113IW, 114.4, 114IW, 115.3, 115IW, 116.2, 116.4, 116IW, 117.1, 117.5, 118.1, 119.IW, 120.IW
			Learning objective: Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables.
	Students analyse: <ul style="list-style-type: none"> tables graphs balance beams line plots. 	CMC Level F Presentation Book 2. Lessons 84-120. Lessons 84.7, 85.6, 86.6, 90.IW, 91., 93.IW, 94.IW, 100.IW 104.2, 104IW, 105.2, 106.2, 106IW, 107.1, 108.1, 108IW, 109.1, 110.1, 110IW, 111.1, 112.1, 112IW, 113.4, 114.3, 114IW, 115.3, 115IW, 116.2, 116IW, 117.5, 117IW, 118.IW, 120.IW	

8.6 Sequence of Content: Year 6 Programme of Study

Table 7: National curriculum in England for Year 6 Statutory requirements mapped to Connecting Math Concepts Levels.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
Number – Number and Place Value			
Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.	E	Students are required to: <ul style="list-style-type: none"> read, write and order 5-digit numerals by: <ul style="list-style-type: none"> reviewing reading and writing four-digit numbers. reading and writing numbers that have five digits and six-digit numbers using base-ten numerals, number names, and expanded form. 	Learning objective: Read and write ten- and hundred-thousand numbers.
			CMC Level E Presentation Book 1. Lessons 5 to 19.
			Lessons 5.7, 6.4, 7.7, 8.7, 10.7, 11.7, 12.6, 13.7, 14.4, 15.4, 16.8, 19.8
Round any whole number to a required degree of accuracy.	E	Students are required to: <ul style="list-style-type: none"> work with rounding and estimating to the nearest ten, hundred, thousand, and then to larger numbers apply this knowledge to decimals and explore the use of number names. 	Learning objective: Check reasonableness using estimation strategies.
			CMC Level E Presentation Book 1. Lesson 130.
			Lesson 130.7
Use negative numbers in context, and calculate intervals across zero.		<ul style="list-style-type: none"> No equivalent content found. 	
Solve number and practical problems that involve all of the above.	D	Students are required to: <ul style="list-style-type: none"> focus heavily on multiplication and division number families show the connection between multiplication and division work on number-family tables to reinforce connection solve word problems using multiplication and division by: <ul style="list-style-type: none"> drawing on their knowledge of number families exploring the word ‘times’ within problems assessing reasonableness of answers by using mental computation and estimation strategies including rounding completing multiplication and division column problems with regrouping. applying properties of operations as strategies to multiply and divide and using parenthesis and applying commutative, associative and distributive properties. 	Learning objective: Multiplication/division facts.
			CMC Level D Presentation Book 1. Lessons 1-40.
			Lessons 1.3, 2.1, 2.6, 3.2, 3IW, 4.2, 5.2, 6.6, 6IW, 7.7, 8.7, 8IW, 9.4, 9.8, 9IW, 10.5, 10.8, 10IW, 11.6, 11.9, 11IW, 12.2, 12.7, 12IW, 13.3, 13IW, 14.7, 14IW, 15.4, 16.5, 17.4, 17IW, 18.7, 18IW, 19.8, 19IW, 20.9, 21.IW, 22.IW, 23., 24., 25., 26., 27.7, 28.3, 29.3, 30.4, 31.3, 31.6, 32.3, 32.5, 33.5, 34.4, 35.4, 36.1, 36.4, 36IW, 37.1, 37IW, 38.1, 385IW, 39.1, 40.1
			Learning objective: Multiplication/division.
			CMC Level D Presentation Books 1 and 2. Lessons 40-130.
			Lessons 40.3, 40.5, 40IW, 41.1, 41.3, 41IW, 42.1, 42.3, 42IW, 43.1, 43IW, 44.1, 44IW, 45.1, 45IW, 46.1, 46IW, 47.1, 47IW, 48.1, 48IW, 49.1, 49IW, 50.1, 50IW, 51.1, 51.3, 51IW, 52.1, 52.4, 52IW, 53.1, 53.4, 53IW, 54.1, 54.7, 54IW, 55.1, 55.8, 55IW, 56.1, 57.1, 57IW, 58.1, 58.7, 58IW, 59.1, 59.7, 59IW, 60.1, 61.1, 61IW, 62.1, 62.2, 62IW, 63.1, 63.2, 63.8, 63IW, 64.1, 64.8, 64IW, 65.1, 65.8, 65IW, 66.1, 66IW, 67.1, 67IW, 68.1, 68.7, 68IW, 69.1, 69.7, 69IW, 70.1, 70.9, 70IW, 71.1, 71IW, 72.1, 72IW, 73.1, 73.7, 73IW, 74.1, 74.6, 74.9, 74IW, 75.1, 75.8, 75IW, 76.1, 76.4, 76IW, 77.1, 77.3, 77.8, 77IW, 78.1, 78.3, 78IW, 79.1, 79.3, 79IW, 80.1, 80.3, 80IW, 81.1, 81.5, 82.1, 82.2, 83.1, 83.2, 83.8, 84.1, 84.3, 85.1, 85.2, 86.1, 86.4, 87.1, 87.3, 88.1, 88.4, 89.1, 89.6, 90.1, 90.9, 91.1, 92.1, 93.1, 94.1, 94.3, 95.1, 95.4, 95.9, 96.1, 97.1, 97IW, 98.1, 98IW, 99.1, 100.1, 101.1, 102.1, 103.1, 104.1, 105.1, 106.1, 107.1, 108.1, 108.8, 108IW, 109.1, 110.1, 110IW, 111.1, 111.8, 118IW, 112.1, 112.6, 112IW, 113.1, 113.4, 113IW, 114.1, 114IW, 115.1, 115.8, 115IW, 116.1, 116.3, 116IW, 117.1, 117.8, 117IW, 118.1, 118IW, 119.1, 119IW, 120.1, 120IW, 121.1, 121IW, 122.1, 122IW, 123.1,

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
			123.8, 123IW, 124.1, 124IW, 125.1, 125IW, 126.1, 126.7, 126IW, 127.1, 127.8, 127IW, 128.1, 128.6, 128IW, 129.1, 129IW, 130.1, 130IW
Number – Addition, Subtraction, Multiplication and Division			
Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.	D	<p>Students are required to:</p> <ul style="list-style-type: none"> focus heavily on multiplication and division number families show the connection between multiplication and division work on number-family tables to reinforce connection solve word problems using multiplication and division by: <ul style="list-style-type: none"> drawing on their knowledge of number families exploring the word ‘times’ within problems assessing reasonableness of answers by using mental computation and estimation strategies including rounding completing multiplication and division column problems with regrouping applying properties of operations as strategies to multiply and divide and using parenthesis and applying commutative, associative and distributive properties. 	<p>Learning objective: Multiplication/division facts.</p> <p>CMC Level D Presentation Book 1. Lessons 1-40.</p> <p>Lessons 1.3, 2.1, 2.6, 3.2, 3IW, 4.2, 5.2, 6.6, 6IW, 7.7, 8.7, 8IW, 9.4, 9.8, 9IW, 10.5, 10.8, 10IW, 11.6, 11.9, 11IW, 12.2, 12.7, 12IW, 13.3, 13IW, 14.7, 14IW, 15.4, 16.5, 17.4, 17IW, 18.7, 18IW, 19.8, 19IW, 20.9, 21.IW, 22.IW, 23., 24., 25., 26., 27.7, 28.3, 29.3, 30.4, 31.3, 31.6, 32.3, 32.5, 33.5, 34.4, 35.4, 36.1, 36.4, 36IW, 37.1, 37IW, 38.1, 385IW, 39.1, 40.1</p>
			<p>Learning objective: Multiplication/division.</p> <p>CMC Level D Presentation Books 1 and 2. Lessons 40-130.</p> <p>Lessons 40.3, 40.5, 40IW, 41.1, 41.3, 41IW, 42.1, 42.3, 42IW, 43.1, 43IW, 44.1, 44IW, 45.1, 45IW, 46.1, 46IW, 47.1, 47IW, 48.1, 48IW, 49.1, 49IW, 50.1, 50IW, 51.1, 51.3, 51IW, 52.1, 52.4, 52IW, 53.1, 53.4, 53IW, 54.1, 54.7, 54IW, 55.1, 55.8, 55IW, 56.1, 57.1, 57IW, 58.1, 58.7, 58IW, 59.1, 59.7, 59IW, 60.1, 61.1, 61IW, 62.1, 62.2, 62IW, 63.1, 63.2, 63.8, 63IW, 64.1, 64.8, 64IW, 65.1, 65.8, 65IW, 66.1, 66IW, 67.1, 67IW, 68.1, 68.7, 68IW, 69.1, 69.7, 69IW, 70.1, 70.9, 70IW, 71.1, 71IW, 72.1, 72IW, 73.1, 73.7, 73IW, 74.1, 74.6, 74.9, 74IW, 75.1, 75.8, 75IW, 76.1, 76.4, 76IW, 77.1, 77.3, 77.8, 77IW, 78.1, 78.3, 78IW, 79.1, 79.3, 79IW, 80.1, 80.3, 80IW, 81.1, 81.5, 82.1, 82.2, 83.1, 83.2, 83.8, 84.1, 84.3, 85.1, 85.2, 86.1, 86.4, 87.1, 87.3, 88.1, 88.4, 89.1, 89.6, 90.1, 90.9, 91.1, 92.1, 93.1, 94.1, 94.3, 95.1, 95.4, 95.9, 96.1, 97.1, 97IW, 98.1, 98IW, 99.1, 100.1, 101.1, 102.1, 103.1, 104.1, 105.1, 106.1, 107.1, 108.1, 108.8, 108IW, 109.1, 110.1, 110IW, 111.1, 111.8, 118IW, 112.1, 112.6, 112IW, 113.1, 113.4, 113IW, 114.1, 114IW, 115.1, 115.8, 115IW, 116.1, 116.3, 116IW, 117.1, 117.8, 117IW, 118.1, 118IW, 119.1, 119IW, 120.1, 120IW, 121.1, 121IW, 122.1, 122IW, 123.1, 123.8, 123IW, 124.1, 124IW, 125.1, 125IW, 126.1, 126.7, 126IW, 127.1, 127.8, 127IW, 128.1, 128.6, 128IW, 129.1, 129IW, 130.1, 130IW</p>
			<p>Learning objective: Solve problems involving the multiplication of large numbers by one- or 2-digit numbers using a variety of strategies.</p> <p>CMC Level E presentation Book 1. Lessons 21 to 109.</p> <p>Lessons 21.7, 22.5, 23.2, 24.2, 25.7, 26.3, 27.6, 28.7, 29.8, 30.5, 31.6, 32.7, 33.8, 34.8, 39.IW, 40.IW, 42.IW, 45.IW, 47.IW, 48.2, 49.2, 50.2, 50.9, 51.2, 51.6, 52.2, 52.8, 53.6, 53.9, 54.7, 55.2, 55IW, 56.2, 56IW, 57.2, 58.2, 58IW, 59.5, 60.7, 60IW, 61.6, 61IW, 62.6, 62IW, 63.IW, 64.IW, 66.IW, 68.IW, 70.IW, 72.IW, 74.IW, 76.IW, 77.IW, 78.IW, 79.IW, 90.IW, 94.IW, 97.IW, 99.IW, 106.IW, 109.IW</p>
			<p>Learning objective: Solve problems involving division by a 1-digit number, including a remainder.</p> <p>CMC Level F Presentation Books 1 and 2. Lessons 1 to 119.</p>
<p>Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.</p> <p>Divide numbers up to 4 digits by a two-digit number using the formal written method of short division</p>	E	<p>Students solve simple problems by:</p> <ul style="list-style-type: none"> word problems of whole numbers column multiplication x 2 digits division with 1-digit divisor division with 1-digit divisor (mental maths) and 1-, 2-, and 3-digit answer division with 2-digit divisor and 1- and 2-digit answers. 	
	F	<p>Students are required to:</p> <ul style="list-style-type: none"> solve division equations with 1-digit divisor 	

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
where appropriate, interpreting remainders according to the context.		<ul style="list-style-type: none"> • solve division equations with 1-digit divisor (mental maths) and 1-, 2-, and 3-digit answer • solve division with 2-digit divisor and 1- and 2-digit answers • practice mental maths. 	Lessons 1.7, 2.5, 3.5, 4.6, 5.7, 6.5, 6.8, 7.4, 8.4, 9.8, 10.8, 11.1, 11.5, 12.2, 12.6, 13.1, 13.4, 14.2, 14.5, 14IW, 15.IW, 16.4, 17.4, 18.3, 19.5, 20.7, 21.1, 21.4, 22.4, 23.IW, 28.IW, 30.IW, 31.4, 31IW, 32.5, 32IW, 33.4, 33IW, 34.4, 34IW, 35.4, 36.3, 37.3, 37IW, 38.4, 38IW, 39.5, 39IW, 40.3, 40IW, 41.6, 41IW, 42.2, 42IW, 43.2, 43.5, 43IW, 44.2, 44.5, 44IW, 45.2, 45.4, 46.3, 47.3, 48.7, 48IW, 49.6, 49IW, 50.6, 60IW, 51.3, 51IW, 52.6, 52IW, 53.7, 53IW, 54.1, 54.7, 54IW, 55.1, 55.6, 55IW, 56.1, 56.7, 56IW, 57.1, 57.6, 57IW, 58.1, 58IW, 59.1, 59IW, 60.1, 60IW, 61.1, 61.2, 61IW, 62.1, 62.5, 62IW, 63.1, 63.3, 63IW, 64.1, 64IW, 65.1, 65IW, 66.1, 66.3, 66.5, 66IW, 67.1, 67.2, 67.4, 67IW, 68.2, 68.4, 69.2, 69.5, 70.2, 70.6, 71.2, 71.4, 72.4, 73.IW, 75.IW, 77.IW, 79.IW, 80.IW, 82.IW, 83.3, 84.3, 84IW, 85.3, 85IW, 86.2, 86IW, 87.IW, 88.IW, 89.IW, 90.IW, 91.IW, 93.2, 93IW, 94.2, 95.2, 95IW, 96.3, 99.IW, 101.2, 101.4, 101IW, 102.2, 102.3, 102IW, 103.7, 103IW, 104.7, 104IW, 105.6, 105IW, 106.IW, 107.IW, 109.4, 110.4, 111.3, 112.3, 117.IW, 118.IW, 119.IW
	F	Limited equivalent content found.	Learning objective: Long division with estimation (includes reworking if estimates don't work). CMC:MATH F Lessons 42.7, 43.2, 44.2, 45.2, 46.3, 47.3, 48.7, 49.6, 50.6, 51.IW, 52.3, 53.7, 54.7, 54IW, 55.6, 56.7, 56IW, 57.6, 57IW, 58.IW, 59.IW, 60.IW, 61.IW, 62.IW, 63.IW, 65.IW, 67.IW, 73.IW, 75.IW, 77.IW, 80.IW, 84.IW, 88.IW, 102.IW, 103.IW, 14.IW, 105.IW, 107.IW
	Perform mental calculations, including with mixed operations and large numbers.	E	Students solve simple problems by: <ul style="list-style-type: none"> • word problems of whole numbers • column multiplication x 2 digits • division with 1-digit divisor • division with 1-digit divisor (mental maths) and 1-, 2-, and 3-digit answer • division with 2-digit divisor and 1- and 2-digit answers.
F		Students are required to: <ul style="list-style-type: none"> • solve division equations with 1-digit divisor • solve division equations with 1-digit divisor (mental maths) and 1-, 2-, and 3-digit answer • solve division with 2-digit divisor and 1- and 2-digit answers • practice mental maths. 	Learning objective: Solve problems involving division by a 1-digit number, including a remainder. CMC Level F Presentation Books 1 and 2. Lessons 1 to 119. Lessons 1.7, 2.5, 3.5, 4.6, 5.7, 6.5, 6.8, 7.4, 8.4, 9.8, 10.8, 11.1, 11.5, 12.2, 12.6, 13.1, 13.4, 14.2, 14.5, 14IW, 15.IW, 16.4, 17.4, 18.3, 19.5, 20.7, 21.1, 21.4, 22.4, 23.IW, 28.IW, 30.IW, 31.4, 31IW, 32.5, 32IW, 33.4, 33IW, 34.4, 34IW, 35.4, 36.3, 37.3, 37IW, 38.4, 38IW, 39.5, 39IW, 40.3, 40IW, 41.6, 41IW, 42.2, 42IW, 43.2, 43.5, 43IW, 44.2, 44.5, 44IW, 45.2, 45.4, 46.3, 47.3, 48.7, 48IW, 49.6, 49IW, 50.6, 60IW, 51.3, 51IW, 52.6, 52IW, 53.7, 53IW, 54.1, 54.7, 54IW, 55.1, 55.6, 55IW, 56.1, 56.7, 56IW, 57.1, 57.6, 57IW, 58.1, 58IW, 59.1, 59IW, 60.1, 60IW, 61.1, 61.2, 61IW, 62.1, 62.5, 62IW, 63.1, 63.3, 63IW, 64.1, 64IW, 65.1, 65IW, 66.1, 66.3, 66.5, 66IW, 67.1, 67.2, 67.4, 67IW, 68.2, 68.4, 69.2, 69.5, 70.2, 70.6, 71.2, 71.4, 72.4, 73.IW, 75.IW, 77.IW, 79.IW, 80.IW, 82.IW, 83.3, 84.3, 84IW, 85.3, 85IW, 86.2, 86IW, 87.IW, 88.IW, 89.IW, 90.IW, 91.IW, 93.2, 93IW, 94.2,

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
			95.2, 95IW, 96.3, 99.IW, 101.2, 101.4, 101IW, 102.2, 102.3, 102IW, 103.7, 103IW, 104.7, 104IW, 105.6, 105IW, 106.IW, 107.IW, 109.4, 110.4, 111.3, 112.3, 117.IW, 118.IW, 119.IW
Identify common factors, common multiples and prime numbers.	E	Students are required to: <ul style="list-style-type: none"> identify whole numbers that are not prime are called composite numbers identify the difference between prime numbers and composite numbers. 	Learning objective: Composite numbers. CMC Level E Presentation Book 2. 124-125. Lessons 124.6, 125.6
	F	Students are required to: <ul style="list-style-type: none"> create algorithms that use multiplication and division facts determine if a number is a multiple or factor of another number identifying lowest common multiples and highest common factors of pairs or triples of natural numbers explore multiples and factors including GCF. 	Learning objective: Lowest common multiple. CMC Level F Presentation Book 1. Lessons 16-22. Lessons 16., 19.4, 22.4 Learning objective: Prime numbers/multiples. CMC Level F Presentation Book 1. Lessons 41-77. Lessons 41.1, 42.1, 43.1, 44.1, 45.1, 46.1, 47.1, 48.2, 49.1, 50.1, 50IW, 51.2, 51IW, 52.2, 52IW, 53.5, 53IW, 54.IW, 56.IW, 58.IW, 59.IW, 61.IW, 74.IW, 77.IW Learning objective: Fraction simplification using prime factorisation. CMC Level F Presentation Book 1. Lessons 50-61. Lessons 50.4, 51.4, 52.4, 53.3, 54.3, 55.3, 56.2, 57.2, 58.IW, 59.IW, 61.IW Learning objective: Prime numbers/multiples. CMC Level F Presentation Book 1. Lessons 41 to 77. Lessons 41.1, 42.1, 43.1, 44.1, 45.1, 46.1, 47.1, 48.2, 49.1, 50.1, 50IW, 51.2, 51IW, 52.2, 52IW, 53.5, 53IW, 54.IW, 56.IW, 58.IW, 59.IW, 61.IW, 74.IW, 77.IW Learning objective: GCF/Factor. CMC Level F presentation book 1. Lessons 2 to 80. Lessons 62.6, 63.4, 64.4, 65.5, 66.6, 67.IW, 68.IW, 70.IW, 75.1, 76.1, 79.8, 80.9 (then simplification required for all fraction/mixed number answers)
		Students are required to: <ul style="list-style-type: none"> explore multiples and factors including GCF exploring factors and multiples using number sequences using simple divisibility tests. 	Learning objective: Prime numbers/multiples. CMC Level F Presentation Book 1. Lessons 41 to 77. Lessons 41.1, 42.1, 43.1, 44.1, 45.1, 46.1, 47.1, 48.2, 49.1, 50.1, 50IW, 51.2, 51IW, 52.2, 52IW, 53.5, 53IW, 54.IW, 56.IW, 58.IW, 59.IW, 61.IW, 74.IW, 77.IW Learning objective: GCF/Factor. CMC Level F Presentation Book 1. Lessons 2 to 80. Lessons 62.6, 63.4, 64.4, 65.5, 66.6, 67.IW, 68.IW, 70.IW, 75.1, 76.1, 79.8, 80.9 (then simplification required for all fraction/mixed number answers) Learning objective: Fraction simplification using prime factorisation. CMC Level F Presentation Book 1. Lessons 50-61. Lessons 50.4, 51.4, 52.4, 53.3, 54.3, 55.3, 56.2, 57.2, 58.IW, 59.IW, 61.IW

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
<p>Use their knowledge of the order of operations to carry out calculations involving the four operations.</p> <p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p>	F	<p>Students are required to:</p> <ul style="list-style-type: none"> • solve word problems to relate to ratio in the form of ‘each/every’ problems and fractional wording problems • apply area and perimeter formulas for rectangles in real world and mathematical problems • solve multiplication family word problems using three types of problems: <ul style="list-style-type: none"> - times problems - each-every problems - measurement fact problems • solve multistep word problems posed with whole numbers and having whole number answers using the four operations, and interpret remainders. 	<p>Learning objective: Multiplication and division word problems.</p> <p>CMC Level E Presentation Books 1 and 2 Lessons 43-129.</p> <p>Lessons 43.6, 44.6, 45.6, 46.4, 46.8, 47.5, 47.8, 48.5, 48.8, 49.5, 49.8, 50.5, 50.7, 50IW, 51.4, 51.7, 51IW, 52.5, 52.8, 52IW, 53.5, 53.8, 54.6, 55.6, 55IW, 56.7, 56IW, 57.8, 57IW, 58.7, 59.8, 59IW, 60.6, 60IW, 61.5, 61.10, 61IW, 62.5, 62.9, 62IW, 63.5, 63.10, 64.8, 65.5, 66.5, 66.8, 67.4, 67.9, 67IW, 68.6, 69.5, 70.7, 70IW, 71.9, 71IW, 72.9, 72IW, 73IW, 74IW, 75IW, 76IW, 77IW, 78IW, 79IW, 80IW, 81., 82IW, 83IW, 84IW, 85IW, 86IW, 87IW, 88IW, 89IW, 105.6, 106.3, 106IW, 107.9, 108.8, 108IW, 109.2, 111IW, 112.5, 112IW, 113.6, 114.4, 114IW, 117IW, 118IW, 121IW, 124.3, 125.3, 125IW, 126.6, 127.3, 127IW, 129IW</p> <p>Learning objective: Add/subtract word problems.</p> <p>CMC Level E presentation books 1&2 Lessons 10-124.</p> <p>Lessons 10.8, 13.9, 16.9, 17.7, 18.7, 19.9, 20.7, 20.9, 21.6, 22.6, 23.7, 24.6, 25.5, 26.7, 27.8, 28.6, 29.5, 30.6, 31.8, 32.5, 33.7, 34.7, 35.7, 36.6, 37.8, 38.7, 39.7, 40.5, 107.5, 108.2, 109.3, 110.7, 111.2, 112.2, 113.3, 114.6, 115.8, 116.3, 117.3, 118.5, 120.4, 122IW, 123IW, 124IW,</p> <p>Learning objective: Financial contexts.</p> <p>CMC Level E Presentation Books 1 &2 Lessons 27-125.</p> <p>Lessons 27.2, 28.4, 29.2, 30.2, 31.5, 32.6, 32.9, 33IW, 34IW, 41IW, 42IW, 43., 44IW, 56IW, 57., 58., 59IW, 63IW, 70IW, 75IW, 79IW, 83IW, 85IW, 87IW, 88IW, 90IW, 91IW, 92., 105IW, 106IW, 112IW, 115IW, 121IW, 122IW, 123IW, 125IW</p>
Number – Fractions (including decimals and percentages)			
<p>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.</p> <p>Compare and order fractions, including fractions > 1.</p> <p>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.</p> <p>Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $1/4 \times 1/2 = 1/8$].</p> <p>Divide proper fractions by whole numbers [for example, $1/3 \div 2 = 1/6$].</p>	<p>E</p> <p>F</p>	<p>Students are required to:</p> <ul style="list-style-type: none"> • use $< > =$ to compare fractions to whole numbers • analyse and compare fractions. <p>Students are required to:</p> <ul style="list-style-type: none"> • add or subtract fractions with like denominators • multiply fractions • focus on fractional comparisons • add, subtract, multiply and divide fractions, including mixed numbers. 	<p>Learning objective: Order and write fractions involving subtraction and addition with same or related denominator.</p> <p>CMC Level E Presentation Books 1 and 2. Lessons 1 to 129.</p> <p>Lessons 1.3, 2.2, 2.4, 3.2, 4.4, 4.8, 5.2, 5.8, 5IW, 6.3, 6IW, 7.2, 7IW, 8.4, 8IW, 9.2, 9IW, 10.3, 11.3, 12.2, 13.2, 13.8, 14.2, 14.7, 14IW, 15.8, 16.3, 16IW, 17.9, 17IW, 18.IW, 19.IW, 20.IW, 21.4, 21IW, 22.8, 22IW, 23.5, 23IW, 24.5, 24IW, 25.4, 25IW, 26.8, 26IW, 27.7, 27IW, 28.2, 28IW, 29.3, 29IW, 30.4, 30IW, 31.IW, 32.IW, 33.IW, 34.IW, 35.IW, 37.IW, 38.8, 38IW, 39.IW, 40.IW, 68.3, 68.5, 69.2, 69.4, 69IW, 70.8, 70IW, 71.3, 71IW, 72.3, 73.6, 73IW, 74.6, 75.9, 75IW, 76.8, 77.5, 77IW, 78.5, 78.9, 79.3, 79.8, 79IW, 80.9, 80IW, 81.8, 82.8, 82IW, 83.7, 84.7, 85.5, 85IW, 86.5, 86IW, 87.5, 87IW, 88.6, 90.2, 95.2, 96.2, 97.1, 98.2, 99.9, 100.2, 101.6, 102.7, 103.4, 103IW, 104.8, 104IW, 105.8, 106.1, 107.1, 108., 109.5, 109.8, 109IW, 111.7, 111IW, 118.IW, 119.IW, 122.IW, 124.IW, 129.IW</p> <p>Learning objective: Order and write fractions involving subtraction, addition, multiplication and division of mixed numbers with related denominator.</p> <p>CMC Level F Presentation Books 1 and 2. Lessons 71 to 119.</p> <p>Lessons 71.1, 72.1, 73.1, 74.1, 75.1, 76.IW, 77.IW, 78.IW, 79.1, 80.2, 81.IW, 84.IW, 113.5, 114.1, 115.1, 116.1, 117.1, 118.5, 119.5</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity		
Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8].		Students are required to: <ul style="list-style-type: none"> find the quantity of fractions compare quantities of fractions using $<$, $>$, $=$. 	Learning objective: Fraction of a quantity. CMC Level F Presentation Book 1. Lessons 46-72. Lessons 46.6, 47.6, 48.IW, 49.7, 50.5, 51.7, 52.5, 53.6, 54.IW, 55.IW, 57.IW, 59.IW, 61.IW, 62.IW, 64.IW, 66.IW, 68.IW, 70.IW, 72.IW		
		Students are required to: <ul style="list-style-type: none"> analyse fractions using half, fourths, thirds and fifths identify fractions equal to 1 multiply fractions. 	Learning objective: Factors and multiples of fraction denominators. CMC Level F Presentation Books 1 and 2. Lessons 1-119. Lessons 1.4, 1.7, 2.1, 3.IW, 4.IW, 5.IW, 10.IW, 12.IW, 66.2, 67.3, 68.1, 69.1, 70.1, 71.1, 72.1, 73.1, 74.1, 74IW, 75.2, 75IW, 76.IW, 79.1, 80.2, 81.IW, 84.IW, 85.IW, 87.2, 87IW, 88.2, 89.2, 89IW, 90.2, 91.2, 91IW, 92.6, 93.4, 94.4, 94IW, 95.IW, 96.IW, 98.IW, 99.IW, 101.IW, 105.IW, 107.IW, 114.1, 115.1, 116.1, 117.1, 118.5, 119.5		
		Students solve word problems involving: <ul style="list-style-type: none"> fractions (addition, subtraction) fractions (division) mixed numbers (addition, subtraction and multiplication). 	Learning objective: Like denominator/whole number. CMC Level F Presentation Book 1. Lessons 4-21. Lessons 4.7, 5.3, 6.3, 7.7, 8.IW, 9.IW, 10.IW, 11.3, 11.7, 11IW, 12.8, 13.5, 14.7, 15.IW, 16.6, 17.6, 18.5, 19.3, 20.5, 21.IW		
		Students investigate fraction operations including: <ul style="list-style-type: none"> addition, subtraction and multiplication mixed numbers unlike denominators multiplication of whole numbers division the use of diagrams. 	Learning objectives: Computation unlike denominators. CMC Level F presentation Book 1. Lessons 22 to 43. Lessons 22.5, 23.6, 24.1, 25.1, 26.4, 27.IW, 28.IW, 29.IW, 30.IW, 30.IW, 31.IW, 33.IW, 35.IW, 36.IW, 38.IW, 40.IW, 41.IW, 40.IW, 41.IW, 43.IW,		
		Students investigate mixed number operations including: <ul style="list-style-type: none"> addition and subtraction multiplication. 	Learning objectives: Word problems unlike denominators. CMC Level F Presentation Book 1. Lessons 45 to 56. Lessons 45.6, 46.4, 48.4, 49.IW, 50.8, 52.IW, 53.IW, 56.IW		
		Students are required to: <ul style="list-style-type: none"> add or subtract fractions with like denominators multiply fractions. 	Learning objective: Computation unlike denominators. CMC Level F Presentation Book 1. Lesson 22-43. Lessons 22.5, 23.6, 24.1, 25.1, 26.4, 27.IW, 28.IW, 29.IW, 30.IW, 30.IW, 31.IW, 33.IW, 35.IW, 36.IW, 38.IW, 40.IW, 41.IW, 40.IW, 41.IW, 43.IW Learning objective: Word problems unlike denominators. CMC Level F Presentation Book 1. Lessons 45-105. Lessons 45.6, 46.4, 48.4, 49.IW, 50.8, 52.IW, 53.IW, 56.IW		
		Identify the value of each digit in numbers given to three decimal places and multiply and divide	E	Students are required to: <ul style="list-style-type: none"> read, write and order 5-digit numerals by: reviewing reading and writing four-digit numbers 	Learning objective: Read and write ten- and hundred-thousand numbers. CMC Level E Presentation Book 1. Lessons 5 to 19. Lessons 5.7, 6.4, 7.7, 8.7, 10.7, 11.7, 12.6, 13.7, 14.4, 15.4, 16.8, 19.8

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
numbers by 10, 100 and 1000 giving answers up to three decimal places.		<ul style="list-style-type: none"> reading and writing numbers that have five digits and six-digit numbers using base-ten numerals, number names, and expanded form. 	
	F	<p>Students are required to:</p> <ul style="list-style-type: none"> round a decimal value to the nearest whole number, tenth, hundredth, or thousandth add or subtract decimal values explore decimal operations by multiplying and dividing by base 10 explore exponents using base 10. 	<p>Learning objective: Multiply and divide decimals by powers of 10.</p> <p>CMC Level F Presentation Book 2. Lessons 81-105.</p> <p>Lessons 81.2, 82.2, 83.3, 84.3, 85.3, 86.2, 87.IW, 88.IW, 89.IW, 91.IW, 101.2, 101.2, 103.7, 104.7, 105.6, 106.IW, 108.IW, 109IW, 111.IW, 112.IW, 113.IW, 115.IW</p>
Multiply one-digit numbers with up to two decimal places by whole numbers.	F	<p>Students are required to:</p> <ul style="list-style-type: none"> add or subtract fractions with like denominators multiply fractions. 	<p>Learning objective: Order and write fractions involving subtraction, addition, multiplication and division of mixed numbers with related denominator.</p>
			<p>CMC Level F Presentation Books 1 and 2. Lessons 71 to 119.</p> <p>Lessons 71.1, 72.1, 73.1, 74.1, 75.1, 76.IW, 77.IW, 78.IW, 79.1, 80.2, 81.IW, 84.IW, 113.5, 114.1, 115.1, 116.1, 117.1, 118.5, 119.5</p>
Use written division methods in cases where the answer has up to two decimal places.	F	<p>Students are required to:</p> <ul style="list-style-type: none"> solve division equations with 1-digit divisor solve division equations with 1-digit divisor (mental maths) and 1-, 2-, and 3-digit answer solve division with 2-digit divisor and 1- and 2-digit answers practice mental maths. 	<p>Learning objective: Solve problems involving division by a 1-digit number, including a remainder.</p>
			<p>CMC Level F Presentation Books 1 and 2. Lessons 1 to 119.</p> <p>Lessons 1.7, 2.5, 3.5, 4.6, 5.7, 6.5, 6.8, 7.4, 8.4, 9.8, 10.8, 11.1, 11.5, 12.2, 12.6, 13.1, 13.4, 14.2, 14.5, 14IW, 15.IW, 16.4, 17.4, 18.3, 19.5, 20.7, 21.1, 21.4, 22.4, 23.IW, 28.IW, 30.IW, 31.4, 31IW, 32.5, 32IW, 33.4, 33IW, 34.4, 34IW, 35.4, 36.3, 37.3, 37IW, 38.4, 38IW, 39.5, 39IW, 40.3, 40IW, 41.6, 41IW, 42.2, 42IW, 43.2, 43.5, 43IW, 44.2, 44.5, 44IW, 45.2, 45.4, 46.3, 47.3, 48.7, 48IW, 49.6, 49IW, 50.6, 60IW, 51.3, 51IW, 52.6, 52IW, 53.7, 53IW, 54.1, 54.7, 54IW, 55.1, 55.6, 55IW, 56.1, 56.7, 56IW, 57.1, 57.6, 57IW, 58.1, 58IW, 59.1, 59IW, 60.1, 60IW, 61.1, 61.2, 61IW, 62.1, 62.5, 62IW, 63.1, 63.3, 63IW, 64.1, 64IW, 65.1, 65IW, 66.1, 66.3, 66.5, 66IW, 67.1, 67.2, 67.4, 67IW, 68.2, 68.4, 69.2, 69.5, 70.2, 70.6, 71.2, 71.4, 72.4, 73.IW, 75.IW, 77.IW, 79.IW, 80.IW, 82.IW, 83.3, 84.3, 84IW, 85.3, 85IW, 86.2, 86IW, 87.IW, 88.IW, 89.IW, 90.IW, 91.IW, 93.2, 93IW, 94.2, 95.2, 95IW, 96.3, 99.IW, 101.2, 101.4, 101IW, 102.2, 102.3, 102IW, 103.7, 103IW, 104.7, 104IW, 105.6, 105IW, 106.IW, 107.IW, 109.4, 110.4, 111.3, 112.3, 117.IW, 118.IW, 119.IW</p>
Solve problems which require answers to be rounded to specified degrees of accuracy.	D	<p>Students are required to:</p> <ul style="list-style-type: none"> review decimal operations by working addition and subtraction problems involving dollar and cents amounts work dollars and cents problems involving regrouping across more than three digits work with rounding and estimating money. 	<p>Learning objective: Use estimation and rounding to check the reasonableness of answers to calculations.</p>
			<p>CMC Level D Presentation Book 1. Lessons 29-88.</p> <p>Lessons 29.2, 30.7, 31.8, 32.6, 33.6, 34IW, 35IW, 36IW, 37IW, 38IW, 39.3, 40.6, 40IW, 41.4, 42.4, 42IW, 43.3, 44.5, 44IW, 45.6, 46.5, 47.7, 48.5, 49.5, 50.4, 51.6, 52.6, 53.6, 54IW, 55IW, 56.7, 57.8, 57IW, 58IW, 59IW, 60IW, 61IW, 62IW, 64IW, 68IW, 73IW, 74IW, 84IW, 88IW</p>
	E	Students are required to:	Learning objective: Check reasonableness using estimation strategies.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> work with rounding and estimating to the nearest ten, hundred, thousand, and then to larger numbers apply this knowledge to decimals and explore the use of number names. 	CMC Level E Presentation Book 1. Lesson 130. Lesson 130.7
Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	E	Students are required to: <ul style="list-style-type: none"> complete an equation to show equivalent fractions complete an equation to show a fraction and the equivalent mixed number. 	Learning objective: Comparing fractions. CMC Level E Presentation Book 2. Lessons 95-129. Lessons 95.2, 96.2, 97.1, 98.2, 99.9, 99IW, 100.2, 101.6, 102.7, 102IW, 103.4, 104.8, 105.8, 106.1, 107.1, 108.IW, 111.IW, 115.IW, 118.7, 124.IW, 129.IW
Ratio and Proportion			
Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.	F	Students are required to: <ul style="list-style-type: none"> solve word problems to relate to ratio in the form of 'each/every' problems and fractional wording problems apply area and perimeter formulas for rectangles in real world and mathematical problems solve multiplication family word problems using three types of problems: <ul style="list-style-type: none"> times problems each-every problems measurement fact problems solve multistep word problems posed with whole numbers and having whole number answers using the four operations, and interpret remainders. 	Learning objective: Ratio word problems. CMC Level F Presentation Book 1. Lessons 19-83. Lessons 19.1, 20.2, 21.5, 22.2, 23.2, 24.3, 25.3, 26.6, 27.7, 28.8, 29.6, 30.5, 31.6, 32.3, 33.2, 34.2, 35.5, 36.7, 37.6, 38.6, 39.6, 40.8, 41.IW, 43.IW, 44.IW, 45.IW, 46.IW, 47.IW, 51.IW, 52.IW, 53.IW, 54.5, 55.5, 56.6, 57.5, 58.6, 59.7, 60.7, 61.6, 62.IW, 63.IW, 65.IW, 67.IW, 68.IW, 69.IW, 71.IW, 73.IW, 74.IW, 75.IW, 76.IW, 77.IW, 78.IW, 79.IW, 83.IW
Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison. Solve problems involving similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	F	Students are required to: <ul style="list-style-type: none"> work a multiplication problem that refers to a fraction or percent of a value solve word problems incorporating rate, ratios and proportion analyse the wording of problems and translate it into an equation with letters. Students are required to: <ul style="list-style-type: none"> solve word problems to relate to ratio in the form of 'each/every' problems and fractional wording problems apply area and perimeter formulas for rectangles in real world and mathematical problems 	Learning objective: Fractions. CMC Level F Presentation Book 1. Lesson 29-44. Lessons 29.7, 30.4, 31.5, 32.7, 33.7, 34.7, 35.IW, 36.IW, 38.IW, 39.IW, 40.IW, 42.IW, 44.IW Learning objective: Fraction of mixed number. CMC Level F Students' Workbook Textbook. Lesson 111-120. Lessons IW: 111.4, 112.IW, 113.IW, 114.IW, 116.IW, 117.IW, 120.IW Learning objective: Ratio word problems. CMC Level F Presentation Book 1. Lessons 19-83. Lessons 19.1, 20.2, 21.5, 22.2, 23.2, 24.3, 25.3, 26.6, 27.7, 28.8, 29.6, 30.5, 31.6, 32.3, 33.2, 34.2, 35.5, 36.7, 37.6, 38.6, 39.6, 40.8, 41.IW, 43.IW, 44.IW, 45.IW, 46.IW, 47.IW, 51.IW, 52.IW, 53.IW, 54.5, 55.5, 56.6, 57.5, 58.6, 59.7, 60.7, 61.6, 62.IW, 63.IW, 65.IW, 67.IW, 68.IW, 69.IW, 71.IW, 73.IW, 74.IW, 75.IW, 76.IW, 77.IW, 78.IW, 79.IW, 83.IW

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> • solve multiplication family word problems using three types of problems: <ul style="list-style-type: none"> - times problems - each-every problems - measurement fact problems - solve multistep word problems posed with whole numbers and having whole number answers using the four operations, and interpret remainders. 	
Algebra			
Use simple formulae.	E	<p>Students are required to:</p> <ul style="list-style-type: none"> • solve word problems to relate to ratio in the form of 'each/every' problems and fractional wording problems • apply area and perimeter formulas for rectangles in real world and mathematical problems • solve multiplication family word problems using three types of problems: <ul style="list-style-type: none"> - times problems - each-every problems - measurement fact problems - solve multistep word problems posed with whole numbers and having whole number answers using the four operations, and interpret remainders. 	<p>Learning objective: Multiplication and division word problems.</p> <p>CMC Level E Presentation Books 1 and 2 Lessons 43-129.</p> <p>Lessons 43.6, 44.6, 45.6, 46.4, 46.8, 47.5, 47.8, 48.5, 48.8, 49.5, 49.8, 50.5, 50.7, 50IW, 51.4, 51.7, 51IW, 52.5, 52.8, 52IW, 53.5, 53.8, 54.6, 55.6, 55IW, 56.7, 56IW, 57.8, 57IW, 58.7, 59.8, 59IW, 60.6, 60IW, 61.5, 61.10, 61IW, 62.5, 62.9, 62IW, 63.5, 63.10, 64.8, 65.5, 66.5, 66.8, 67.4, 67.9, 67IW, 68.6, 69.5, 70.7, 70IW, 71.9, 71IW, 72.9, 72IW, 73IW, 74IW, 75IW, 76IW, 77IW, 78IW, 79IW, 80IW, 81., 82IW, 83IW, 84IW, 85IW, 86IW, 87IW, 88IW, 89IW, 105.6, 106.3, 106IW, 107.9, 108.8, 108IW, 109.2, 111IW, 112.5, 112IW, 113.6, 114.4, 114IW, 117IW, 118IW, 121IW, 124.3, 125.3, 125IW, 126.6, 127.3, 127IW, 129IW</p> <p>Learning objective: Add/subtract word problems.</p> <p>CMC Level E Presentation Books 1 and 2 Lessons 10-124.</p> <p>Lessons 10.8, 13.9, 16.9, 17.7, 18.7, 19.9, 20.7, 20.9, 21.6, 22.6, 23.7, 24.6, 25.5, 26.7, 27.8, 28.6, 29.5, 30.6, 31.8, 32.5, 33.7, 34.7, 35.7, 36.6, 37.8, 38.7, 39.7, 40.5, 107.5, 108.2, 109.3, 110.7, 111.2, 112.2, 113.3, 114.6, 115.8, 116.3, 117.3, 118.5, 120.4, 122IW, 123IW, 124IW</p> <p>Learning objective: Financial contexts.</p> <p>CMC Level E Presentation Books 1 and 2 Lessons 27-125.</p> <p>Lessons 27.2, 28.4, 29.2, 30.2, 31.5, 32.6, 32.9, 33IW, 34IW, 41IW, 42IW, 43., 44IW, 56IW, 57., 58., 59IW, 63IW, 70IW, 75IW, 79IW, 83IW, 85IW, 87IW, 88IW, 90IW, 91IW, 92., 105IW, 106IW, 112IW, 115IW, 121IW, 122IW, 123IW, 125IW</p>
Generate and describe linear number sequences.	E	<p>Students are required to:</p> <ul style="list-style-type: none"> • use the ones digit in a sequence of multiples (7, 14,21,28) to create a new sequence of multiples from a higher point (start with 7_, 8_, 9_, 9_ and produce multiples of 7 starting with 77: 84, 91, 98). 	<p>Learning objective: Generate numbers or shape patterns that follow a given rule.</p> <p>CMC Level E. Presentation Book 2. Lessons 112-115.</p> <p>Lessons 112.7, 113.2, 114.2, 115.7</p>
	F	<p>Students are required to:</p> <ul style="list-style-type: none"> • identify and generalise number patterns 	<p>Learning objective: Create sequences and growing patterns involving whole numbers, fractions and decimals.</p> <p>CMC Level F Presentation Book 2. Lessons 65-118.</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> investigate additive and multiplicative patterns such as the number of tiles in a geometric pattern, or the number of dots or other shapes in successive repeats of a strip or border pattern looking for patterns in the way the numbers increase/decrease. 	Lessons 118.2, 119.2, 120.1, 55.1, 56.1, 57.1, 58.2, 59.2, 60.2, 61.4, 62.1, 63.4, 64.4, 65.5
Express missing number problems algebraically.	E	Students are required to: <ul style="list-style-type: none"> identify missing numbers within work on number families throughout the program explore inverse operations by: <ul style="list-style-type: none"> analysing addition-subtraction problems that have a missing number decoding missing numbers in number sentences represented by letters applying their knowledge of missing numbers to multiplication and division number sentences. identify unknown quantities within function tables using the values X and Y. These are related to the Coordinate System and plotted. 	Learning objective: To solve inverse operations. CMC Level E Presentation Book 2. Lessons 107-116. Lessons 107.6, 108.6, 109.7, 110.5, 111.3, 112.6, 113IW, 114IW, 115IW, 116.5 Learning objective: Multiplication/division. CMC Level E Presentation Book 2. Lessons 111-114. Lessons 111.6; 112.3; 113.IW; 114.7; Learning objective: Integrations. CMC Level E Presentation Book 2. Lessons 115-127. Lessons 115.5, 116.5, 117.7, 118IW, 120IW, 123IW, 127IW
Find pairs of numbers that satisfy an equation with two unknowns.			
Enumerate possibilities of combinations of two variables.		No equivalent content found.	
Measurement			
Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.	D	Students are required to: <ul style="list-style-type: none"> review measurement facts establish equivalent amounts of weight, capacity, time, money and length compare $<$ $>$ $=$ units of time compare metric units compared to imperial units. measure and estimate liquid volumes and masses of objects in g, kg and L add, subtract, multiply and divide to solve one-step word problems involving mass and volume understand concepts of area and relate to multiplication and addition measure perimeter measure volume. 	Learning objective: Measure objects; calculate perimeter, volume, weight, capacity and cost; solve word problems using measurements of time, space, weight and money. CMC Level D Presentation Books 1 and 2. Lessons 1 to 130. Lessons 13.6, 14.3, 15.3, 15.5, 16.2, 16.6, 17.3, 17.6, 18.5, 19.6, 20.7, 21.7, 22.6, 23.5, 23IW, 24.5, 24IW, 25.5, 25IW, 26.5, 26IW, 27.5, 27IW, 28.6, 29.7, 30.6, 30IW, 31.7, 32.7, 32IW, 33.7, 33IW, 34.7, 34IW, 35.2, 35IW, 36.6, 36IW, 37.6, 37IW, 38.5, 38IW, 39.6, 39IW, 40.8, 40IW, 41.7, 41IW, 42.6, 43.7, 43IW, 44.3, 44IW, 45.2, 45IW, 46.4, 46.7, 46IW, 47.4, 47IW, 48.3, 48.6, 48IW, 49.4, 49.6, 49IW, 50.3, 50.6, 50IW, 51.4, 51.6, 52.7, 52IW, 103.8, 103IW, 104.7, 104IW, 105.7, 105IW, 106.7, 106IW, 107.6, 107IW, 108.6, 108IW, 109.7, 109IW, 110.6, 110IW, 111.7, 111IW, 112.4, 112IW, 113.2, 113IW, 114.6, 114IW, 115IW, 116.6, 116.8, 116IW, 117.5, 117.7, 117IW, 118.3, 118.5, 118.7, 118IW, 119.4, 119.6, 119IW, 120.4, 120.5, 120.7, 120IW, 121.5, 121.6, 121IW, 122.3, 122.4, 122.8, 122IW, 123.3, 123.4, 123.5, 123IW, 124.3, 124.5, 124.6, 124IW, 125.4, 125.5, 125IW, 126IW, 127.6, 127.7, 127IW, 128.4, 128.5, 128.9, 128IW, 129.8, 129.9, 129IW, 130.8, 130.9, 130IW
Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places.	F	Students are required to:	Learning objective: Convert days into hours and minutes. CMC Level F Presentation Book 2 Lessons 90-109.
Convert between miles and kilometres.			

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> connect decimal representations to the metric system when solving problems involving length and area connect decimal representations to the metric system to calculate volume of rectangular prisms and complex figures convert units of measurement between kilometres, metres and centimetres. 	Lessons 90.5, 91.5, 92.5, 93.6, 94.6, 95.5, 96.4, 96IW, 97.5, 98.5, 99.5, 100.4, 101.IW, 102.IW, 103.5, 103.7, 104.5, 104.7, 104IW, 105.6, 105IW, 107.2, 108.5, 109.5, 109IW Learning objective: Convert units of measurement. CMC Level F Presentation Book 2 Lessons 106-116. Lessons 106.6, 107.6, 108.7, 108IW, 109.IW, 110.5, 110IW, 112IW, 113.IW, 116.IW
Recognise that shapes with the same areas can have different perimeters and vice versa.	E	Students are required to: <ul style="list-style-type: none"> work perimeter problems involving different shapes by writing the answers as a number followed by the word units focus on the number of squares inside a figure creating connections to multiplying length by width and establish the answer in square units create links between area and perimeter and the formal units of measurement create links between area and perimeter and the formal units of measurement work area problems using formal units consolidate their knowledge by working problems on area and perimeter work backwards to find the value of unknown sides when given the area apply the area and perimeter formulas for rectangles in real world and mathematical problems. 	Learning objective: Measure and approximate the perimeter and area of shapes using a variety of metric units. CMC Level E Presentation Books 1 and 2. Lessons 3-129. Lessons 3.4, 4.6, 5.6, 6.8, 7.6, 7IW, 8.2, 8.5, 8IW, 9.5, 9IW, 10IW, 11.5, 12.4, 12IW, 13.6, 14.5, 15.7, 16.6, 17.8, 18.8, 19.6, 20.10, 21IW, 22IW, 23IW, 24IW, 25.8, 26IW, 29IW, 31IW, 33IW, 34IW, 37IW, 39IW, 41IW, 44IW, 48IW, 53IW, 55IW, 58IW, 62IW, 67.1, 67IW, 71IW, 75IW, 82IW, 85IW, 88IW, 89IW, 90.7, 91.3, 92.5, 93.3, 94.1, 95.6, 96.7, 97.3, 98.4, 99.8, 100.8, 101IW, 102IW, 104IW, 106IW, 108IW, 110IW, 112IW, 114IW, 117IW, 121IW, 124.3, 124IW, 125.3, 126.6, 127.3, 129IW
Recognise when it is possible to use formulae for area and volume of shapes.		No equivalent content found.	
Calculate the area of parallelograms and triangles.		No equivalent content found.	
Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm ³) and cubic metres (m ³), and extending to other units [for example, mm ³ and km ³].	D	Students are required to: <ul style="list-style-type: none"> review measurement facts establish equivalent amounts of weight, capacity, time, money and length compare < > = units of time compare metric units compared to imperial units measure and estimate liquid volumes and masses of objects in g, kg and L 	Learning objective: Measure objects; calculate perimeter, volume, weight, capacity and cost; solve word problems using measurements of time, space, weight and money. CMC Level D Presentation Books 1 and 2. Lessons 1 to 130. Lessons 13.6, 14.3, 15.3, 15.5, 16.2, 16.6, 17.3, 17.6, 18.5, 19.6, 20.7, 21.7, 22.6, 23.5, 23IW, 24.5, 24IW, 25.5, 25IW, 26.5, 26IW, 27.5, 27IW, 28.6, 29.7, 30.6, 30IW, 31.7, 32.7, 32IW, 33.7, 33IW, 34.7, 34IW, 35.2, 35IW, 36.6, 36IW, 37.6, 37IW, 38.5, 38IW, 39.6, 39IW, 40.8, 40IW, 41.7, 41IW, 42.6, 43.7, 43IW, 44.3, 44IW, 45.2, 45IW, 46.4, 46.7, 46IW, 47.4, 47IW, 48.3, 48.6, 48IW, 49.4, 49.6

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> add, subtract, multiply and divide to solve one-step word problems involving mass and volume understand concepts of area and relate to multiplication and addition measure perimeter measure volume. 	49IW, 50.3, 50.6, 50IW, 51.4, 51.6, 52.7, 52IW, 103.8, 103IW, 104.7, 104IW, 105.7, 105IW, 106.7, 106IW, 107.6, 107IW, 108.6, 108IW, 109.7, 109IW, 110.6, 110IW, 111.7, 111IW, 112.4, 112IW, 113.2, 113IW, 114.6, 114IW, 115IW, 116.6, 116.8, 116IW, 117.5, 117.7, 117IW, 118.3, 118.5, 118.7, 118IW, 119.4, 119.6, 119IW, 120.4, 120.5, 120.7, 120IW, 121.5, 121.6, 121IW, 122.3, 122.4, 122.8, 122IW, 123.3, 123.4, 123.5, 123IW, 124.3, 124.5, 124.6, 124IW, 125.4, 125.5, 125IW, 126IW, 127.6, 127.7, 127IW, 128.4, 128.5, 128.9, 128IW, 129.8, 129.9, 129IW, 130.8, 130.9, 130IW
	F	Students are required to: <ul style="list-style-type: none"> find the area & volume of a rectangular prism find the volume of complex figures. 	Learning objective: Use the formula to calculate the area of a rectangle. CMC Level F Presentation Books 1 & 2. Lessons 40-78. Lessons 40.4, 41.4, 42.4, 43.3, 45.7, 46.6, 47.5, 48.5, 50.IW, 51.IW, 52.IW, 54.6, 54IW, 55.IW, 59.IW, 69.IW, 75.IW, 78.IW
		Students are required to: <ul style="list-style-type: none"> calculate the volume of right prisms related to base or face calculate using cubic centimetres and cubic metres. 	Learning objective: Volume of right prisms related to base or face. CMC Level F Presentation book 2. Lessons 68-98. Lessons 68.3, 69.6, 70.6, 71.5, 72.IW, 73.IW, 74.IW, 76.4, 77.5, 77IW, 78.6, 79.7, 80.7, 81.IW, 82.IW, 84.IW, 86.IW, 89.IW, 91.IW, 93.5, 93IW, 94.7, 94IW, 95.6, 96.6, 97.7, 98.7, 99.IW, 101.IW, 102.IW
Geometry – Properties of Shapes			
Draw 2-D shapes using given dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets.	B	Students are required to: <ul style="list-style-type: none"> distinguish defining attributes of triangle, square, rectangle, hexagon distinguish defining attributes of 3-dimensional shapes. 	Learning objective: Distinguish between defining versus non-defining attributes. Build and draw shapes to possess defining attributes. CMC Level B Presentation Book 2. Lessons 61 to 74. Lesson 61.2, 62.4, 63.3, 64.2, 65.5, 66.4, 67.5, 68.4, 69.4, 70.3, 71.2, 72.2, 73.2, 74.3
		Students are required to: <ul style="list-style-type: none"> compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles and quarter-circles) or three-dimensional shapes (cubes, right rectangle prisms, right circular cones and right circular cylinders) to create a composite shape compose new shapes from the composite shape. 	Learning objective: Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape. CMC Level B Presentation Book 2. Lessons 75 to 85. Lessons 75.2, 76.5, 77.6, 78.5, 79.6, 80.IW, 81.IW, 82.IW, 83.IW, 84.IW, 85.IW,
	F	Students are required to: <ul style="list-style-type: none"> construct simple prisms and pyramids considering the history and significance of pyramids from a range of cultural perspectives including those structures found in China, Korea and Indonesia constructing prisms and pyramids from nets, and skeletal models. 	Learning objective: Combine familiar shapes and objects to represent and approximate composite shapes in the environment. CMC Level F Presentation Book 2. Lessons 95 to 102. Lessons 95.6, 96.6, 97.7, 98.7, 102IW
		Students are required to:	Learning objective: Surface area of rectangular prisms. CMC Level F Presentation Book 2. Lessons 106-120.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> identify the shape and objects, and relative position of each face of a solid to determine the net of the solid, including that of prisms and pyramids. 	Lessons 106.5, 106IW, 107.5, 108.6, 109.6, 110.6, 111.6, 112.IW, 120.IW
Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.	B	Students are required to: <ul style="list-style-type: none"> distinguish defining attributes of triangle, square, rectangle, hexagon distinguish defining attributes of 3-dimensional shapes. 	Learning objective: Distinguish between defining versus non-defining attributes. Build and draw shapes to possess defining attributes. CMC Level B Presentation Book 2. Lessons 61 to 74. Lesson 61.2, 62.4, 63.3, 64.2, 65.5, 66.4, 67.5, 68.4, 69.4, 70.3, 71.2, 72.2, 73.2, 74.3
		Students are required to: <ul style="list-style-type: none"> compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles and quarter-circles) or three-dimensional shapes (cubes, right rectangle prisms, right circular cones and right circular cylinders) to create a composite shape compose new shapes from the composite shape. 	Learning objective: Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape. CMC Level B Presentation Book 2. Lessons 75 to 85. Lessons 75.2, 76.5, 77.6, 78.5, 79.6, 80.IW, 81.IW, 82.IW, 82.IW, 83.IW, 84.IW, 85.IW,
	D	Students are required to: <ul style="list-style-type: none"> classify two-dimensional objects (quadrilateral, rectangle, square, triangle, circle, pentagon and hexagon) classify three-dimensional objects (cube, sphere and pyramid). 	Learning objective: Identify two-dimensional shapes and their attributes. CMC Level D Presentation Book 1. Lessons 27 to 34. Lessons 27.4, 28.5, 29.4, 30.8, 31.5, 32.8, 33.8, 34.8
		No equivalent content found.	
Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.			
Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	E	Students are required to: <ul style="list-style-type: none"> learn supplementary and vertically opposite angles (but does not teach the names of these angles) estimate, compare and measure angles using degrees. 	Learning objective: Estimate, measure and compare angles using degrees. CMC Level E Presentation Books 1 and 2. Lessons 61-130. Lessons 61.3, 62.2, 63.6, 63.9, 64.3, 64.9, 64IW, 65.6, 65IW, 66.5, 66IW, 67.6, 68.2, 69.6, 69IW, 70.5, 70IW, 71.5, 72.5, 72IW, 73.5, 74.5, 75.6, 75IW, 76., 76IW, 77.6, 77IW, 78.2, 78IW, 79.2, 79IW, 80.8, 81.IW, 82.IW, 83.IW, 84.IW, 87.IW, 90.IW, 91.IW, 93.IW, 95.IW, 97.IW, 99.IW, 103.IW, 107.4, 108.4, 109.4, 109IW, 110.4, 111.IW, 112.4, 112IW, 113.4, 114.3, 115.2, 115IW, 116.6, 117.4, 118.7, 119.IW, 120.5, 121.5, 121IW, 122.6, 122IW, 123.4, 123IW, 124.2, 125.7, 125IW, 126.5, 126IW, 127.4, 127IW, 128.4, 129.2, 130.3
		Students explore angles by:	Learning objective: Construct angles using a protractor. CMC Level E Presentation Book 2. Lessons 121-130. Lesson 121 to Lesson 130
		Students explore angles by:	Learning objective: Estimate, measure and compare angles using degrees. CMC Level E Presentation Books 1 and 2. Lessons 61 to 130.

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
		<ul style="list-style-type: none"> recognising that angles are formed when two lines meet, are shown as part of a circle and expressed in degrees establishing 90, 180, 270 and 360 multiples working problems that show degrees of two nested angles related to multiples of 90 degrees (including supplementary and complimentary angles) learning supplementary and vertically opposite angles (but does not teach the names of these angles) learning the 90-degree angles are called right angles and within triangles are right-angled triangles identifying acute angles and relate to right angles as well as triangles identifying obtuse angles and relate to right angles as well as triangles learning to use a 180-degree protractor to measure and draw angles learning related vocabulary – line segments, intersect. 	Lessons 61.3, 62.2, 63.6, 63.9, 64.3, 64.9, 64IW, 65.6, 65IW, 66.6, 66IW, 67.6, 68.2, 69.6, 69IW, 70.5, 70IW, 71.5, 72.5, 72IW, 73.5, 74.5, 75.6, 75IW, 76IW, 77.6, 77IW, 78.2, 78IW, 79.2, 79IW, 80.8, 81IW, 82IW, 83IW, 84IW, 87IW, 90IW, 91IW, 93IW, 95IW, 97IW, 99IW, 103IW, 107.4, 108.4, 109.4, 109IW, 110.4, 111IW, 112.4, 112IW, 113.4, 114.3, 115.2, 115IW, 116.6, 117.4, 118.7, 119IW, 120.5, 121.5, 121IW, 122.6, 122IW, 123.4, 123IW, 124.2, 125.7, 125IW, 126.5, 126IW, 127.4, 127IW, 128.4, 129.2, 130.3
	F	<p>Students are required to:</p> <ul style="list-style-type: none"> know the degrees in a circle, a right angle, and a straight line find the unknown angle in a triangle Students explore Pythagorean Theorem Students explore Similar Triangles by figuring out: <ul style="list-style-type: none"> a missing angle to determine if two triangles are similar a corresponding side in a pair of similar triangles a corresponding side for right triangles shown on parallel lines corresponding side in a pair of nested similar triangles word problem that generates a similar- triangle diagram. 	<p>Learning objective: Investigate angles on a straight line, angles at a point and vertically opposite angles. Use results to find unknown angles.</p> <p>CMC Level F Presentation Books 1 and 2. Lessons 54-104.</p> <p>Lessons 54.4, 55.4, 56.4, 57.4, 58.5, 59.6, 60.8, 60IW, 61.IW, 62.IW, 63.IW, 64.IW, 65.IW, 66.IW, 67., 68.IW, 71.IW, 75.IW, 77.IW, 104.IW</p>
Geometry – Position and Direction			
Describe positions on the full coordinate grid (all four quadrants).	F	Students are required to:	<p>Learning objective: Use grid coordinates to locate and move positions.</p> <p>CMC Level E Presentation Book 2. Lessons 82 to 103.</p>

Statutory Requirements	Program	CMC Explicit Content and Strategies	Lesson/Exercise/Activity
<p>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</p>		<ul style="list-style-type: none"> • explore the coordinate system by: <ul style="list-style-type: none"> - plotting points - completing ratio problems - exploring rules - identifying x and y points - plotting x and y points - write coordinates for a point (4 quadrants) (L43-44) - connecting a series of points to draw a straight line that goes through zero - completing simple function tables to describe points shown on a line (L37- 54) - matching equations with the corresponding line (based on the slope). 	<p>Lessons 82.3, 83.2, 84.2, 85.2, 86.1, 87.1, 88.1, 89.6, 90.3, 91.8, 92.2, 93IW, 94IW, 95IW, 96IW, 97IW, 98IW, 99IW, 103IW</p>
	Oz-e-maths Top-ups Year 5	<p>Students are required to:</p> <ul style="list-style-type: none"> • describe and identify translations, reflections and rotations of shapes. <p>Note: The lesson involves the concepts of transformation, rotation and reflection.</p>	<p>Learning objective: Identify different transformations (i.e. translations, reflections and rotations) a shape undergoes. Apply the concept of transformation to real-life problems.</p> <p>Oz-e-maths Top-ups Supplementary Materials for Connecting Maths Concepts Teaching Guide Years 4–6. Lesson: 23.</p> <p>Lessons 23.1, 23.2, 23.3, Mastery Test 23</p>
	Statistics		
<p>Interpret and construct pie charts and line graphs and use these to solve problems.</p> <p>Calculate and interpret the mean as an average.</p>	F	<p>Students are required to:</p> <ul style="list-style-type: none"> • refer to tables or graphs to interpret information and then write a rate equation and solve it. 	<p>Learning objective: compare and explain data sets involving diverse numerical variables.</p> <p>CMC Level F Presentation Books 1 and 2. Lessons 18-118.</p> <p>Lessons 18.7, 19.8, 20.3, 21.7, 22.6, 22IW, 23.5, 24.6, 25.6, 25IW, 26.3, 26IW, 27.3, 27IW, 28.4, 28IW, 29.3, 29IW, 30.8, 30IW, 31.IW, 33.IW, 38.IW, 44.IW, 57.IW, 60.IW, 81.5, 82.5, 83.7, 84.7, 85.6, 86.6, 87.5, 88.6, 89.6, 90.3, 90IW, 91.3, 92.2, 93.3, 93IW, 94.3, 94IW, 95.4, 96.7, 96IW, 97.3, 97IW, 98.3, 98IW, 99.3, 99IW, 100.2, 100IW, 101.IW, 102.IW, 103.2, 103IW, 104.2, 104IW, 105.2, 105IW, 106.2, 106IW, 107.1, 108.1, 108IW, 109.1, 109IW, 110.1, 110IW, 111.1, 111.3, 112.1, 112.4, 112IW, 113.4, 113.5, 113IW, 114.4, 114IW, 115.3, 115IW, 116.2, 116.4, 116IW, 117.1, 117.5, 118.1, 119.IW, 120.IW</p>



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