

Mastery Five Unit Overview: Summer Term 1

Use opportunities as part of the daily routine to tell the time.

At some point in each day, not necessarily the maths lesson, addition and subtraction facts (number bonds to 1, 10 and 100) and multiplication and division facts for the 2 to 12 times tables should be rehearsed following guidance provided.

Use knowledge of place value and multiplication facts to derive related multiplication and division facts.

Recall key conversions of time including 60 seconds = 1 minute, 60 minutes = 1 hour, 24 hours = 1 day and 7 days = 1 week and vice versa. Recall key conversions of distance including 10mm = 1cm, 100cm = 1m, 1000m = 1km and vice versa 1000g = 1kg and vice versa and volume/capacity 1000ml = 1 litre and vice versa.

Summer 1 Unit 20 (Weeks 1, 2 and 3):Place Value

Lesson	Starter	Lesson Focus
1	Identify and describe 2-D shapes (sides, parallel and perpendicular sides, vertices, angles and symmetry)	Read, write, compare and order numbers to 1,000,000 and determine the value of each digit
2	Recall and use multiplication facts up to 12×12 and related division facts	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000
3	Use partitioning to double or halve any number, including decimals to two decimal places	Identify, represent and estimate numbers on a number line from 0 to 100,000 where the number line has no demarcations Identify, represent and estimate numbers on a number line from 0 to 1,000,000 where the number line has no demarcations
4	Use knowledge of place value and multiplication facts to multiply multiples of 100 and 1000 by a one-digit number Use knowledge of place value and multiplication facts to divide related larger numbers	Identify, represent and estimate numbers up to 100,000 on a number line where the starting point is a number other than 0 (e.g. 50,000 to 75,000) Identify, represent and estimate numbers up to 1,000,000 on a number line where the starting point is a number other than 0 (e.g. 600,000 to 950,000)
5	Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)	Round any number up to 1,000,000 to the nearest 10,000 Round any number up to 1,000,000 to the nearest 100,000
6	Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places)	Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero Continue to order temperatures including those below 0°C

7	Multiply/divide whole numbers by 10, 100 and 1,000	Read Roman numerals using the symbols I, V, X, L, C, D, M where subtracting of the symbols (e.g. a lower value symbol in front of a higher value one such as IX, CM) is not required Read Roman numerals using the symbols I, V, X, L, C, D, M in any order Read Roman numerals to 1,000 (M); recognise years written as such
8	Identify the value of each digit to three decimal places	Count forwards and backwards in decimal thousandths (0.001) including where ones boundaries are crossed, e.g. 5.998, 5.999, 6, 6.001, 6.002 Describe and extend number sequences where the step size is in thousandths, e.g. 5.742, 5.747, 5.752 (step size 0.005)
9	Find 0.01, 0.1, 1, 10, 100, 1000 and other powers of 10 more or less than a given number	Compare and order numbers with up to 3 decimal places
10	Recognise and write decimal equivalents of any number of fractional hundredths	Correctly place multiples of one thousandth on a number line where hundredths are marked but not labelled
11	Convert mixed numbers to improper fractions and vice versa	Round decimals with two decimal places to the nearest whole number and to one decimal place
12	Add fractions with denominators that are multiples of the same number where the answer is > 1 and that involve mixed numbers	Multiply/divide whole numbers and decimals by 10, 100 and 1,000

Summer 1 Unit 21 (Week 3): Measurement and Statistics		
Lesson	Starter	Lesson Focus
1	Convert between different units of metric measure	Convert between different units of time using an appropriate strategy e.g. How many hours are there in a year? How many hours are there in a fortnight? How many full weeks is 337 days?
2	Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000	Understand and use approximate equivalences between metric and imperial measures using a conversion graph: 1 inch $\approx$ 2.54cm 1 foot $\approx$ 30cm 1 yard $\approx$ 90cm 1 lb $\approx$ 500g 1 oz $\approx$ 30g 1 pint $\approx$ 0.6 litres 1 gallon $\approx$ 4.5 litres
3	Use partitioning to double or halve any number, including decimals to two decimal places	Understand and use approximate equivalences between metric and imperial measures using conversion facts: 1 inch $\approx$ 2.54cm 1 foot $\approx$ 30cm 1 yard $\approx$ 90cm 1 lb $\approx$ 500g 1 oz $\approx$ 30g 1 pint $\approx$ 0.6 litres 1 gallon $\approx$ 4.5 litres

Summer 1 Unit 22 (Week 4): Geometry		
Lesson	Starter	Lesson Focus
1	Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks	Know angles are measured in degrees: estimate (<i>and measure</i>) and compare acute, obtuse and reflex angles
2	Use knowledge of place value and multiplication facts to divide related decimal numbers where the dividend is scaled down	Draw given angles, and measure them in degrees (°)
3	Order more than two fractions whose denominators are all multiples of the same number (only where the numerator allows a conversion to the common denominator)	Identify: - angles at a point and one whole turn (total 360°) - angles at a point on a straight line and half a turn (total 180°) - other multiples of 90°
4	Find 0.01, 0.1, 1, 10, 100, 1000 and other powers of 10 more or less than a given number	Use the properties of rectangles to deduce related facts and find missing lengths and angles
5	Use knowledge of place value and multiplication facts to multiply multiples of 100 and 1000 by a one-digit number Use knowledge of place value and multiplication facts to divide related larger numbers	Plot points to complete shapes on the first quadrant of the coordinate grid Identify, describe and represent the position of a shape following a reflection, using the appropriate language, and know that the shape has not changed

Summer 1 Unit 23 (Week 5): Addition and Subtraction		
Lesson	Starter	Lesson Focus
1	Round decimals with two decimal places within a calculation to an appropriate power of 10	Add decimals with up to two decimal places including pairs of numbers with different amounts of digits, e.g. 154.7 + 68.56 Subtract decimals with up to two decimal places including pairs of numbers with different amounts of digits, e.g. 245.3 – 72.64
2	Subtract fractions with denominators that are multiples of the same number where the answer is > 1 and that involve mixed numbers	Choose an appropriate strategy to solve addition calculations based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) Select a mental strategy appropriate for the numbers involved in the calculation

3	Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)	Choose an appropriate strategy to solve subtraction calculations based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) Select a mental strategy appropriate for the numbers involved in the calculation
4	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Measure/calculate the perimeter of composite rectilinear shapes (<i>context</i>)
5	Multiply/divide whole numbers by 10, 100 and 1,000, e.g. 324×10 or $709 \div 100$	Solve addition and subtraction problems involving missing numbers

Summer 1 Unit 24 (Week 6): Multiplication		
Lesson	Starter	Lesson Focus
1	Use partitioning to double or halve any number, including decimals to two decimal places	Multiply a 4 digit by a two-digit number using a formal written method 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
2	Recall and use multiplication facts up to 12×12 and related division facts	Choose an appropriate strategy to solve multiplication calculations based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)
3	Recognise and use square (2) and cube (3) numbers, and notation	Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy
4	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	Solve problems involving multiplication including using their knowledge of factors and multiples, squares and cubes Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates
5		Learning Check