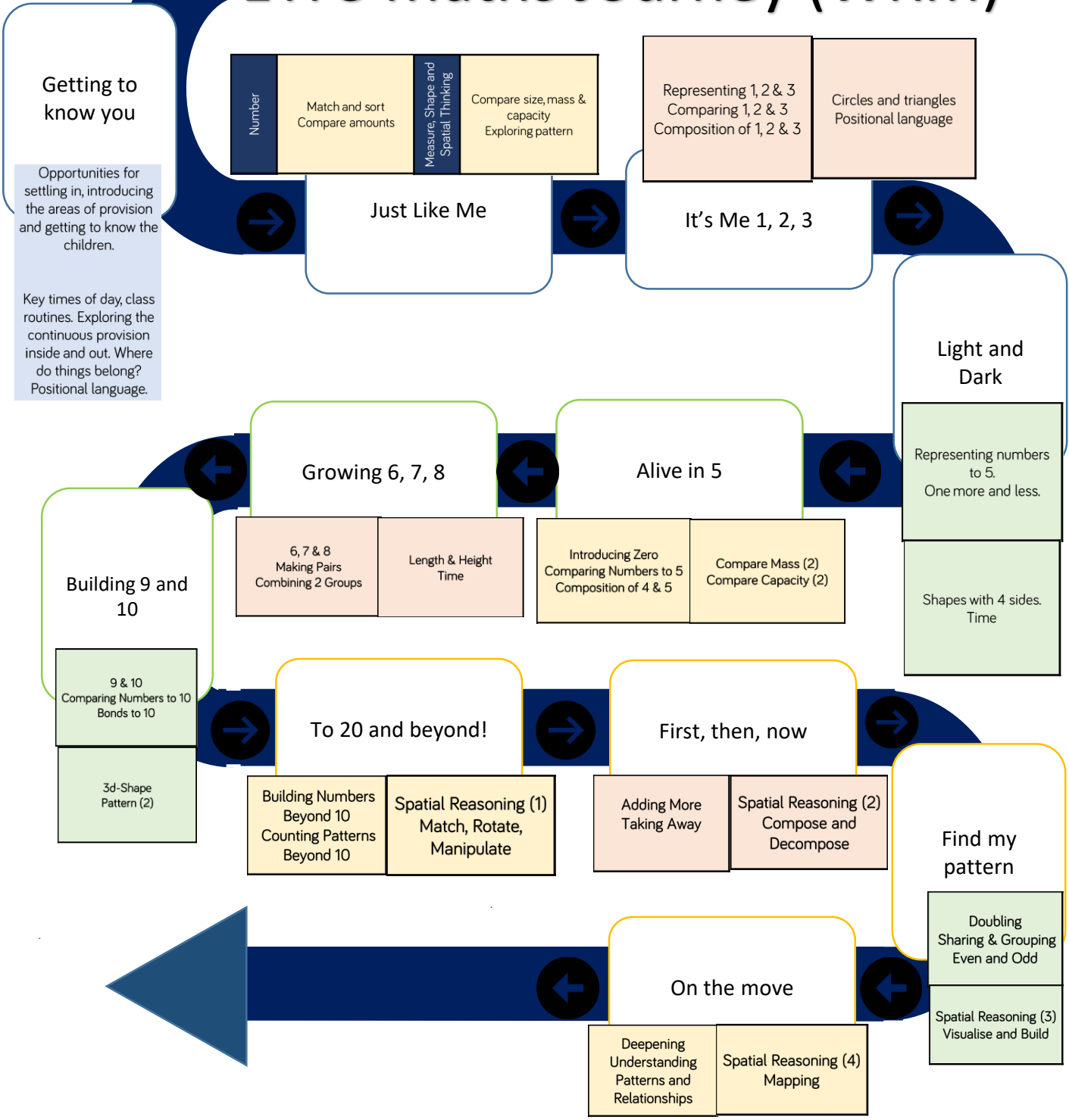


← EYFS Maths Journey (WRM)



New

| Number and Place Value | Addition and Subtraction | Multiplication and Division | Measure | Geometry (position and direction) | Geometry (Properties of shape) | Fractions | General/problem solving. |
|---|--|-----------------------------|--|--|---|-----------|---|
| Number | Number line | Odd, even | Full, half, empty | Over, under, underneath, above, below, top, bottom, side | Sort | Whole | Listen, join in |
| One, two, three to twenty and beyond. | Add, more, plus, make, sum, total, altogether | Double, halve | Holds | On, in, outside, inside | Cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square | Equal | Say, think, imagine, remember |
| None | Double | Share, share equally | Container | In front, behind | Shape | One half | Start from |
| Count on/up/to/from/down | Half, halve | Group in pairs | Weigh, weighs, balance | Front, back | Flat, curved, straight, round | | Look at, point to |
| Before, after | Equals, is the same (including equals sign) | Equal groups of | Heavy, heavier, heaviest, light, lighter, lightest | Before, after | Solid | | Put |
| More, less, many, few, fewer, fewest, smaller, smallest | How many more to make...? How many more is...? How many more is...? How much more is...? | Divide | Scales | Beside, next to | Corner | | What comes next? |
| Equal to, the same as | | | Time | Middle | Face, side | | Find, use, make, build |
| Odd, even | | | Days of the week: Monday, Tuesday etc. | Up, down, forwards, backwards, Sideways | Make, build, draw | | Tell me, describe, pick out, talk about, explain, show me |
| Digit | Subtract, take away, minus. | | Seasons: Spring, Summer, Autumn, Winter | Close, far | | | Read, write |
| Numeral | | | Days, week, month, year, weekend | Through | | | Tick, draw a line, ring |
| Compare | | | Birthday, holiday | Towards, away from | | | Cost |
| Order | | | Morning, afternoon, evening, night | Side, roll, turn | | | Count, work out |
| Size | | | Bedtime, | | | | Number line, number track, number square, number cards |
| Value | | | | | | | |
| Between, halfway between | | | | | | | |

Year 1 Spring Journey

Place value within 20



- Step 1 Count within 20
- Step 2 Understand 10
- Step 3 Understand 11, 12 and 13
- Step 4 Understand 14, 15 and 16
- Step 5 Understand 17, 18 and 19
- Step 6 Understand 20
- Step 7 1 more and 1 less
- Step 8 The number line to 20
- Step 9 Use a number line to 20
- Step 10 Estimate on a number line to 20
- Step 11 Compare numbers to 20
- Step 12 Order numbers to 20

Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number

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

Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s

Read and write numbers from 1 to 20 in numerals and words

Given a number, identify 1 more and 1 less

Measures



Length and height

- Step 1 Compare lengths and heights
- Step 2 Measure length using objects
- Step 3 Measure length in centimetres

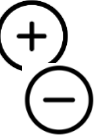
Mass and volume

- Step 1 Heavier and lighter
- Step 2 Measure mass
- Step 3 Compare mass
- Step 4 Full and empty
- Step 5 Compare volume
- Step 6 Measure capacity
- Step 7 Compare capacity

Compare, describe and solve practical problems for: lengths and height; mass/weight; capacity and volume; time

Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume; time

Addition and Subtraction



- Step 1 Add by counting on within 20
- Step 2 Add ones using number bonds
- Step 3 Find and make number bonds to 20
- Step 4 Doubles
- Step 5 Near doubles
- Step 6 Subtract ones using number bonds
- Step 7 Subtraction – counting back
- Step 8 Subtraction – finding the difference
- Step 9 Related facts
- Step 10 Missing number problems

Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs

Add and subtract 1-digit and 2-digit numbers to 20, including zero

Represent and use number bonds and related subtraction facts within 20

Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$

Place value within 50



- Step 1 Count from 20 to 50
- Step 2 20, 30, 40 and 50
- Step 3 Count by making groups of tens
- Step 4 Groups of tens and ones
- Step 5 Partition into tens and ones
- Step 6 The number line to 50
- Step 7 Estimate on a number line to 50
- Step 8 1 more, 1 less

Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number

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

Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s

Given a number, identify 1 more and 1 less

| Number and Place value | Addition and Subtraction | Multiplication and division | Measure | Position and direction | Shape | Fractions | Problem solving |
|--|--|-------------------------------|---------------------------------|--|---|----------------------|---------------------------------|
| Zero, one, two, three to twenty and beyond | Number bonds, number line | Odd, even | Full, half, empty | Over, under, underneath, above, below, top, bottom | Group, sort | Whole | Say |
| None | Add, more, plus, make, sum, total, altogether | How many times | Holds | On, in, outside, inside | Cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square | Equal | Think |
| Count on/up/to/down/From | Inverse | Lots of, groups of | Container | Around, in front, behind | Shape | Parts | Start from, start with |
| Before/less | Equals | Multiply, multiple of | Weigh, balances | Front, back, before, after | Flat, curved, straight, round | Four equal parts | Look at, point to, place |
| Many, fewer, least, smallest, greatest, | Difference between, | Repeated addition, | Heavy, heavier, heaviest | Beside, next to, opposite, apart | Hollow, solid | One half, two halves | Arrange, rearrange |
| Equal to, same as | How many more make...? How much more is...? | Array, row | Light, lighter, lightest | Left, right, up, down, forwards, backwards | Corner | A quarter | What comes next? |
| Odd, even | Subtract, take away, minus | Double, halve | Days of the week Seasons | Along, through | Face, side, edge | Two quarters | Carry on, continue, repeat |
| Units, ones, tens | How many fewer is...? How much less is...? | Share, share equally | Day, week, month, year, weekend | Slide, roll, turn, | | | Find, choose, collect |
| Compare | | Equal groups of | Morning, afternoon, evening | Whole turn, half turn | | | Shade, colour, record |
| Value | | Divide, divided by, left over | Hour, o'clock, half past | | | | Describe Explain Prove it |

Year 2 Spring Journey

Multiplication and division



- Step 1 Recognise equal groups
- Step 2 Make equal groups
- Step 3 Add equal groups
- Step 4 Introduce the multiplication symbol
- Step 5 Multiplication sentences
- Step 6 Use arrays
- Step 7 Make equal groups – grouping
- Step 8 Make equal groups – sharing
- Step 9 The 2 times-table
- Step 10 Divide by 2
- Step 11 Doubling and halving
- Step 12 Odd and even numbers
- Step 13 The 10 times-table
- Step 14 Divide by 10
- Step 15 The 5 times-table
- Step 16 Divide by
- Step 17 The 5 and 10 times-tables

Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs

Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot

Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers

Measures-Length and height

- Step 1 Measure in centimetres
- Step 2 Measure in metres
- Step 3 Compare lengths and heights
- Step 4 Order lengths and heights
- Step 5 Four operations with lengths and heights

Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}\text{C}$); capacity (litres/ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels

Compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$

Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures

Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

Money



- Step 1 Count money – pence
- Step 2 Count money – pounds (notes and coins)
- Step 3 Count money – pounds and pence
- Step 4 Choose notes and coins
- Step 5 Make the same amount
- Step 6 Compare amounts of money
- Step 7 Calculate with money
- Step 8 Make a pound

Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value

Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change

Measures-Mass, capacity and temperature

- Step 1 Compare mass
- Step 2 Measure in grams
- Step 3 Measure in kilograms
- Step 4 Four operations with mass
- Step 5 Compare volume and capacity
- Step 6 Measure in millilitres
- Step 7 Measure in litres
- Step 8 Four operations with volume and capacity
- Step 9 Temperature

Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}\text{C}$); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels

Compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$

| Number and Place value | Addition and Subtraction | Multiplication and division | Measure | Position and direction | Shape | Fractions | Problem solving |
|------------------------|---|-------------------------------|--------------------------|------------------------|-------------------------------|--------------------|---------------------------|
| Numbers to 100 | Number bonds, number line | Odd, even | Quarter past | Rotation | Size | Three quarters | Predict |
| Hundreds | Add, more, plus, make, sum, total, altogether | How many times | Quarter to | Clockwise | Bigger, smaller, larger | One third, a third | Describe the pattern |
| Partition | Inverse | Lots of, groups of | Km, m | Anti clockwise | Symmetrical, line of symmetry | Equivalence | Describe the rule |
| Recombine | Equals | Multiply, multiple of | Kg, g | Straight line | Fold | Equivalent to | Find, find all |
| Hundred more, less | Difference between, | Repeated addition, | ML, l | Ninety degree turn | Match | | Investigate |
| Equal to, same as | How many more make...? | Array, row | Temperature | Right angle | Mirror line, reflection, | | Describe Explain Prove it |
| Odd, even | How much more is...? | Double, halve | degrees | | Pattern, repeating pattern, | | |
| Units, ones, tens | How much more is...? | Share, share equally | Holds | | | | |
| Compare | Subtract, take away, minus | Equal groups of | Container | | | | |
| Value | How many fewer is...? | Divide, divided by, left over | Weigh, balances | | | | |
| | How much less is...? | | Heavy, heavier, heaviest | | | | |

Year 3 Spring Journey

Multiplication and division

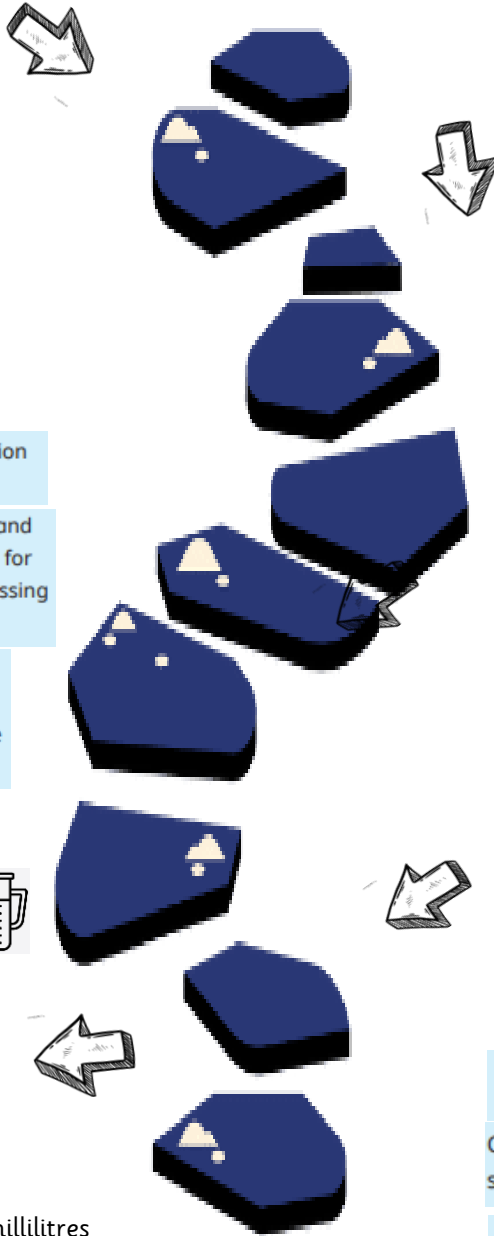


- Step 1 Multiples of 10
- Step 2 Related calculations
- Step 3 Reasoning about multiplication
- Step 4 Multiply a 2-digit number by a 1-digit number – no exchange
- Step 5 Multiply a 2-digit number by a 1-digit number – with exchange
- Step 6 Link multiplication and division
- Step 7 Divide a 2-digit number by a 1-digit number – no exchange
- Step 8 Divide a 2-digit number by a 1-digit number – flexible partitioning
- Step 9 Divide a 2-digit number by a 1-digit number – with remainders
- Step 10 Scaling
- Step 11 How many ways?

Recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers (Y2)

Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods

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



Measures-Length and Perimeter



- Step 1 Measure in metres and centimetres
- Step 2 Measure in millimetres
- Step 3 Measure in centimetres and millimetres
- Step 4 Metres, centimetres and millimetres
- Step 5 Equivalent lengths (metres and centimetres)
- Step 6 Equivalent lengths (centimetres and millimetres)
- Step 7 Compare lengths
- Step 8 Add lengths Small steps
- Step 9 Subtract lengths
- Step 10 What is perimeter?
- Step 11 Measure perimeter
- Step 12 Calculate perimeter

Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

Measure the perimeter of simple 2-D shapes

Fractions



- Step 1 Understand the denominators of unit fractions
- Step 2 Compare and order unit fractions
- Step 3 Understand the numerators of non-unit fractions
- Step 4 Understand the whole
- Step 5 Compare and order non-unit fractions
- Step 6 Fractions and scales
- Step 7 Fractions on a number line
- Step 8 Count in fractions on a number line
- Step 9 Equivalent fractions on a number line
- Step 10 Equivalent fractions as bar models

Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators

Compare and order unit fractions, and fractions with the same denominators

Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators

Recognise and show, using diagrams, equivalent fractions with small denominators

Measures-Mass and Capacity



- Step 1 Use scales
- Step 2 Measure mass in grams
- Step 3 Measure mass in kilograms and grams
- Step 4 Equivalent masses (kilograms and grams)
- Step 5 Compare mass
- Step 6 Add and subtract mass
- Step 7 Measure capacity and volume in millilitres
- Step 8 Measure capacity and volume in litres and millilitres
- Step 9 Equivalent capacities and volumes (litres and millilitres)
- Step 10 Compare capacity and volume
- Step 11 Add and subtract capacity and volume

Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

| Number and Place value | Addition and Subtraction | Multiplication and division | Measure | Position and direction | Shape | Fractions | Data/Statistics |
|------------------------|--|-------------------------------|-------------------------------|------------------------|---------------------|----------------------------------|--------------------|
| Numbers to 1000 | Column addition, Column subtraction, | Product | Twelve/twenty four hour clock | Greater, less than | Horizontal, | Numerator | Chart Bar chart |
| Partition | | Multiples of... | Am, pm | Ninety degrees | Vertical | Denominator | Frequency table |
| Recombine | Inverse | Scale up | Roman numerals I to XIII | Orientation, | Perpendicular lines | Unit fraction, non unit fraction | Carroll diagram |
| Hundred more, less | Equals | Multiply, multiple of | | Same orientation | Parallel lines | Compare and order | Venn diagram |
| Equal to, same as | Difference between, | Repeated addition, | | Different orientation | | Tenths | Axis |
| Odd, even | How many more make...? How much more is...? | Array, row | | | | | Diagram |
| Compare | Subtract, take away, minus | Share, share equally | | | | | |
| Value | How many fewer is...? How much less is...? | Equal groups of | | | | | |
| | | Divide, divided by, left over | | | | | |

Multiplication and division



Year 4 Spring Journey

- Step 1 Factor pairs
- Step 2 Use factor pairs
- Step 3 Multiply by 10
- Step 4 Multiply by 100
- Step 5 Divide by 10
- Step 6 Divide by 100
- Step 7 Related facts – multiplication and division
- Step 8 Informal written methods for multiplication
- Step 9 Multiply a 2-digit number by a 1-digit number
- Step 10 Multiply a 3-digit number by a 1-digit number
- Step 11 Divide a 2-digit number by a 1-digit number (1)
- Step 12 Divide a 2-digit number by a 1-digit number (2)
- Step 13 Divide a 3-digit number by a 1-digit number
- Step 14 Correspondence problems
- Step 15 Efficient multiplication

Recognise and use factor pairs and commutativity in mental calculations

Recall multiplication and division facts for multiplication tables up to 12×12

Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 (Y5)

Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects

Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers

Decimals

- Step 1 Tenths as fractions
- Step 2 Tenths as decimals
- Step 3 Tenths on a place value chart
- Step 4 Tenths on a number line
- Step 5 Divide a 1-digit number by 10
- Step 6 Divide a 2-digit number by 10
- Step 7 Hundredths as fractions
- Step 8 Hundredths as decimals
- Step 9 Hundredths on a place value chart
- Step 10 Divide a 1- or 2-digit number by 100

Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10 (Y3)

Recognise and write decimal equivalents of any number of tenths or hundredths

Compare numbers with the same number of decimal places up to 2 decimal places

Find the effect of dividing a 1- or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths

Recognise and show, using diagrams, families of common equivalent fractions

Measures-Length and Perimeter



- Step 1 Measure in kilometres and metres
- Step 2 Equivalent lengths (kilometres and metres)
- Step 3 Perimeter on a grid
- Step 4 Perimeter of a rectangle
- Step 5 Perimeter of rectilinear shapes
- Step 6 Find missing lengths in rectilinear shapes
- Step 7 Calculate perimeter of rectilinear shapes
- Step 8 Perimeter of regular
- Step 9 Perimeter of polygons

Convert between different units of measure [for example, kilometre to metre; hour to minute]

Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres

Fractions



- Step 1 Understand the whole
- Step 2 Count beyond 1
- Step 3 Partition a mixed number
- Step 4 Number lines with mixed numbers
- Step 5 Compare and order mixed numbers
- Step 6 Understand improper fractions
- Step 7 Convert mixed numbers to improper fractions
- Step 8 Convert improper fractions to mixed numbers
- Step 9 Equivalent fractions on a number line
- Step 10 Equivalent fraction families
- Step 11 Add two or more fractions
- Step 12 Add fractions and mixed numbers
- Step 13 Subtract two fractions
- Step 14 Subtract from whole amounts
- Step 15 Subtract from mixed numbers

Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators (Y3)

Recognise and show, using diagrams, families of common equivalent fractions

Add and subtract fractions with the same denominator

| Number and Place value | Multiplication and division | Measure | Position and direction | Shape | Fractions | Data/Statistics |
|------------------------------------|--|---------|------------------------|-------------------------|-----------------------------------|-----------------|
| Tenths, hundredths, decimal places | Multiplication facts (up to 12×12) | Convert | Co-ordinates | Quadrilaterals | Equivalent decimals and fractions | Continuous data |
| Round (to nearest) | Division facts | | Translation | Triangles | | Line graph |
| Thousand more, thousand less | Inverse | | Quadrant | Right angle | | |
| Negative integers | Derive | | X axis Y axis | Acute and obtuse angles | | |
| Count through zero | | | Perimeter and area | | | |
| Roman Numerals (I to C) | | | | | | |

Year 5 Spring Journey

Multiplication and division



- Step 1 Multiply up to a 4-digit number by a 1-digit number
- Step 2 Multiply a 2-digit number by a 2-digit number (area model)
- Step 3 Multiply a 2-digit number by a 2-digit number
- Step 4 Multiply a 3-digit number by a 2-digit number
- Step 5 Multiply a 4-digit number by a 2-digit number
- Step 6 Solve problems with multiplication
- Step 7 Short division
- Step 8 Divide a 4-digit number by a 1-digit number
- Step 9 Divide with remainders
- Step 10 Efficient division
- Step 11 Solve problems with multiplication and division

Multiply numbers up to four digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers

Divide up to four digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context

Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes

Statistics



- Step 1 Draw line graphs
- Step 2 Read and interpret line graphs
- Step 3 Read and interpret tables
- Step 4 Two-way tables
- Step 5 Read and interpret timetables

Solve comparison, sum and difference problems using information presented in a line graph

Complete, read and interpret information in tables, including timetables

Perimeter and Area



- Step 1 Perimeter of rectangles
- Step 2 Perimeter of rectilinear shapes
- Step 3 Perimeter of polygons
- Step 4 Area of rectangles
- Step 5 Area of compound shapes
- Step 6 Estimate area

Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres

Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes

Fractions



- Step 1 Multiply a unit fraction by an integer
- Step 2 Multiply a non-unit fraction by an integer
- Step 3 Multiply a mixed number by an integer
- Step 4 Calculate a fraction of a quantity
- Step 5 Fraction of an amount
- Step 6 Find the whole
- Step 7 Use fractions as operators

Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

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 (Y4)

Decimals and Percentages



- Step 1 Decimals up to 2 decimal places
- Step 2 Equivalent fractions and decimals (tenths)
- Step 3 Equivalent fractions and decimals (hundredths)
- Step 4 Equivalent fractions and decimals
- Step 5 Thousandths as fractions
- Step 6 Thousandths as decimals
- Step 7 Thousandths on a place value chart
- Step 8 Order and compare decimals (same number of decimal places)
- Step 9 Order and compare any decimals with up to 3 decimal places
- Step 10 Round to the nearest whole number
- Step 11 Round to 1 decimal place
- Step 12 Understand percentages
- Step 13 Percentages as fractions
- Step 14 Percentages as decimals
- Step 15 Equivalent fractions, decimals and percentages

Read, write, order and compare numbers with up to 3 decimal places

Read and write decimal numbers as fractions

Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths

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

Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

Solve problems involving numbers up to 3 decimal places

Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place

Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per 100", and write percentages as a fraction with denominator 100, and as a decimal fraction

| Number and Place value | Multiplication and division | Measure | Position and direction | Shape | Fractions |
|------------------------|--|--|-----------------------------|--------------------------------|---|
| Powers of ten | Efficient written method Factor pairs Composite, prime, prime factor, square numbers, cubed numbers Formal written method | Volume Imperial measures/units Metric measures/units | Reflex angles Dimensions | Regular and irregular polygons | Proper fraction, improper fractions, mixed numbers Percentage Half Quarter Fifths Ratio and proportion |

Year 6 Spring Journey

Ratio



- Step 1 Add or multiply?
- Step 2 Use ratio language
- Step 3 Introduction to the ratio symbol
- Step 4 Ratio and fractions
- Step 5 Scale drawing
- Step 6 Use scale factors
- Step 7 Similar shapes
- Step 8 Ratio problems
- Step 9 Proportion problems
- Step 10 Recipes

Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts

Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

Solve problems involving similar shapes where the scale factor is known or can be found

Statistics



- Step 1 Line graphs Step 2 Dual bar charts
- Step 3 Read and interpret pie charts Step 4 Pie charts with percentages
- Step 5 Draw pie charts
- Step 6 The mean

Interpret and construct pie charts and line graphs and use these to solve problems

Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs (Year 4)

Calculate and interpret the mean as an average

Area, Perimeter and Volume



- Step 1 Shapes – same area
- Step 2 Area and perimeter
- Step 3 Area of a triangle – counting squares
- Step 4 Area of a right-angled triangle
- Step 5 Area of any triangle
- Step 6 Area of a parallelogram
- Step 7 Volume – counting cubes
- Step 8 Volume of a cuboid

Recognise that shapes with the same areas can have different perimeters and vice versa

Recognise when it is possible to use formulae for area and volume of shapes

Calculate the area of parallelograms and triangles

Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units

Algebra



- Step 1 1-step function machines
- Step 2 2-step function machines
- Step 3 Form expressions
- Step 4 Substitution
- Step 5 Formulae
- Step 6 Form equations
- Step 7 Solve 1-step equations
- Step 8 Solve 2-step equations
- Step 9 Find pairs of values
- Step 10 Solve problems with two unknowns

Use simple formulae

Generate and describe linear number sequences

Find pairs of numbers that satisfy an equation with two unknowns

Enumerate possibilities of combinations of two variables

Express missing number problems algebraically

Decimals



- Step 1 Place value within 1
- Step 2 Place value – integers and decimals
- Step 3 Round decimals
- Step 4 Add and subtract decimals
- Step 5 Multiply by 10, 100 and 1,000
- Step 6 Divide by 10, 100 and 1,000
- Step 7 Multiply decimals by integers
- Step 8 Divide decimals by integers
- Step 9 Multiply and divide decimals in context

Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places

Solve problems which require answers to be rounded to specified degrees of accuracy

Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

Multiply 1-digit numbers with up to 2 decimal places by whole numbers

Use written division methods in cases where the answer has up to 2 decimal places

Solve problems involving addition, subtraction, multiplication and division

F, D, P



- Step 1 Decimal and fraction equivalents Step 2 Fractions as division
- Step 3 Understand percentages
- Step 4 Fractions to percentages
- Step 5 Equivalent fractions, decimals and percentages
- Step 6 Order fractions, decimals and percentages
- Step 7 Percentage of an amount – one step Step 8 Percentage of an amount – multi-step
- Step 9 Percentages – missing values

Use common factors to simplify fractions; use common multiples to express fractions in the same denomination

Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction

Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts

Compare and order fractions, including fractions >1

Solve problems involving the calculation of percentages and the use of percentages for comparison

| Number and Place value | Addition, subtraction, multiplication and division | Geometry (position and direction and properties of shape) | Fractions, decimals and percentages | Algebra | Data/Statistics |
|------------------------|---|---|-------------------------------------|--|--------------------------------|
| Numbers to 10 million | Order of Operations Bidmas Common factors Common multiples | Four quadrants Vertically opposite (angles) Circumference Radius Diameter | Degree of accuracy Simplify | Linear number Sequence Substitute Variables Symbol Known values | Mean Pie chart Construct |