

Mathematics Curriculum - Year 3

Autumn 1

- Read and write numbers to at least 1000 in numerals and in words.
- Recognise the place value of each digit in a three-digit number (hundreds, tens and ones).
- Partition numbers in different ways.
- Identify, represent and estimate numbers using different representations, including the number line.
- Compare and order numbers up to 1000.
- Round numbers to at least 1000 to the nearest 10 or 100.
- Solve number problems and practical problems involving these ideas.
- Find 1, 10 or 100 more or less than a given number.
- Add numbers mentally, including: a three-digit number and ones; and tens; and hundreds.
- Subtract numbers mentally, including: a three-digit number and ones; and tens; and hundreds.
- Add and subtract mentally combinations of two-digit numbers.
- Choose an appropriate strategy to solve a calculation 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.
- Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context.
- Draw 2-D shapes and describe them.
- Recognise angles as a property of shape.
- Measure, compare, add and subtract: lengths (m/cm/mm).
- Understand that perimeter is a measure of distance around the boundary of a shape.
- Measure the perimeter of simple 2-D shapes.
- Derive and use addition and subtraction facts for 100.
- Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - a 2-digit number and ones
 - a 2-digit number and tens
 - two 2-digit numbers
 - adding three 1-digit numbers.
- Select a mental strategy appropriate for the numbers involved in the calculation.
- Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context.
- Interpret and present data using bar charts and tables.
- Solve one-step and two-step questions (for example, 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and tables.
- Add numbers with up to three digits, using formal written method of columnar addition.
- Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).
- Estimate the answer to a calculation and use inverse operations to check the answers.
- Solve problems, including missing number problems, using number facts, place value, and more complex addition.
- Subtract numbers with up to three digits, using formal written method of columnar subtraction.

Autumn 2

- Count from 0 in multiples of 4.
- Recall and use multiplication and division facts for the 3 and 4 times tables.
- Describe and extend number sequences involving counting on or back in different steps.
- Use sorting diagrams to compare and sort numbers.
- Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
- Select a mental strategy appropriate for the numbers involved in the calculation.
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
- Solve problems involving money and measures.
- Solve problems, including missing number problems involving multiplication, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.
- Write and calculate mathematical statements for division using the multiplication tables that they know, including for two-digit numbers divided by one-digit numbers, using mental and progressing to formal written methods.
- Solve problems, including missing number problems, involving division (and interpreting remainders) and correspondence problems in which n objects are connected to m objects.
- Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.
- Estimate and read time with increasing accuracy to the nearest minute.
- Record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight.

- Know the number of seconds in a minute and the number of days in each month, year and leap year.
- Solve simple problems involving passage of time.
- Make 3-D shapes using modelling materials.
- Recognise 3-D shapes in different orientations and describe them.
- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
- Compare and sort common 3-D shapes and everyday objects.

Spring 1

- Find 1, 10 or 100 more or less than a given number.
- Count from 0 in multiples of 50 and 100.
- Describe and extend number sequences involving counting on or back in different steps.
- Add and subtract mentally:
 - a three-digit number and ones
 - a three-digit number and tens
 - a three digit number and hundreds.
- Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - a 2-digit number and ones
 - a 2-digit number and tens
 - two 2-digit numbers. (Year 2 objective)
- Select a mental strategy appropriate for the numbers involved in the calculation.
- Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context.
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.
- Understand that finding a fraction of an amount relates to division.
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
- Show practically or pictorially that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as $3 \div 4$).
- Understand how division statements can be represented using arrays.
- Understand division as sharing and grouping and use each appropriately.
- Select a mental strategy appropriate for the numbers involved in the calculation.
- Write and calculate mathematical statements for division using the multiplication tables that they know, including for two-digit numbers divided by one-digit numbers, using mental and progressing to formal written methods.
- Measure, compare, add and subtract volumes and capacities.
- Measure, compare, add and subtract masses.
- Solve problems involving money and measures.
- Count from 0 in multiples of 8.
- Recall and use multiplication and division facts for the 8 multiplication tables.
- Use sorting diagrams to compare and sort numbers.
- Describe and extend number sequences involving counting on or back in different steps.
- Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
- Solve problems, including missing number problems involving multiplication, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Spring 2

- Draw 2-D shapes and describe them.
- Make 3-D shapes using modelling materials.
- Recognise 3-D shapes in different orientations and describe them.
- Recognise that angles area property of a shape or a description of a turn.
- Identify whether angles are greater than or less than a right angle.
- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
- Compare and sort common 2-D and 3-D shapes and everyday objects.
- Add numbers with up to three digits, using formal written method of columnar addition.
- Subtract numbers with up to three digits, using formal written method of columnar subtraction.
- Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).
- Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context.
- Estimate the answer to a calculation and use inverse operations to check the answers.

- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
- Solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.
- Recognise and show, using diagrams, equivalent fractions with small denominators.
- Add and subtract fractions with the same denominator within one whole (using diagram) (for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$).
- Show practically or pictorially that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as $3 \div 4$).
- Compare and order unit fractions and fractions with the same denominators (including on a number line).
- Solve problems involving fractions.
- Use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line. (Year 2 objective)
- Describe positions on a square grid labelled with letters and numbers.
- Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.
- Estimate and read time with increasing accuracy to the nearest minute.
- Record and compare time in terms of seconds, minutes and hours; use vocabulary such as, o'clock, a.m./p.m., morning, afternoon, noon and midnight.
- Know the number of seconds in a minute and the number of days in each month, year and leap year.
- Compare durations of events, for example to calculate the time taken by particular events or tasks.
- Solve simple problems involving passage of time.

Summer 1

- Count from 0 in multiples of 4, 8, 50 and 100.
- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.
- Describe and extend number sequences involving counting on or back in different steps.
- Interpret (and present data) using bar charts, pictograms and tables.
- Add and subtract mentally:
 - a three-digit number and ones
 - a three-digit number and tens
 - a three-digit number and hundreds.
- Add numbers with up to three digits, using formal written method of columnar addition.
- Subtract numbers with up to three digits, using formal written method of columnar subtraction.
- Choose an appropriate strategy to solve a calculation 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.
- Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context.
- Estimate the answer to a calculation and use inverse operations to check the answers.
- Solve problems involving money and measures and simple problems involving passage of time.
- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).
- Measure the perimeter of simple shapes.
- Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
- Write and calculate mathematical statements for division using the multiplication tables that they know, including for two-digit numbers divided by one-digit numbers, using mental and progressing to formal written methods.
- Select a mental strategy appropriate for the numbers involved in the calculation.
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
- Solve problems involving money and measures and simple problems involving passage of time.
- Solve problems, including missing number problems involving multiplication and division, including positive integer scaling problems.
- Draw 2-D shapes and describe them.
- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
- Recognise that angles are a property of a shape or a description of a turn.
- Identify right angles, recognise that two right angles make a half turn, three make three quarters of a turn and four a complete turn.
- Identify whether angles are greater than or less than a right angle.
- Compare and sort common 2-D and 3-D shapes and everyday objects.
- Count up and down in tenths.
- Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or

quantities by 10.

- Identify the value of each digit to one decimal place.
- Read and write numbers with one decimal place.
- Compare and order numbers with one decimal place.
- Continue to recognise and use symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds and pence.
- Recognise that ten 10p coins are equivalent to £1 and that each coin is $\frac{1}{10}$ of £1.
- Add and subtract amounts of money to give change, using both £ and p in practical contexts.
- Solve problems involving money.
- Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).
- Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context.
- Make 3-D shapes using modelling materials.
- Recognise 3-D shapes in different orientations and describe them.

Summer 2

- Count from 0 in multiples of 4, 8, 50 and 100.
- Find 1, 10 or 100 more or less than a given number.
- Recognise the place value of each digit in a three-digit number (hundreds, tens and ones).
- Identify the value of each digit to one decimal place.
- Compare and order numbers up to 1000.
- Identify, represent and estimate numbers using different representations, including the number line.
- Read and write numbers to at least 1000 in numerals and in words.
- Solve problems involving measures and simple problems involving passage of time.
- Add and subtract mentally a three-digit number and ones, tens and hundreds.
- Derive and use addition and subtraction facts for 100.
- Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - a 2-digit number and ones
 - a 2-digit number and tens
 - two 2-digit numbers
 - adding three 1-digit numbers.
- Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).
- Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context.
- Select a mental strategy appropriate for the numbers involved in the calculation.
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.
- 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.
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
- Show practically or pictorially that a fraction is one whole number divided by another (for example, $\frac{3}{4}$ can be interpreted as $3 \div 4$).
- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).
- Measure the perimeter of simple 2-D shapes.
- Solve problems involving measures.
- Interpret and present data using bar charts, pictograms and tables.
- Solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.