Curriculum framework correlation

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The following table shows how the learning objectives map to the Cambridge Primary Mathematics Stage 1 resources, including the Learner's Book, Workbook and Teacher's Resource.

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
1Nc.01 Count objects from 0 to 20, recognising conservation of number and one-to-one correspondence.	✓								✓							
1Nc.02 Recognise the number of objects presented in familiar patterns up to 10, without counting.	✓				✓				✓							
1Nc.03 Estimate the number of objects or people (up to 20), and check by counting.	✓								✓							
1Nc.04 Count on in ones, twos or tens, and count back in ones and tens, starting from any number (from 0 to 20).									✓							
1Nc.05 Understand even and odd numbers as 'every other number' when counting (from 0 to 20).	✓								✓							
1Nc.06 Use familiar language to describe sequences of objects.																✓
1Ni.01 Recite, read and write number names and whole numbers (from 0 to 20).	✓								✓							
1Ni.02 Understand addition as: - counting on - combining two sets.					✓								✓			

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
1Ni.03 Understand subtraction as: - counting back - take away - difference.					✓								✓			
1Ni.04 Recognise complements of 10.					✓								✓			
1Ni.05 Estimate, add and subtract whole numbers (where the answer is from 0 to 20).					✓								✓			
1Ni.06 Know doubles up to double 10.													✓			
1Nm.01 Recognise money used in local currency.													✓			
1Np.01 Understand that zero represents none of something.	✓												✓			
1Np.02 Compose, decompose and regroup numbers from 10 to 20.									✓				✓			
1Np.03 Understand the relative size of quantities to compare and order numbers from 0 to 20.	✓								✓							
1Np.04 Recognise and use ordinal numbers from 1st to 10th.						✓										
1Nf.01 Understand that an object or shape can be split into two equal parts or two unequal parts.			✓								✓					
1Nf.02 Understand that a half can describe one of two equal parts of a quantity or set of objects.											✓					
1Nf.03 Understand that a half can act as an operator (whole number answers).											✓					
1Nf.04 Understand and visualise that halves can be combined to make wholes.			✓								✓					
1Gt.01 Use familiar language to describe units of time.								✓							✓	
1Gt.02 Know the days of the week and the months of the year.								✓							✓	

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
1Gt.03 Recognise time to the hour and half hour.								✓							✓	
1Gg.01 Identify, describe and sort 2D shapes by their characteristics or properties, including reference to number of sides and whether the sides are curved or straight.		✓								✓						
1Gg.02 Use familiar language to describe length, including long, longer, longest, thin, thinner, thinnest, short, shorter, shortest, tall, taller and tallest.				✓												
1Gg.03 Identify, describe and sort 3D shapes by their properties, including reference to the number of faces, edges and whether faces are flat or curved.		✓								✓						
1Gg.04 Use familiar language to describe mass, including heavy, light, less and more.												✓				
1Gg.05 Use familiar language to describe capacity, including full, empty, less and more.												✓				
1Gg.06 Differentiate between 2D and 3D shapes.		✓								✓						
1Gg.07 Identify when a shape looks identical as it rotates.										✓						
1Gg.08 Explore instruments that have numbered scales, and select the most appropriate instrument to measure length, mass, capacity and temperature.												✓				
1Gp.01 Use familiar language to describe position and direction.						✓										✓
1Ss.01 Answer non-statistical questions (categorical data).							✓							✓		

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
1Ss.02 Record, organise and represent categorical data using: - practical resources and drawings - lists and tables - Venn and Carroll diagrams - block graphs and pictograms.							✓							✓		
1Ss.03 Describe data, using familiar language including reference to more, less, most or least to answer non-statistical questions and discuss conclusions.							✓							✓		

Curriculum framework correlation

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The following table shows how the learning objectives map to the Cambridge Primary Mathematics Stage 2 resources, including the Learner's Book, Workbook and Teacher's Resource.

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
2Nc.01 Count objects from 0 to 100.	✓														
2Nc.02 Recognise the number of objects presented in unfamiliar patterns up to 10, without counting.					✓					✓					
2Nc.03 Estimate the number of objects or people (up to 100).	✓														
2Nc.04 Count on and count back in ones, twos, fives or tens, starting from any number (from 0 to 100).	✓				✓					✓					
2Nc.05 Recognise the characteristics of even and odd numbers (from 0 to 100).	✓														
2Nc.06 Recognise, describe and extend numerical sequences (from 0 to 100).	✓														
2Nm.01 Recognise value and money notation used in local currency.						✓									
2Nm.02 Compare values of different combinations of coins or notes.						✓									
2Ni.01 Recite, read and write number names and whole numbers (from 0 to 100).	✓							✓							
2Ni.02 Understand and explain the relationship between addition and subtraction.										✓					
2Ni.03 Recognise complements of 20 and complements of multiples of 10 (up to 100).					✓					✓					

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
2Ni.04 Estimate, add and subtract whole numbers with up to two digits (no regrouping of ones or tens).					✓					✓					
2Ni.05 Understand multiplication as: - repeated addition - an array.					✓					✓					
2Ni.06 Understand division as: - sharing (number of items per group) - grouping (number of groups) - repeated subtraction.					✓					✓					
2Ni.07 Know 1, 2, 5 and 10 times tables.					✓					✓					
2Np.01 Understand and explain that the value of each digit in a 2-digit number is determined by its position in that number, recognising zero as a place holder.	✓				✓			✓							
2Np.02 Compose, decompose and regroup 2-digit numbers, using tens and ones.	✓				✓			✓		✓					
2Np.03 Understand the relative size of quantities to compare and order 2-digit numbers.	✓									✓					
2Np.04 Recognise and use ordinal numbers.	✓				✓										
2Np.05 Round 2-digit numbers to the nearest 10.								✓							
2Nf.01 Understand that an object or shape can be split into four equal parts or four unequal parts.		✓						✓							
2Nf.02 Understand that a quarter can describe one of four equal parts of a quantity or set of objects.		✓						✓							
2Nf.03 Understand that one half and one quarter can be interpreted as division.								✓		✓					
2Nf.04 Understand that fractions (half, quarter and three-quarters) can act as operators.		✓						✓		✓					

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
2Nf.05 Recognise the relative size of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1, and the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$, and $\frac{2}{2}$, $\frac{4}{4}$ and 1.								✓							
2Nf.06 Understand and visualise that wholes, halves and quarters can be combined to create new fractions.		✓						✓							
2Gt.01 Order and compare units of time (seconds, minutes, hours, days, weeks, months and years).							✓					✓			
2Gt.02 Read and record time to five minutes in digital notation (12-hour) and on analogue clocks.												✓			
2Gt.03 Interpret and use the information in calendars.							✓								
2Gg.01 Identify, describe, sort, name and sketch 2D shapes by their properties, including reference to regular polygons, number of sides and vertices. Recognise these shapes in different positions and orientations.		✓													
2Gg.02 Understand that a circle has a centre and any point on the boundary is at the same distance from the centre.											✓				
2Gg.03 Understand that length is a fixed distance between two points. Estimate and measure lengths using non-standard or standard units.			✓												
2Gg.04 Draw and measure lines, using standard units.			✓												
2Gg.05 Identify, describe, sort and name 3D shapes by their properties, including reference to number and shapes of faces, edges and vertices.		✓													
2Gg.06 Understand that mass is the quantity of matter in an object. Estimate and measure familiar objects using non-standard or standard units.													✓		
2Gg.07 Understand that capacity is the maximum amount that an object can contain. Estimate and measure the capacity of familiar objects using non-standard or standard units.													✓		

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
2Gg.08 Identify 2D and 3D shapes in familiar objects.		✓													
2Gg.09 Identify a horizontal or vertical line of symmetry on 2D shapes and patterns.		✓													
2Gg.10 Predict and check how many times a shape looks identical as it completes a full turn.											✓				
2Gg.11 Understand that an angle is a description of a turn, including reference to the terms whole, half and quarter turns, both clockwise and anticlockwise.											✓				
2Gg.12 Understand a measuring scale as a continuous number line where intermediate points have value.			✓										✓		
2Gp.01 Use knowledge of position and direction to describe movement.															✓
2Gp.02 Sketch the reflection of a 2D shape in a vertical mirror line, including where the mirror line is the edge of the shape.		✓													✓
2Ss.01 Conduct an investigation to answer non-statistical and statistical questions (categorical data).				✓					✓						
2Ss.02 Record, organise and represent categorical data. Choose and explain which representation to use in a given situation: - lists and tables - Venn and Carroll diagrams - tally charts - block graphs and pictograms.				✓					✓						
2Ss.03 Describe data, identifying similarities and variations to answer non-statistical and statistical questions and discuss conclusions.				✓					✓						
2Sp.01 Use familiar language associated with patterns and randomness, including regular pattern and random pattern.														✓	
2Sp.02 Conduct chance experiments with two outcomes, and present and describe the results.														✓	

Curriculum framework correlation

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The following table shows how the learning objectives map to the Cambridge Primary Mathematics Stage 3 resources, including the Learner's Book, Workbook and Teacher's Resource.

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Nc.01 Estimate the number of objects or people (up to 1000).	✓																
3Nc.02 Count on and count back in steps of constant size: 1-digit numbers, tens or hundreds, starting from any number (from 0 to 1000).	✓		✓		✓				✓		✓						
3Nc.03 Use knowledge of even and odd numbers up to 10 to recognise and sort numbers.					✓												

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Nc.04 Recognise the use of an object to represent an unknown quantity in addition and subtraction calculations.			✓						✓								
3Nc.05 Recognise and extend linear sequences, and describe the term-to-term rule.					✓						✓						
3Nc.06 Extend spatial patterns formed from adding and subtracting a constant.																	✓
3Nm.01 Interpret money notation for currencies that use a decimal point.			✓														
3Nm.02 Add and subtract amounts of money to give change.			✓														

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Ni.01 Recite, read and write number names and whole numbers (from 0 to 1000).	✓		✓						✓								
3Ni.02 Understand the commutative and associative properties of addition, and use these to simplify calculations.			✓						✓								
3Ni.03 Recognise complements of 100 and complements of multiples of 10 or 100 (up to 1000).									✓								
3Ni.04 Estimate, add and subtract whole numbers with up to three digits (regrouping of ones or tens).			✓						✓								

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Ni.05 Understand and explain the relationship between multiplication and division.					✓						✓						
3Ni.06 Understand and explain the commutative and distributive properties of multiplication, and use these to simplify calculations.					✓						✓						
3Ni.07 Know 1, 2, 3, 4, 5, 6, 8, 9 and 10 times tables.					✓						✓						
3Ni.08 Estimate and multiply whole numbers up to 100 by 2, 3, 4 and 5.											✓						
3Ni.09 Estimate and divide whole numbers up to 100 by 2, 3, 4 and 5.											✓						

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Ni.10 Recognise multiples of 2, 5 and 10 (up to 1000).					✓												
3Np.01 Understand and explain that the value of each digit is determined by its position in that number (up to 3-digit numbers).	✓		✓						✓								
3Np.02 Use knowledge of place value to multiply whole numbers by 10.					✓												
3Np.03 Compose, decompose and regroup 3-digit numbers, using hundreds, tens and ones.	✓		✓						✓								

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Np.04 Understand the relative size of quantities to compare and order 3-digit positive numbers, using the symbols =, > and <.	✓																
3Np.05 Round 3-digit numbers to the nearest 10 or 100.	✓																
3Nf.01 Understand and explain that fractions are several equal parts of an object or shape and all the parts, taken together, equal one whole.							✓					✓					

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Nf.02 Understand that the relationship between the whole and the parts depends on the relative size of each, regardless of their shape or orientation.							✓					✓					
3Nf.03 Understand and explain that fractions can describe equal parts of a quantity or set of objects.												✓	✓				
3Nf.04 Understand that a fraction can be represented as a division of the numerator by the denominator (half, quarter and three-quarters).												✓					

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Nf.05 Understand that fractions (half, quarter, three-quarters, third and tenth) can act as operators.							✓					✓					
3Nf.06 Recognise that two fractions can have an equivalent value (halves, quarters, fifths and tenths).							✓					✓					
3Nf.07 Estimate, add and subtract fractions with the same denominator (within one whole).												✓					
3Nf.08 Use knowledge of equivalence to compare and order unit fractions and fractions with the same denominator, using the symbols =, > and <.												✓					

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Gt.01 Choose the appropriate unit of time for familiar activities.														✓			
3Gt.02 Read and record time accurately in digital notation (12-hour) and on analogue clocks.								✓									
3Gt.03 Interpret and use the information in timetables (12-hour clock).														✓			
3Gt.04 Understand the difference between a time and a time interval. Find time intervals between the same units in days, weeks, months and years.														✓			

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Gg.01 Identify, describe, classify, name and sketch 2D shapes by their properties. Differentiate between regular and irregular polygons.						✓											
3Gg.02 Estimate and measure lengths in centimetres (cm), metres (m) and kilometres (km). Understand the relationship between units.						✓											
3Gg.03 Understand that perimeter is the total distance around a 2D shape and can be calculated by adding lengths, and area is how much space a 2D shape						✓											

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
occupies within its boundary.																	
3Gg.04 Draw lines, rectangles and squares. Estimate, measure and calculate the perimeter of a shape, using appropriate metric units, and area on a square grid.						✓											
3Gg.05 Identify, describe, sort, name and sketch 3D shapes by their properties.				✓													
3Gg.06 Estimate and measure the mass of objects in grams (g) and kilograms (kg). Understand the relationship between units.													✓				

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Gg.07 Estimate and measure capacity in millilitres (m*l*) and litres (*l*), and understand their relationships.													✓				
3Gg.08 Recognise pictures, drawings and diagrams of 3D shapes.				✓													
3Gg.09 Identify both horizontal and vertical lines of symmetry on 2D shapes and patterns.																	✓
3Gg.10 Compare angles with a right angle. Recognise that a straight line is equivalent to two right angles or a half turn.															✓		

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
3Gg.11 Use instruments that measure length, mass, capacity and temperature.						✓							✓				
3Gp.01 Interpret and create descriptions of position, direction and movement, including reference to cardinal points.															✓		
3Gp.02 Sketch the reflection of a 2D shape in a horizontal or vertical mirror line, including where the mirror line is the edge of the shape.																	✓
3Ss.01 Conduct an investigation to answer non-statistical and statistical questions		✓															

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
(categorical and discrete data).																	
3Ss.02 Record, organise and represent categorical and discrete data. Choose and explain which representation to use in a given situation: - Venn and Carroll diagrams - tally charts and frequency tables - pictograms and bar charts.		✓								✓							
3Ss.03 Interpret data, identifying similarities and variations, within data sets, to answer non-statistical and statistical questions and		✓								✓							

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
discuss conclusions.																	
3Sp.01 Use familiar language associated with chance to describe events, including 'it will happen', 'it will not happen', 'it might happen'.																✓	
3Sp.02 Conduct chance experiments, and present and describe the results.																✓	

Curriculum framework correlation

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The following table shows how the learning objectives map to the Cambridge Primary Mathematics Stage 4 resources, including the Learner's Book, Workbook and Teacher's Resource.

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
4Nc.01 Count on and count back in steps of constant size: 1-digit numbers, tens, hundreds or thousands, starting from any number, and extending beyond zero to include negative numbers.	✓																	
4Nc.02 Recognise and explain generalisations when adding and subtracting combinations of even and odd numbers.			✓															
4Nc.03 Recognise the use of objects, shapes or symbols to represent unknown quantities in addition and subtraction calculations.			✓															
4Nc.04 Recognise and extend linear and non-linear sequences, and describe the term-to-term rule.	✓																	

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
4Nc.05 Recognise and extend the spatial pattern of square numbers.	✓														[part]			
4Ni.01 Read and write number names and whole numbers greater than 1000 and less than 0.	[part]																	
4Ni.02 Estimate, add and subtract whole numbers with up to three digits.			✓										✓					
4Ni.03 Understand the associative property of multiplication, and use this to simplify calculations.					✓													
4Ni.04 Know all times tables from 1 to 10.					✓													
4Ni.05 Estimate and multiply whole numbers up to 1000 by 1-digit whole numbers.					✓												✓	
4Ni.06 Estimate and divide whole numbers up to 100 by 1-digit whole numbers.									✓								✓	
4Ni.07 Understand the relationship between multiples and factors.					✓										✓			
4Ni.08 Use knowledge of factors and multiples to understand tests of divisibility by 2, 5, 10, 25, 50 and 100.															✓			

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
4Np.01 Understand and explain that the value of each digit in numbers is determined by its position in that number.	✓																	
4Np.02 Use knowledge of place value to multiply and divide whole numbers by 10 and 100.	✓																	
4Np.03 Compose, decompose and regroup whole numbers.	✓		✓															
4Np.04 Understand the relative size of quantities to compare and order positive and negative numbers, using the symbols =, > and <.	✓								[part]						[part]			
4Np.05 Round numbers to the nearest 10, 100, 1000, 10 000 or 100 000.									✓									
4Nf.01 Understand that the more parts a whole is divided into, the smaller the parts become.							✓											
4Nf.02 Understand that a fraction can be represented as a division of the numerator by the denominator (unit fractions and three-quarters).							✓											
4Nf.03 Understand that unit fractions can act as operators.							✓											

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
4Nf.04 Recognise that two proper fractions can have an equivalent value.											✓							
4Nf.05 Estimate, add and subtract fractions with the same denominator.													✓					
4Nf.06 Understand percentage as the number of parts in each hundred, and use the percentage symbol (%).											✓							
4Nf.07 Use knowledge of equivalence to compare and order proper fractions, using the symbols =, > and <.											✓							
4Gt.01 Understand the direct relationship between units of time, and convert between them.		✓																
4Gt.02 Read and record time accurately in digital notation (12- and 24-hour) and on analogue clocks.		✓																
4Gt.03 Interpret and use the information in timetables (12- and 24-hour clock).		✓																
4Gt.04 Find time intervals between different units: – days, weeks, months and years – seconds, minutes and hours that do not bridge through 60.		✓																

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
4Gg.01 Investigate what shapes can be made if two or more shapes are combined, and analyse their properties, including reference to tessellation.						✓												
4Gg.02 Estimate and measure perimeter and area of 2D shapes, understanding that two areas can be added together to calculate the area of a compound shape.														✓				
4Gg.03 Draw rectangles and squares on square grids, and measure their perimeter and area. Derive and use formulae to calculate areas and perimeters of rectangles and squares.														✓				
4Gg.04 Estimate the area of irregular shapes on a square grid (whole and part squares).														✓				
4Gg.05 Identify 2D faces of 3D shapes, and describe their properties.												✓						
4Gg.06 Match nets to their corresponding 3D shapes.												✓						
4Gg.07 Identify all horizontal, vertical and diagonal lines of symmetry on 2D shapes and patterns.						✓												

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
4Gg.08 Estimate, compare and classify angles, using geometric vocabulary including acute, right and obtuse.								✓										
4Gg.09 Use knowledge of fractions to read and interpret a measuring scale.							✓											
4Gp.01 Interpret and create descriptions of position, direction and movement, including reference to cardinal and ordinal points, and their notations.																		✓
4Gp.02 Understand that position can be described using coordinate notation. Read and plot coordinates in the first quadrant (with the aid of a grid).																		✓
4Gp.03 Reflect 2D shapes in a horizontal or vertical mirror line, including where the mirror line is the edge of the shape, on square grids.																		✓
4Ss.01 Plan and conduct an investigation to answer statistical questions, considering what data to collect (categorical and discrete data).										✓								

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
4Ss.02 Record, organise and represent categorical and discrete data. Choose and explain which representation to use in a given situation: – Venn and Carroll diagrams – tally charts and frequency tables – pictograms and bar charts – dot plots (one dot per count).										✓						✓		
4Ss.03 Interpret data, identifying similarities and variations, within and between data sets, to answer statistical questions. Discuss conclusions, considering the sources of variation.																✓		
4Sp.01 Use language associated with chance to describe familiar events, including reference to maybe, likely, certain, impossible.				✓														
4Sp.02 Conduct chance experiments, using small and large numbers of trials, and present and describe the results using the language of probability.				✓														

Curriculum framework correlation

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The following table shows how the learning objectives map to the Cambridge Primary Mathematics Stage 5 resources, including the Learner's Book, Workbook and Teacher's Resource.

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
5Nc.01 Count on and count back in steps of constant size, and extend beyond zero to include negative numbers.			✓															
5Nc.02 Recognise the use of objects, shapes or symbols to represent two unknown quantities in addition and subtraction calculations.					✓													
5Nc.03 Use the relationship between repeated addition of a constant and multiplication to find any term of a linear sequence.			✓															
5Nc.04 Recognise and extend the spatial pattern of square and triangular numbers.			✓															
5Ni.01 Estimate, add and subtract integers, including where one integer is negative.					✓													
5Ni.02 Understand which law of arithmetic to apply to simplify calculations.																	✓	
5Ni.03 Understand that the four operations follow a particular order.																	✓	

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
5Ni.04 Estimate and multiply whole numbers up to 1000 by 1-digit or 2-digit whole numbers.											✓							
5Ni.05 Estimate and divide whole numbers up to 1000 by 1-digit whole numbers.											✓							
5Ni.06 Understand and explain the difference between prime and composite numbers.			✓															
5Ni.07 Use knowledge of factors and multiples to understand tests of divisibility by 4 and 8.											✓							
5Ni.08 Use knowledge of multiplication to recognise square numbers (from 1 to 100).			✓															
5Np.01 Understand and explain the value of each digit in decimals (tenths and hundredths).	✓																	
5Np.02 Use knowledge of place value to multiply and divide whole numbers by 10, 100 and 1000.	✓																	
5Np.03 Use knowledge of place value to multiply and divide decimals by 10 and 100.	✓																	
5Np.04 Compose, decompose and regroup numbers, including decimals (tenths and hundredths).	✓				✓													
5Np.05 Round numbers with one decimal place to the nearest whole number.	✓																	
5Nf.01 Understand that a fraction can be represented as a division of the numerator by the denominator (unit fractions, three-quarters, tenths and hundredths).							✓											

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
5Nf.02 Understand that proper fractions can act as operators.							✓											
5Nf.03 Recognise that improper fractions and mixed numbers can have an equivalent value.							✓											
5Nf.04 Recognise that proper fractions, decimals (one decimal place) and percentages can have equivalent values.							✓											
5Nf.05 Estimate, add and subtract fractions with the same denominator and denominators that are multiples of each other.									✓									
5Nf.06 Estimate, multiply and divide unit fractions by a whole number.															✓			
5Nf.07 Recognise percentages of shapes, and write percentages as a fraction with denominator 100.							✓											
5Nf.08 Understand the relative size of quantities to compare and order numbers with one decimal place, proper fractions with the same denominator and percentages, using the symbols =, > and <.							✓											
5Nf.09 Estimate, add and subtract numbers with the same number of decimal places.					✓													
5Nf.10 Estimate and multiply numbers with one decimal place by 1-digit whole numbers.															✓			

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
5Nf.11 Understand that: - a proportion compares part to whole - a ratio compares part to part of two or more quantities.													✓					
5Gt.01 Understand time intervals less than one second.																✓		
5Gt.02 Compare times between time zones in digital notation (12- and 24-hour) and on analogue clocks.																✓		
5Gt.03 Find time intervals in seconds, minutes and hours that bridge through 60.																✓		
5Gt.04 Recognise that a time interval can be expressed as a decimal, or in mixed units.																✓		
5Gg.01 Identify, describe, classify and sketch isosceles, equilateral or scalene triangles, including reference to angles and symmetrical properties.		✓																
5Gg.02 Estimate and measure perimeter and area of 2D shapes, understanding that shapes with the same perimeter can have different areas and vice versa.														✓				
5Gg.03 Draw compound shapes that can be divided into rectangles and squares. Estimate, measure and calculate their perimeter and area.														✓				
5Gg.04 Identify, describe and sketch 3D shapes in different orientations.						✓												
5Gg.05 Identify and sketch different nets for a cube.						✓												

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
5Gg.06 Use knowledge of reflective symmetry to identify and complete symmetrical patterns.		✓																
5Gg.07 Estimate, compare and classify angles, using geometric vocabulary including acute, right, obtuse and reflex.										✓								
5Gg.08 Know that the sum of the angles on a straight line is 180° and use this to calculate missing angles on a straight line.										✓								
5Gp.01 Compare the relative position of coordinates (with or without the aid of a grid).																		✓
5Gp.02 Use knowledge of 2D shapes and coordinates to plot points to form lines and shapes in the first quadrant (with the aid of a grid).																		✓
5Gp.03 Translate 2D shapes, identifying the corresponding points between the original and the translated image, on square grids.																		✓
5Gp.04 Reflect 2D shapes in both horizontal and vertical mirror lines to create patterns on square grids.		✓																
5Ss.01 Plan and conduct an investigation to answer a set of related statistical questions, considering what data to collect (categorical, discrete and continuous data).												✓						

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
5Ss.02 Record, organise and represent categorical, discrete and continuous data. Choose and explain which representation to use in a given situation: - Venn and Carroll diagrams - tally charts and frequency tables - bar charts - waffle diagrams - frequency diagrams for continuous data - line graphs - dot plots (one dot per data point).												✓						
5Ss.03 Understand that the mode and median are ways to describe and summarise data sets. Find and interpret the mode and the median, and consider their appropriateness for the context.				✓														
5Ss.04 Interpret data, identifying patterns, within and between data sets, to answer statistical questions. Discuss conclusions, considering the sources of variation.												✓						
5Sp.01 Use the language associated with probability to describe and compare likelihood and risk of familiar events, including those with equally likely outcomes.								✓										
5Sp.02 Recognise that some outcomes are equally likely to happen and some outcomes are more (or less) likely to happen, when doing practical activities.								✓										

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18
5Sp.03 Conduct chance experiments or simulations, using small and large numbers of trials, and present and describe the results using the language of probability.								✓										

Curriculum framework correlation

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The following table shows how the learning objectives map to the Cambridge Primary Mathematics Stage 6 resources, including the Learner's Book, Workbook and Teacher's Resource.

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
6Nc.01 Count on and count back in steps of constant size, including fractions and decimals, and extend beyond zero to include negative numbers.		✓															
6Nc.02 Recognise the use of letters to represent quantities that vary in addition and subtraction calculations.				✓													
6Nc.03 Use the relationship between repeated addition of a constant and multiplication to find and use a position-to-term rule.		✓															
6Nc.04 Use knowledge of square numbers to generate terms in a sequence, given its position.		✓															
6Ni.01 Estimate, add and subtract integers.				✓													
6Ni.02 Use knowledge of laws of arithmetic and order of operations to simplify calculations.																✓	
6Ni.03 Understand that brackets can be used to alter the order of operations.																✓	
6Ni.04 Estimate and multiply whole numbers up to 10 000 by 1-digit or 2-digit whole numbers.										✓							
6Ni.05 Estimate and divide whole numbers up to 1000 by 1-digit or 2-digit whole numbers.										✓							

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
6Ni.06 Understand common multiples and common factors.		✓															
6Ni.07 Use knowledge of factors and multiples to understand tests of divisibility by 3, 6 and 9.										✓							
6Ni.08 Use knowledge of multiplication and square numbers to recognise cube numbers (from 1 to 125).		✓															
6Np.01 Understand and explain the value of each digit in decimals (tenths, hundredths and thousandths).	✓																
6Np.02 Use knowledge of place value to multiply and divide whole numbers and decimals by 10, 100 and 1000.	✓																
6Np.03 Compose, decompose and regroup numbers, including decimals (tenths, hundredths and thousandths).	✓							✓									
6Np.04 Round numbers with 2 decimal places to the nearest tenth or whole number.	✓																
6Nf.01 Understand that a fraction can be represented as a division of the numerator by the denominator (proper and improper fractions).						✓											
6Nf.02 Understand that proper and improper fractions can act as operators.						✓											
6Nf.03 Use knowledge of equivalence to write fractions in their simplest form.						✓											
6Nf.04 Recognise that fractions, decimals (one or two decimal places) and percentages can have equivalent values.						✓											
6Nf.05 Estimate, add and subtract fractions with different denominators.								✓									

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
6Nf.06 Estimate, multiply and divide proper fractions by whole numbers.														✓			
6Nf.07 Recognise percentages (1%, and multiples of 5% up to 100%) of shapes and whole numbers.						✓											
6Nf.08 Understand the relative size of quantities to compare and order numbers with one or two decimal places, proper fractions with different denominators and percentages, using the symbols =, > and <.						✓											
6Nf.09 Estimate, add and subtract numbers with the same or different number of decimal places.								✓									
6Nf.10 Estimate and multiply numbers with one or two decimal places by 1-digit and 2-digit whole numbers.														✓			
6Nf.11 Estimate and divide numbers with one or two decimal places by whole numbers.														✓			
6Nf.12 Understand the relationship between two quantities when they are in direct proportion.												✓					
6Nf.13 Use knowledge of equivalence to understand and use equivalent ratios.												✓					
6Gt.01 Convert between time intervals expressed as a decimal and in mixed units.							✓										
6Gg.01 Identify, describe, classify and sketch quadrilaterals, including reference to angles, symmetrical properties, parallel sides and diagonals.					✓												
6Gg.02 Know the parts of a circle: - centre - radius - diameter - circumference.					✓												

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
6Gg.03 Use knowledge of area of rectangles to estimate and calculate the area of right-angled triangles.							✓										
6Gg.04 Identify, describe and sketch compound 3D shapes.											✓						
6Gg.05 Understand the difference between capacity and volume.											✓						
6Gg.06 Identify and sketch different nets for cubes, cuboids, prisms and pyramids.											✓						
6Gg.07 Understand the relationship between area of 2D shapes and surface area of 3D shapes.											✓						
6Gg.08 Identify rotational symmetry in familiar shapes, patterns or images with maximum order 4. Describe rotational symmetry as 'order x'.					✓												
6Gg.09 Classify, estimate, measure and draw angles.													✓				
6Gg.10 Know that the sum of the angles in a triangle is 180°, and use this to calculate missing angles in a triangle.													✓				
6Gg.11 Construct circles of a specified radius or diameter.					✓												
6Gp.01 Read and plot coordinates including integers, fractions and decimals, in all four quadrants (with the aid of a grid).																	✓
6Gp.02 Use knowledge of 2D shapes and coordinates to plot points to form lines and shapes in all four quadrants.																	✓
6Gp.03 Translate 2D shapes, identifying the corresponding points between the original and the translated image, on coordinate grids.																	✓

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
6Gp.04 Reflect 2D shapes in a given mirror line (vertical, horizontal and diagonal), on square grids.																	✓
6Gp.05 Rotate shapes 90° around a vertex (clockwise or anticlockwise).																	✓
6Ss.01 Plan and conduct an investigation and make predictions for a set of related statistical questions, considering what data to collect (categorical, discrete and continuous data).															✓		
6Ss.02 Record, organise and represent categorical, discrete and continuous data. Choose and explain which representation to use in a given situation: - Venn and Carroll diagrams - tally charts and frequency tables - bar charts - waffle diagrams and pie charts - frequency diagrams for continuous data - line graphs - scatter graphs - dot plots.															✓		
6Ss.03 Understand that the mode, median, mean and range are ways to describe and summarise data sets. Find and interpret the mode (including bimodal data), median, mean and range, and consider their appropriateness for the context.			✓														
6Ss.04 Interpret data, identifying patterns, within and between data sets, to answer statistical questions. Discuss conclusions, considering the sources of variation, and check predictions.															✓		
6Sp.01 Use the language associated with probability and proportion to describe and compare possible outcomes.									✓								

Curriculum framework objective	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17
6Sp.02 Identify when two events can happen at the same time and when they cannot, and know that the latter are called 'mutually exclusive'.									✓								
6Sp.03 Recognise that some probabilities can only be modelled through experiments using a large number of trials.									✓								
6Sp.04 Conduct chance experiments or simulations, using small and large numbers of trials. Predict, analyse and describe the frequency of outcomes using the language of probability.									✓								

Curriculum framework correlation

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The following table shows how the learning objectives map to the Cambridge Lower Secondary Mathematics Stage 7 resources, including the Learner's Book, Workbook and Teacher's Resource.

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
7Ni.01 Estimate, add and subtract integers, recognising generalisations.	✓															
7Ni.02 Understand that brackets, positive indices and operations follow a particular order.	✓	✓														
7Ni.03 Estimate, multiply and divide integers including where one integer is negative.	✓															
7Ni.04 Understand lowest common multiple and highest common factor (numbers less than 100).	✓															
7Ni.05 Use knowledge of tests of divisibility to find factors of numbers greater than 100.	✓															
7Ni.06 Understand the relationship between squares and corresponding square roots, and cubes and corresponding cube roots.	✓															
7Np.01 Use knowledge of place value to multiply and divide whole numbers and decimals by any positive power of 10.			✓													
7Np.02 Round numbers to a given number of decimal places.			✓													
7Nf.01 Recognise that fractions, terminating decimals and percentages have equivalent values										✓						

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
7Nf.02 Estimate and add mixed numbers, and write the answer as a mixed number in its simplest form.							✓									
7Nf.03 Estimate, multiply and divide proper fractions.							✓									
7Nf.04 Use knowledge of common factors, laws of arithmetic and order of operations to simplify calculations containing decimals or fractions.				✓			✓									
7Nf.05 Recognise percentages of shapes and whole numbers, including percentages less than 1 or greater than 100.										✓						
7Nf.06 Understand the relative size of quantities to compare and order decimals and fractions, using the symbols =, ≠, > and <.				✓			✓									
7Nf.07 Estimate, add and subtract positive and negative numbers with the same or different number of decimal places.				✓												
7Nf.08 Estimate, multiply and divide decimals by whole numbers.				✓												
7Nf.09 Understand and use the unitary method to solve problems involving ratio and direct proportion in a range of contexts.												✓				
7Nf.10 Use knowledge of equivalence to simplify and compare ratios (same units).												✓				
7Nf.11 Understand how ratios are used to compare quantities to divide an amount into a given ratio with two parts.												✓				
7Ae.01 Understand that letters can be used to represent unknown numbers, variables or constants.		✓														
7Ae.02 Understand that the laws of arithmetic and order of operations apply to algebraic terms and expressions (four operations).		✓														

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
7Ae.03 Understand how to manipulate algebraic expressions including: – collecting like terms – applying the distributive law with a constant.		✓														
7Ae.04 Understand that a situation can be represented either in words or as an algebraic expression, and move between the two representations (linear with integer coefficients).		✓														
7Ae.05 Understand that a situation can be represented either in words or as a formula (single operation), and move between the two representations.		✓														
7Ae.06 Understand that a situation can be represented either in words or as an equation. Move between the two representations and solve the equation (integer coefficients, unknown on one side).		✓														
7Ae.07 Understand that letters can represent an open interval (one term).		✓														
7As.01 Understand term-to-term rules, and generate sequences from numerical and spatial patterns (linear and integers).									✓							
7As.02 Understand and describe nth term rules algebraically (in the form $n \pm a$, $a \times n$ where a is a whole number).									✓							
7As.03 Understand that a function is a relationship where each input has a single output. Generate outputs from a given function and identify inputs from a given output by considering inverse operations (linear and integers).									✓							

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
7As.04 Understand that a situation can be represented either in words or as a linear function in two variables (of the form $y = x + c$ or $y = mx$), and move between the two representations.											✓					
7As.05 Use knowledge of coordinate pairs to construct tables of values and plot the graphs of linear functions, where y is given explicitly in terms of x ($y = x + c$ or $y = mx$).											✓					
7As.06 Recognise straight-line graphs parallel to the x- or y-axis.											✓					
7As.07 Read and interpret graphs related to rates of change. Explain why they have a specific shape.											✓					
7Gg.01 Identify, describe and sketch regular polygons, including reference to sides, angles and symmetrical properties.								✓								
7Gg.02 Understand that if two 2D shapes are congruent, corresponding sides and angles are equal.								✓								
7Gg.03 Know the parts of a circle: – centre – radius – diameter – circumference – chord – tangent								✓								
7Gg.04 Understand the relationships and convert between metric units of area, including hectares (ha), square metres (m^2), square centimetres (cm^2) and square millimetres (mm^2).															✓	

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
7Gg.05 Derive and know the formula for the area of a triangle. Use the formula to calculate the area of triangles and compound shapes made from rectangles and triangles.															✓	
7Gg.06 Identify and describe the combination of properties that determine a specific 3D shape.								✓								
7Gg.07 Derive and use a formula for the volume of a cube or cuboid. Use the formula to calculate the volume of compound shapes made from cuboids, in cubic metres (m^3), cubic centimetres (cm^3) and cubic millimetres (mm^3).															✓	
7Gg.08 Visualise and represent front, side and top view of 3D shapes.								✓								
7Gg.09 Use knowledge of area, and properties of cubes and cuboids to calculate their surface area.															✓	
7Gg.10 Identify reflective symmetry and order of rotational symmetry of 2D shapes and patterns.								✓								
7Gg.11 Derive the property that the sum of the angles in a quadrilateral is 360°, and use this to calculate missing angles.					✓											
7Gg.12 Know that the sum of the angles around a point is 360°, and use this to calculate missing angles.					✓											
7Gg.13 Recognise the properties of angles on: – parallel lines and transversals – perpendicular lines					✓											
7Gg.14 Draw parallel and perpendicular lines, and quadrilaterals.					✓											
7Gp.01 Use knowledge of scaling to interpret maps and plans.														✓		

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
7Gp.02 Use knowledge of 2D shapes and coordinates to find the distance between two coordinates that have the same x or y coordinate (without the aid of a grid).														✓		
7Gp.03 Use knowledge of translation of 2D shapes to identify the corresponding points between the original and the translated image, without the use of a grid.														✓		
7Gp.04 Reflect 2D shapes on coordinate grids, in a given mirror line (x- or y-axis), recognising that the image is congruent to the object after a reflection.														✓		
7Gp.05 Rotate shapes 90° and 180° around a centre of rotation, recognising that the image is congruent to the object after a rotation.														✓		
7Gp.06 Understand that the image is mathematically similar to the object after enlargement. Use positive integer scale factors to perform and identify enlargements.														✓		
7Ss.01 Select and trial data collection and sampling methods to investigate predictions for a set of related statistical questions, considering what data to collect (categorical, discrete and continuous data)						✓										
7Ss.02 Understand the effect of sample size on data collection and analysis.						✓										

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
7Ss.03 Record, organise and represent categorical, discrete and continuous data. Choose and explain which representation to use in a given situation: – Venn and Carroll diagrams – tally charts, frequency tables and two-way tables – dual and compound bar charts – waffle diagrams and pie charts – frequency diagrams for continuous data – line graphs – scatter graphs – infographics.																✓
7Sp.01 Use the language associated with probability and proportion to describe, compare, order and interpret the likelihood of outcomes.						✓										
7Sp.02 Understand and explain that probabilities range from 0 to 1, and can be represented as proper fractions, decimals and percentages.													✓			
7Sp.03 Identify all the possible mutually exclusive outcomes of a single event, and recognise when they are equally likely to happen.													✓			
7Sp.04 Understand how to find the theoretical probabilities of equally likely outcomes.													✓			
7Sp.05 Design and conduct chance experiments or simulations, using small and large numbers of trials. Analyse the frequency of outcomes to calculate experimental probabilities.													✓			

Curriculum framework correlation

These learning objectives are reproduced from the Cambridge Primary Mathematics curriculum framework from 2020.

The following table shows how the learning objectives map to the Cambridge Lower Secondary Mathematics Stage 8 resources, including the Learner's Book, Workbook and Teacher's Resource.

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Ni.01 Understand that brackets, indices (square and cube roots) and operations follow a particular order.		✓														
8Ni.02 Estimate, multiply and divide integers, recognising generalisations.	✓															
8Ni.03 Understand factors, multiples, prime factors, highest common factors and lowest common multiples.	✓															

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Ni.04 Understand the hierarchy of natural numbers, integers and rational numbers.	✓															
8Ni.05 Use positive and zero indices, and the index laws for multiplication and division.	✓															
8Ni.06 Recognise squares of negative and positive numbers, and corresponding square roots.	✓															
8Ni.07 Recognise positive and negative cube numbers, and the corresponding cube roots.	✓															
8Np.01 Use knowledge of place value to multiply and divide integers and decimals by 0.1 and 0.01			✓													

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Np.02 Round numbers to a given number of significant figures.			✓													
8Nf.01 Recognise fractions that are equivalent to recurring decimals.							✓									
8Nf.02 Estimate and subtract mixed numbers, and write the answer as a mixed number in its simplest form.							✓									
8Nf.03 Estimate and multiply an integer by a mixed number, and divide an integer by a proper fraction.						✓										
8Nf.04 Use knowledge of the laws of arithmetic and order of operations (including brackets) to simplify calculations containing decimals or fractions.				✓			✓									

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Nf.05 Understand percentage increase and decrease, and absolute change.										✓						
8Nf.06 Understand the relative size of quantities to compare and order decimals and fractions (positive and negative), using the symbols =, ≠, >, <, ≤ and ≥.				✓			✓									
8Nf.07 Estimate and multiply decimals by integers and decimals.				✓												
8Nf.08 Estimate and divide decimals by numbers with one decimal place.				✓												
8Nf.09 Understand and use the relationship between ratio and direct proportion.												✓				

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Nf.10 Use knowledge of equivalence to simplify and compare ratios (different units).												✓				
8Nf.11 Understand how ratios are used to compare quantities to divide an amount into a given ratio with two or more parts.												✓				
8Ae.01 Understand that letters have different meanings in expressions, formulae and equations		✓														
8Ae.02 Understand that the laws of arithmetic and order of operations apply to algebraic terms and expressions (four operations, squares and cubes).		✓														

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Ae.03 Understand how to manipulate algebraic expressions including: - applying the distributive law with a single term (squares and cubes) - identifying the highest common factor to factorise.		✓														
8Ae.04 Understand that a situation can be represented either in words or as an algebraic expression, and move between the two representations (linear with integer or fractional coefficients).		✓														

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Ae.05 Understand that a situation can be represented either in words or as a formula (mixed operations), and manipulate using knowledge of inverse operations to change the subject of a formula.		✓														
8Ae.06 Understand that a situation can be represented either in words or as an equation. Move between the two representations and solve the equation (integer or fractional coefficients, unknown on either or both sides).		✓														
8Ae.07 Understand that letters can represent open and closed intervals (two terms).		✓														

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8As.01 Understand term-to-term rules, and generate sequences from numerical and spatial patterns (including fractions).									✓							
8As.02 Understand and describe *n*th term rules algebraically (in the form $n \pm a$, $a \times n$, or $an \pm b$, where a and b are positive or negative integers or fractions).									✓							
8As.03 Understand that a function is a relationship where each input has a single output. Generate outputs from a given function and identify inputs from a given output by considering inverse operations (including fractions).									✓							

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8As.04 Understand that a situation can be represented either in words or as a linear function in two variables (of the form $y = mx + c$), and move between the two representations.											✓					
8As.05 Use knowledge of coordinate pairs to construct tables of values and plot the graphs of linear functions, where y is given explicitly in terms of x($y = mx + c$).											✓					
8As.06 Recognise that equations of the form $y = mx + c$ correspond to straight-line graphs, where m is the gradient and c is the y-intercept (integer values of m).											✓					

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8As.07 Read and interpret graphs with more than one component. Explain why they have a specific shape and the significance of intersections of the graphs.											✓					
8Gg.01 Identify and describe the hierarchy of quadrilaterals.								✓								
8Gg.02 Understand π as the ratio between a circumference and a diameter. Know and use the formula for the circumference of a circle.								✓								
8Gg.03 Know that distances can be measured in miles or kilometres, and that a kilometre is approximately $\frac{5}{8}$ of a mile or a mile is 1.6 kilometres.															✓	

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Gg.04 Use knowledge of rectangles, squares and triangles to derive the formulae for the area of parallelograms and trapezia. Use the formulae to calculate the area of parallelograms and trapezia.															✓	
8Gg.05 Understand and use Euler's formula to connect number of vertices, faces and edges of 3D shapes.								✓								
8Gg.06 Use knowledge of area and volume to derive the formula for the volume of a triangular prism. Use the formula to calculate the volume of triangular prisms.															✓	

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Gg.07 Represent front, side and top view of 3D shapes to scale.								✓								
8Gg.08 Use knowledge of area, and properties of cubes, cuboids, triangular prisms and pyramids to calculate their surface area.															✓	
8Gg.09 Understand that the number of sides of a regular polygon is equal to the number of lines of symmetry and the order of rotation.								✓								
8Gg.10 Derive and use the fact that the exterior angle of a triangle is equal to the sum of the two interior opposite angles.					✓											

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Gg.11 Recognise and describe the properties of angles on parallel and intersecting lines, using geometric vocabulary such as alternate, corresponding and vertically opposite.					✓											
8Gg.12 Construct triangles, midpoint and perpendicular bisector of a line segment, and the bisector of an angle.					✓											
8Gp.01 Understand and use bearings as a measure of direction.														✓		
8Gp.02 Use knowledge of coordinates to find the midpoint of a line segment.														✓		

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Gp.03 Translate points and 2D shapes using vectors, recognising that the image is congruent to the object after a translation.														✓		
8Gp.04 Reflect 2D shapes and points in a given mirror line on or parallel to the x- or y-axis, or $y = \pm x$ on coordinate grids. Identify a reflection and its mirror line.														✓		
8Gp.05 Understand that the centre of rotation, direction of rotation and angle are needed to identify and perform rotations.														✓		

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Ss.01 Select, trial and justify data collection and sampling methods to investigate predictions for a set of related statistical questions, considering what data to collect (categorical, discrete and continuous data).						✓										
8Ss.02 Understand the advantages and disadvantages of different sampling methods.						✓										

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Ss.03 Record, organise and represent categorical, discrete and continuous data. Choose and explain which representation to use in a given situation: - Venn and Carroll diagrams - tally charts, frequency tables and two-way tables - dual and compound bar charts - pie charts - frequency diagrams for continuous data - line graphs and time series graphs - scatter graphs - stem-and-leaf diagrams - infographics.																✓

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Ss.04 Use knowledge of mode, median, mean and range to compare two distributions, considering the interrelationship between centrality and spread.																✓
8Ss.05 Interpret data, identifying patterns, trends and relationships, within and between data sets, to answer statistical questions. Discuss conclusions, considering the sources of variation, including sampling, and check predictions.																✓
8Sp.01 Understand that complementary events are two events that have a total probability of 1.													✓			

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16
8Sp.02 Understand that tables, diagrams and lists can be used to identify all mutually exclusive outcomes of combined events (independent events only).													✓			
8Sp.03 Understand how to find the theoretical probabilities of equally likely combined events.													✓			
8Sp.04 Design and conduct chance experiments or simulations, using small and large numbers of trials. Compare the experimental probabilities with theoretical outcomes.													✓			

Curriculum framework correlation

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The following table shows how the learning objectives map to the Cambridge Lower Secondary Mathematics Stage 9 resources, including the Learner's Book, Workbook and Teacher's Resource.

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
9Ni.01 Understand the difference between rational and irrational numbers.	✓														
9Ni.02 Use positive, negative and zero indices, and the index laws for multiplication and division.	✓														
9Ni.03 Understand the standard form for representing large and small numbers.	✓														
9Ni.04 Use knowledge of square and cube roots to estimate surds.	✓														
9Np.01 Multiply and divide integers and decimals by 10 to the power of any positive or negative number.			✓												
9Np.02 Understand that when a number is rounded there are upper and lower limits for the original number.			✓												
9Nf.01 Deduce whether fractions will have recurring or terminating decimal equivalents.								✓							
9Nf.02 Estimate, add and subtract proper and improper fractions, and mixed numbers, using the order of operations.								✓							
9Nf.03 Estimate, multiply and divide fractions, interpret division as a multiplicative inverse, and cancel common factors before multiplying or dividing.								✓							

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
9Nf.04 Use knowledge of the laws of arithmetic, inverse operations, equivalence and order of operations (brackets and indices) to simplify calculations containing decimals and fractions.								✓							
9Nf.05 Understand compound percentages.			✓												
9Nf.06 Estimate, multiply and divide decimals by integers and decimals.			✓												
9Nf.07 Understand the relationship between two quantities when they are in direct or inverse proportion.											✓				
9Nf.08 Use knowledge of ratios and equivalence for a range of contexts.											✓				
9Ae.01 Understand that the laws of arithmetic and order of operations apply to algebraic terms and expressions (four operations and integer powers).		✓													
9Ae.02 Understand how to manipulate algebraic expressions including: - expanding the product of two algebraic expressions - applying the laws of indices - simplifying algebraic fractions.		✓													
9Ae.03 Understand that a situation can be represented either in words or as an algebraic expression, and move between the two representations (including squares, cubes and roots).		✓													
9Ae.04 Understand that a situation can be represented either in words or as a formula (including squares and cubes), and manipulate using knowledge of inverse operations to change the subject of a formula.		✓													
9Ae.05 Understand that a situation can be represented either in words or as an equation. Move between the two representations and solve the equation (including those with an unknown in the denominator).				✓											

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
9Ae.06 Understand that the solution of simultaneous linear equations: - is the pair of values that satisfy both equations - can be found algebraically (eliminating one variable) - can be found graphically (point of intersection).				✓											
9Ae.07 Understand that a situation can be represented either in words or as an inequality. Move between the two representations and solve linear inequalities.				✓											
9As.01 Generate linear and quadratic sequences from numerical patterns and from a given term-to-term rule (any indices).									✓						
9As.02 Understand and describe *n*th term rules algebraically (in the form $an \pm b$, where a and b are positive or negative integers or fractions, and in the form $\frac{n}{a}$, n^2, n^3 or $n^2 \pm a$, where a is a whole number).									✓						
9As.03 Understand that a function is a relationship where each input has a single output. Generate outputs from a given function and identify inputs from a given output by considering inverse operations (including indices).									✓						
9As.04 Understand that a situation can be represented either in words or as a linear function in two variables (of the form $y = mx + c$ or $ax + by = c$), and move between the two representations.										✓					
9As.05 Use knowledge of coordinate pairs to construct tables of values and plot the graphs of linear functions, including where y is given implicitly in terms of x ($ax + by = c$), and quadratic functions of the form $y = x^2 \pm a$.										✓					

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
9As.06 Understand that straight-line graphs can be represented by equations. Find the equation in the form $y = mx + c$ or where y is given implicitly in terms of x (fractional, positive and negative gradients).										✓					
9As.07 Read, draw and interpret graphs and use compound measures to compare graphs.										✓					
9Gg.01 Know and use the formulae for the area and circumference of a circle.							✓								
9Gg.02 Know and recognise very small or very large units of length, capacity and mass.							✓								
9Gg.03 Estimate and calculate areas of compound 2D shapes made from rectangles, triangles and circles.							✓								
9Gg.04 Use knowledge of area and volume to derive the formula for the volume of prisms and cylinders. Use the formula to calculate the volume of prisms and cylinders.														✓	
9Gg.05 Use knowledge of area, and properties of cubes, cuboids, triangular prisms, pyramids and cylinders to calculate their surface area.														✓	
9Gg.06 Identify reflective symmetry in 3D shapes.														✓	
9Gg.07 Derive and use the formula for the sum of the interior angles of any polygon.					✓										
9Gg.08 Know that the sum of the exterior angles of any polygon is 360°.					✓										
9Gg.09 Use properties of angles, parallel and intersecting lines, triangles and quadrilaterals to calculate missing angles.					✓										
9Gg.10 Know and use Pythagoras' theorem.					✓										
9Gg.11 Construct 60°, 45° and 30° angles and regular polygons.					✓										

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
9Gp.01 Use knowledge of bearings and scaling to interpret position on maps and plans.													✓		
9Gp.02 Use knowledge of coordinates to find points on a line segment.													✓		
9Gp.03 Transform points and 2D shapes by combinations of reflections, translations and rotations.													✓		
9Gp.04 Identify and describe a transformation (reflections, translations, rotations and combinations of these) given an object and its image.													✓		
9Gp.05 Recognise and explain that after any combination of reflections, translations and rotations the image is congruent to the object.													✓		
9Gp.06 Enlarge 2D shapes, from a centre of enlargement (outside, on or inside the shape) with a positive integer scale factor. Identify an enlargement, centre of enlargement and scale factor.													✓		
9Gp.07 Analyse and describe changes in perimeter and area of squares and rectangles when side lengths are enlarged by a positive integer scale factor.													✓		
9Ss.01 Select, trial and justify data collection and sampling methods to investigate predictions for a set of related statistical questions, considering what data to collect, and the appropriateness of each type (qualitative or quantitative; categorical, discrete or continuous).						✓									
9Ss.02 Explain potential issues and sources of bias with data collection and sampling methods, identifying further questions to ask.						✓									

Learning objectives	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
9Ss.03 Record, organise and represent categorical, discrete and continuous data. Choose and explain which representation to use in a given situation: - Venn and Carroll diagrams - tally charts, frequency tables and two-way tables - dual and compound bar charts - pie charts - line graphs, time series graphs and frequency polygons - scatter graphs - stem-and-leaf and back-to-back stem-and-leaf diagrams - infographics.															✓
9Ss.04 Use mode, median, mean and range to compare two distributions, including grouped data.															✓
9Ss.05 Interpret data, identifying patterns, trends and relationships, within and between data sets, to answer statistical questions. Make informal inferences and generalisations, identifying wrong or misleading information.						✓									✓
9Sp.01 Understand that the probability of multiple mutually exclusive events can be found by summation and all mutually exclusive events have a total probability of 1.												✓			
9Sp.02 Identify when successive and combined events are independent and when they are not.												✓			
9Sp.03 Understand how to find the theoretical probabilities of combined events.												✓			
9Sp.04 Design and conduct chance experiments or simulations, using small and large numbers of trials. Calculate the expected frequency of occurrences and compare with observed outcomes.												✓			