

## Mathematics Curriculum Overview

|  | Autumn 1st | Autumn 2nd |
| :---: | :---: | :---: |
| Nursery | Colours <br> Introduction to numbers 1 to 5: <br> Number songs/rhymes Take part in finger rhymes with numbers. React to changes of amount in a group of up to three items. <br> Count in everyday contexts, sometimes skipping numbers - '1-2-3-5'. Counting: saying number words in sequence Counting: tagging each object with one number word | 2D shapes <br> Size <br> Patterns <br> Introduction to shapes <br> Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. <br> Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Say one number for each item in order: $1,2,3,4,5$. Show 'finger numbers' up to 5 . |


| Spring 1st | Spring 2nd | Summer 1st |
| :---: | :---: | :---: |
| Introduction Numbers 1 <br> to 10 <br> Songs and Rhymes <br> Counting objects, actions and sounds <br> Positional Language <br> Understand position through words alone for example, "The bag is under the table," with no pointing. <br> Shapes <br> Counting the different shapes <br> Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. Combine shapes to make new ones - an arch, a bigger triangle, etc. | Numbers 1 to 10 <br> Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). <br> Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Show 'finger numbers' up to 5 . <br> Experiment with their own symbols and marks as well as numerals <br> Make comparisons between objects relating to size, length, weight and capacity. | Numbers 1 to 10: <br> Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). <br> Writing Numbers Number problems Link numerals and amounts: the right number of objects to match the numeral, up to 5 . <br> Solve real world mathematical problems with numbers up to 5 . Compare quantities using language: 'more than', 'fewer than'. |

## Summer 2nd

Matching Numerals to quantities Patterns

Revise numbers 1 to 10 Number songs
Subitising activities
Talk about and identify the patterns around them. Extend and create $A B A B$ patterns - stick, leaf, stick, leaf.
Notice and correct an error in a repeating pattern.

Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'

Size ordering Number and quantity relation

|  |  |  | Review: <br> Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). |  |  | Number formation Subitising <br> Addition |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reception | Count objects, actions and sounds. <br> Compare length, weight and capacity <br> Phase: Just like me! <br> Match and sort, compare amounts Compare size Compare amounts Compare height Compare length Exploring patterns: Repeating patterns Printing patterns Fruit kebab patterns Autumn walk patterns | Link the number symbol (numeral) with its cardinal number value. <br> Subitise <br> Phase: It's me 123 <br> Representing, matching, sorting, comparing and composition of 1, 2 \&3 <br> Circles and triangles: <br> Sorting Circles and <br> Triangle <br> Shape Pictures <br> Shape Hunt <br> Positional language: <br> Where's Teddy Hiding? <br> Obstacle Course <br> Understand the 'one more than/one less than' relationship between consecutive numbers. <br> Phase Light and Dark <br> Representing, matching, sorting, comparing and composition of $4 \& 5$. | Compare numbers <br> Phase: Alive in 5! <br> Introduce zero <br> Comparing numbers to 5 <br> Composition of 4 \& 5 <br> Compare mass heavier and lighter than <br> Full and empty <br> Measuring capacity <br> Measuring capacity - <br> how many fit inside? <br> Measuring ingredients <br> Compare capacity <br> Subitise <br> Growing 6,7,8, <br> Representing, matching, sorting, comparing and composition of 6, 7 \& 8 <br> Combining 2 amounts <br> Making pairs <br> Length \& height: <br> Comparing length longer and shorter than <br> Comparing height taller and shorter than Measuring height <br> Measuring time | Explore the composition of numbers to 10 <br> Building 9 and 10 <br> Counting to 9 \& 10 <br> Comparing numbers to 10 <br> Bonds to 10 <br> 3-D shape - matching objects <br> Building with 3-D shapes Printing with 3-D shapes Spatial Awareness: Patterns <br> Consolidation | Count beyond ten. Automatically recall number bonds for numbers 0-5 and some to 10. <br> Phase: To 20 and Beyond <br> Building numbers beyond 10 <br> Counting patterns beyond 10 <br> Can select, rotate and manipulate shapes <br> Spatial reasoning skills: Select, rotate and manipulate shapes <br> Can add more and take away <br> Phase: First Then Now Counting On <br> Adding More <br> Taking Away <br> Can compose and decompose shapes shapes can have other shapes within it, just as numbers can | Continue, copy and create repeating patterns. <br> Phase: Finding my <br> Patterns <br> Doubling <br> Sharing \& grouping <br> Even and odd <br> Spatial reasoning: <br> Visualise and build <br> Deepening understanding in <br> patterns and relationships <br> Phase: On The Move <br> Problem Solving <br> Spatial Reasoning: <br> Making Maps <br> Designing Mazes |



|  | Systematic methods for number bonds within 10 Number bonds to 10 | Geometry (Shape): <br> Recognise and name 2-D shapes <br> Sort 2-D shapes <br> Recognise and name 3D shapes <br> Sort 3-D shapes <br> Patterns with 3-D and 2- <br> D shapes <br> Place Value <br> (within 20) <br> Count forwards and backwards and write numbers to 20 in numerals and words Numbers from 11 to 20 <br> Tens and ones <br> Count one more and one less <br> Compare groups of objects Compare numbers Order groups of objects | Count in 2s <br> Count in 5 s |  |  | Introduce capacity and volume <br> Measure \& compare capacity <br> Time <br> Before and after Dates <br> Time to the hour activity <br> Time to the hour/half hour <br> Writing time <br> Comparing time |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year 2 | Place value <br> Counting forwards and backwards within 50 Recognise tens and ones within 50 <br> Compare and order numbers within 50 Count objects to 100 and read and write numbers in numerals and words Write numbers to 100 in the expanded form Represent numbers to 100 <br> Tens and ones with a part-whole model | Addition \& subtraction <br> 10 more and 10 less <br> Add and subtract 10s <br> Add by making 10 <br> Add and subtract a 2 - <br> digit and 1-digit number <br> - crossing ten <br> Subtract a 1-digit <br> number from a 2-digit <br> number - crossing ten <br> Add and subtract two 2- <br> digit numbers (including <br> crossing ten) <br> Add two 2-digit numbers <br> - crossing ten - add ones and add tens | Money <br> Recognising and counting coins and notes (pence \& pounds) Make the same amount Compare money Find the total, difference and change Two-step problems <br> Multiplication \& division Recognise and add equal groups Make arrays Multiplication sentences using the x symbol | Multiplication and <br> Division <br> The 10 times-table <br> Divide by 10 <br> The 5 times-table <br> Divide by 5 <br> The 5 and 10 times- <br> tables <br> Measures - <br> Length, Mass, capacity \& temperature <br> Measure, compare and order lengths and heights (centimetres and meters) | Fractions <br> Make equal parts Recognise \& find a half Recognise \& find a quarter Recognise \& find a third Unit \& non-unit fractions Equivalence of a half and 2 quarters Find three quarters Count in fractions Problem solving with fractions <br> Time | Statistics <br> Make tally chart, tables and block diagrams Interpret pictograms Draw \& interpret pictograms (2, 5 and 10) <br> Geometry - Position \& direction Describe position Problem solving with position Describing movement and turns Shape patterns with turns |


| Tens and ones using addition <br> Use a place value chart Estimating numbers on number line <br> Compare \& order objects/numbers <br> Count in $2 \mathrm{~s}, 5 \mathrm{~s}, 10 \mathrm{~s}$, 3 s <br> Addition \& subtraction <br> Bonds to 10 <br> Fact families to 20 <br> Bonds within 20 <br> Related facts <br> Bonds to 100 (tens) <br> Add and subtract 1 s <br> Add by making 10 <br> Add three 1-digit <br> numbers <br> Add to the next 10 | Subtract a 2-digit number from a 2-digit number - not crossing ten <br> Subtract a 2-digit number from a 2 -digit number - crossing ten subtract ones and subtract tens Mixed addition and subtraction <br> Find and make number bonds <br> Bonds to 100 <br> Compare number sentences Missing number problems <br> Properties of shape <br> Recognise 2-D and 3-D shapes <br> Properties of 2D and 3D shapes: sides, edges, vertices, lines of symmetry, faces Draw \& sort 2D shapes Lines of symmetry - draw the whole Make patterns with 2d \& 3D shapes | 2, 5, 10 times tables Make equal groups sharing \& grouping Divide by 2 <br> Odd and even numbers Divide by 5 <br> Divide by 10 <br> Use arrays <br> Doubling and halving Odd and even numbers |
| :---: | :---: | :---: |

Four operations with lengths and heights Problem solving with lengths and heights Compare mass Measure mass in grams
\& kilograms
Measure capacity Compare volume Millilitres

Litres
Four operations with mass \& volume
Temperature

Telling the time to the hour \& half hour
O'clock and half past Quarter past and quarter to
Telling time to 5 minutes
Minutes in an hour
Hours in a day
Writing time
Find durations of time Compare durations of time

Revision/Consolidation All four operations: addition, subtraction, multiplication and division

Problem solving \&
Investigations

| Year 3 | Place value | Addition \& subtraction | Multiplication \& division | Length \& perimeter | Fractions | Properties of shape |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Represent numbers to $100$ | Mixed addition and subtraction problems | Consolidate 2, 4 and 8 times table (new | Measure length Measure length ( m ) | Making the whole Tenths | Turns and angles Right angles in shapes |
|  | Tens and ones using | Add and subtract 2-digit | worksheet) | Equivalent lengths - m \& | Count in tenths | Compare angles |
|  | addition | and 3-digit numbers - | Comparing statements | cm | Tenths as decimals | Draw accurately |
|  | Hundreds | not crossing 10 or 100 | Related calculations | Compare lengths | Fractions on a number | Horizontal and vertical |
|  | Numbers to 1,000 | Add 2-digit and 3-digit | Multiply 2-digits by 1- | Add lengths | line | Parallel and perpendicular |
|  | Activity: Numbers to 1,000 on a place value | numbers - crossing 10 or 100 | digit (1) <br> Multiply 2-digits by 1 - | Subtract lengths Activity What is | Fractions of a set of objects (1) | Recognise and describe 2D shapes |
|  | grid | Subtract a 2-digit | digit - exchange | perimeter? | Fractions of a set of | Recognise and describe 3- |
|  | 100s, 10s and 1s (1) | number from a 3-digit | Divide 2-digits by 1-digit | Measure perimeter | objects (2) | D shapes |
|  | $100 \mathrm{~s}, 10 \mathrm{~s}$ and 1s (2) | numbers - crossing 10 or | Activity Divide 100 into | Calculate perimeter | Fractions of a set of | Make 3-D shapes |
|  | Number line to 100 | 100 | 2, 4, 5 and 10 equal parts | Activity Calculate | objects (3) |  |
|  | Number line to 1,000 | Add two 3-digit numbers | Activity Divide with | perimeter activity | Equivalent fractions (1) | Mass \& capacity |
|  | Find 1, 10, 100 more or | - not crossing 10 or 100 | remainders |  | Equivalent fractions (2) | Activity Measure mass |
|  | less | Add two 3-digit numbers | Divide 2-digits by 1-digit | Fractions | Equivalent fractions (3) | Compare mass |
|  | Compare objects | - crossing 10 or 100 | Scaling | Activity - Working with | Compare fractions | Measure mass (1) |
|  | Compare numbers | Subtract a 3-digit | How many ways? | wholes and parts | Order fractions | Measure mass (2) |
|  | Order numbers | number from a 3 -digit |  | Make equal parts | Add fractions | Compare mass |
|  | Count in 50s | number - no exchange <br> Subtract a 3-digit | Money <br>  | Recognise a half Find a half | Time | Add and subtract mass Activity Measure capacity |
|  |  | number from a 3-digit | pounds | Recognise a quarter | O'clock and half past | Compare volume |
|  | Addition \& subtraction | number - exchange | Pounds and pence | Find a quarter | Quarter past and quarter | Measure capacity (1) |
|  | Add and subtract multiples of 100 | Estimate answers to calculations | Convert pounds and pence | Recognise a third Find a third | to Months and years | Compare capacity <br> Add and subtract capacity |
|  | Add and subtracts 1 s | Check answers | Add \& subtract money | Unit fractions | Hours in a day | Activity Temperature |
|  | and 1-digit numbers - | Multiplication \& division |  | Consolidation: Unit and | minutes | Temperature |
|  | not crossing 10 | Multiplication - equal | Statistics | non-unit fractions | Telling the time to the |  |
|  | Add and subtract 3-digit, | groups | Make tally charts | Equivalence of a half and | minute |  |
|  | numbers - crossing/not | symbol | and 10) | Count in fractions | Activity: 24-hour clock |  |
|  | crossing 10 and 100 | Using arrays | Interpret pictograms (2, |  | 24-hour clock |  |
|  | Add two 2-digit numbers | 2 times table | 5 and 10) |  | Finding the duration |  |
|  | - crossing 10 - add ones | 5 times table | Consolidation: |  | Comparing durations |  |
|  | \& add tens | Make equal groups - | Pictograms |  | Start and end times |  |
|  | Subtract a 2-digit | sharing, | Activity: Draw bar charts |  | Measuring time in |  |
|  | number from a 2-digit | Make equal groups - |  |  | seconds |  |
|  | number - crossing 10 - | grouping |  |  | Problem solving with |  |
|  | subtract ones \& subtract | Divide by 2, 5, 10 |  |  | time |  |
|  |  | Multiply \& divide by 3 |  |  |  |  |


|  |  | The 3 times table Multiply and divide by 4 The 4 times table Multiply \& divide by 8 The 8 times table |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year 4 | Place value <br> Numbers to 1,000 100s, 10s and 1s <br> Number line to 1,000 <br> Round to the nearest 10, 100 <br> Count in 1,000 s <br> Represent numbers to <br> $10,000,1,000 \mathrm{~s}, 100 \mathrm{~s}, 10 \mathrm{~s}$ <br> and 1s <br> Partitioning <br> The number line to <br> 10,000 <br> Find 1, 10, 100, 1,000 <br> more or less <br> Compare 4-digit <br> numbers <br> Order numbers <br> Round to the nearest <br> 1,000 <br> Count in 25 s <br> Introducing negative <br> numbers <br> Negative numbers <br> Roman numerals <br> Add and subtract $1 \mathrm{~s}, 10 \mathrm{~s}$, <br> 100 s and 1,000 s <br> Add and subtract two 3- <br> digit and 4 digit number: <br> With/without crossing <br> 10 or 100 <br> With/without <br> exchanging one/more | Length \& perimeter | Multiplication \& division | Fractions | Decimals | Time |
|  |  | Equivalent lengths - m and cm | 11 and 12 times table Multiply 3 numbers | Subtract fractions <br> Subtract 2 fractions | Bonds to 10 and 100 Make a whole | Telling the time to 5 minutes/to the minute |
|  |  | Equivalent lengths - mm | Factor pairs | Subtract from whole | Activity Write decimals | Using a.m. and p.m |
|  |  | and cm <br> Kilometres | Efficient multiplication Written methods | amounts <br> Fractions of a set of | Write decimals Compare decimals | 24-hour clock <br> Hours, minutes \& seconds |
|  |  | Add lengths | Multiply 2-digits by 1- | objects (1) | Order decimals | Years, months, weeks and |
|  |  | Subtract lengths | digit \& 3-digits by 1-digit | Fractions of a set of | Activity Round decimals | days |
|  |  | Measure perimeter | Divide 2-digits by 1-digit | objects (2) | Round decimals Halves | Analogue to digital |
|  |  | Perimeter on a grid | Divide 3-digits by 1 -digit | Calculate fractions of a | and quarters | (12 hour \& 24 hour) |
|  |  | Perimeter of rectilinear | problems | Problem solving - | Pounds and pence | Statistics |
|  |  | shapes |  | calculate quantities | Ordering money | Interpret charts |
|  |  | Multiplication \& division | What is area? <br> Counting squares | Decimals | Estimating money Convert pounds and | Comparison, sum and difference |
|  |  | Multiply by 10 | Making shapes | Activity Tenths and | pence | Introducing line graphs |
|  |  | Multiply by 100 Divide by 10 | Comparing area | hundredths Recognise tenths and | Add money Subtract money | Line graphs |
|  |  | Divide by 100 | What is a fraction? | hundredths | Give change | Properties of shape |
|  |  | Multiply by 1 and 0 Divide by 1 and itself | Unit and non-unit fractions | Tenths as decimals Tenths on a place value | Activity Working with money | Turns and angles Right angles in shapes |
|  |  | Multiply and divide by 3 The 3 times table | Tenths Count in tenths | grid <br> Tenths on a number line | Four operations | Compare angles Identify angles |
|  |  | Multiply and divide by 6 | Equivalent fractions | Divide 1-digit by 10 |  | Compare/order angles |
|  |  | 6 times tables and | Fractions greater than 1 | Divide 2-digits by 10 |  | Recognise and describe 2- |
|  |  | division facts | Count in fractions | Hundredths |  | D shapes |
|  |  | Multiply and divide by 9 | Add fractions | Hundredths as decimals |  | Triangles |
|  |  | 9 times table and | Add 2 or more fractions | Hundredths on a place |  | Quadrilaterals |
|  |  | division facts |  | value grid |  | Symmetry |
|  |  | Multiply and divide by 7 |  | Divide 1 or 2-digits by |  | Horizontal and Vertical |
|  |  | 7 times tables and |  | 100 |  | Lines of symmetry |
|  |  | division facts |  |  |  | Complete a symmetric figure |
|  |  |  |  |  |  | Position and direction |



|  | Subtract two 4-digit numbers - one exchange Subtract two 4-digit numbers - more than one exchange Subtract whole numbers with more than 4 digits (column method) <br> Round to estimate and approximate Inverse operations (addition and subtraction) <br> Multi-step addition and subtraction problems <br> Statistics <br> Interpret charts Comparison, sum and difference Introduce line graphs Read and interpret line graphs Draw line graphs Use line graphs to solve problems Read and interpret tables |  | Add and subtract fractions <br> Add fractions within 1 | Percentages as fractions and decimals Equivalent F.D.P. | Geometry <br> Identify angles <br> Compare and order <br> angles <br> Measure angles in <br> degrees <br> Measuring with a <br> protractor (1) <br> Measuring with a <br> protractor (2) <br> Drawing lines and angles accurately <br> Calculating angles on a straight line <br> Calculating angles <br> around a point <br> Triangles <br> Quadrilaterals <br> Calculating lengths and angles in shapes | What is volume? Compare volume Estimate volume Estimate capacity |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year 6 | Place Value <br> Numbers to 10 million Compare and order any numbers Round numbers to 10 , 100 and 1,000 Round any number Negative numbers <br> Addition, subtraction, multiplication \& division | Fractions <br> Multiply fractions by integers <br> Multiply fractions by fractions Divide fractions by integers (1) Divide fractions by integers (2) Four rules with fractions Fraction of an amount | Percentages <br> Understand percentages <br> Fractions to percentages <br> Equivalent FDP <br> Order FDP <br> Percentage of an <br> amount (1) <br> Percentage of an amount (2) <br> Percentages - missing | Ratio <br> Use ratio language Ratio and fractions Introducing the ratio symbol Activity Calculating ratio Calculating ratio Using scale factors Calculating scale factors Ratio and proportion problems | Revision \& Reasoning <br> Long multiplication Long division <br> Ordering fractions, decimals, percentages Fraction and percentage of amounts Perimeter of rectilinear shapes Volume | Creating a Theme Park <br> Four operations <br> Profit and loss <br> Estimating <br> Percentages <br> Kandinsky <br> Constructing shapes <br> Symmetry <br> Angles <br> Types of lines <br> Fibonacci Sequence |



Ratio and proportion problems (2)

Statistics
Read and interpret line graphs
Draw line graphs
Use line graphs to solve problems
Circles
Read and interpret pie
charts
Pie charts with
percentages
Draw pie charts The mean

Properties of shape
Measure with a protractor Draw lines and angles accurately Introduce angles Angles on a straight line Angles around a point Calculate angles Vertically opposite angles
Angles in a triangle Angles in a trianglespecial cases Angles in a trianglemissing angles Angles in special quadrilaterals Angles in regular

## polygons

Draw shapes accurately Draw nets of 3-D shapes

Area of triangles and quadrilaterals
Ratio
Fraction word problems
Translations
Reflections
Algebra
Reading and interpreting
line graphs and pie
charts
Word problems and multi-step problems

## SATs week

Maths in real life
Calculating time
differences
Distance Conversion
graphs
Money - costs, budgets
Percentages
Time problems

Number patterns
Enterprise
Best value for money (four operations)
Estimation
Costings and profit
Five 2's Investigation
Bodmas
4 operations
Reasoning
Problem solving skills Smarties Investigation Estimation
Sorting and Classifying
Nets
Pie charts
Measuring
Lines of symmetry
Famous Mathematicians
Trachtenburg Method
(links to History) -
multiplying any number by 11
The Future
Salaries
Tax
Mortgages
(four operations,
percentages)
The Future
Buying your dream home Area and perimeter
Budgeting
Bills
(percentages, fractions, six-digit numbers)

```
Equivalent fractions
Simplify fractions
Improper fractions to
mixed numbers Mixed
numbers to improper
fractions
Fractions on a number
line
Compare and order
(denominator)
Compare and order
(numerator)
Add and subtract
fractions (1)
Activity Add and subtract
fractions activity
(denominators are not
multiples)
Add and subtract
fractions (2)
Add mixed numbers
Add fractions
Subtract mixed numbers
Subtract fraction
Mixed addition and
subtraction
```

