| Nursery |  |  |
| :---: | :---: | :---: |
| Autumn | Spring | Summer |
| Daily whole class maths sessions <br> Nursery rhymes during circle times (puppets) <br> Daily book choice - comparison of height, counting, more, less than <br> Enhancements in the classroom linked to topics <br> Develop recognition of up to 2 objects without having to count <br> Reciting numbers up to 3 <br> Say one number for each item in order: 1,2,3 <br> Show some finger numbers <br> Recognises some numerals and beginning to link them <br> to amounts <br> Experiment with their own symbols and marks <br> Select shapes appropriately for tasks <br> Understand position through words alone <br> Make comparisons between objects relating to size <br> Talk about and identify patterns around them Solve real-life mathematical problems with numbers up to 2 | Daily whole class maths sessions <br> Nursery rhymes during circle times (puppets) <br> Daily book choice - comparison of height, counting, more, less than <br> Enhancements in the classroom linked to topics <br> Develop recognition of up to 3 objects without having to count individually <br> Reciting numbers up to 5 <br> Say one number for each item in order <br> Show some finger numbers <br> Recognise numerals to 3 and able to link them to amounts <br> Experiment with their own symbols and marks Solve real life mathematical problems with numbers up to 3 <br> Compare quantities "more than" and "fewer than" Combines shapes to make new ones Explore and talk about different 2D and 3D shapes Discuss routes and locations Make comparisons between objects relating to length/height <br> Extend and create ABAB patterns | Daily whole class maths sessions <br> Nursery rhymes during circle times (puppets) <br> Daily book choice - comparison of height, counting, more, less than <br> Enhancements in the classroom linked to topics <br> Develop recognition of up to 5 objects without having to count individually <br> Recite numbers up to 10 <br> Say one number for each item in order Show finger numbers up to 5 <br> Know that the last number you counted tells you how many there are in total Recognise numerals to 5 and able to link them to amounts <br> Experiment with their own symbols and marks <br> Solve real-life mathematical problems with numbers up to 5 <br> Explore and talk about different 2D and 3 D shapes, using informal mathematical <br> language <br> Describe a familiar route <br> Make comparisons between objects relating to weight/capacity <br> Notice and correct an error in a simple repeating pattern |


|  |  | Begin to describe a sequence of events using words such as first, then. |
| :---: | :---: | :---: |
| Reception |  |  |
| Autumn | Spring | Summer |
| 'Just Like Me' <br> Number <br> Match and sort numbers <br> Compare amounts <br> Measure, Shape and special thinking <br> Compare size , mass, \& capacity <br> Exploring patern <br> 'It's me 1,2.3 <br> Number <br> Representing 1, 2, 3 <br> Comparing 1, 2,3 <br> Composition of 1,2,3 <br> Measure, Shape and special thinking <br> Circles and triangles <br> Positional language <br> 'Light and dark' <br> Number | 'Alive in 5' <br> Number <br> Introducing zero <br> Comparing numbers to 5 <br> Composition of 4\&5 <br> Measure, Shape and special thinking <br> Compare mass <br> Compare capacity <br> 'Growing 6,7,8’ <br> Number <br> 6,7,8 <br> Making pairs <br> Combining 2 groups <br> Measure, Shape and special thinking <br> Length \& height <br> time <br> 'Building 9 and 10' <br> Number | 'To 20 and beyond' <br> Number <br> Building numbers beyond 10 <br> Counting patterns beyond 10 <br> Spatial reasoning <br> Spatial reasoning <br> Match, rotate, manipulate <br> 'first, then, now' <br> Number <br> Adding more <br> Taking away <br> Spatial reasoning <br> Spatial reasoning <br> Compose and decompose <br> 'Find my pattern' <br> Number <br> Doubling <br> Sharing and grouping |


| Representing numbers to 5 One more or less | 9\&10 <br> Comparing numbers to 10 <br> Bonds tp 10 | Even and odd |
| :---: | :---: | :---: |
|  |  |  |
|  |  | Spatial reasoning |
| Measure, Shape and special thinking |  | Spatial reasoning |
| Shapes with 4 sides | Measure, Shape and special thinking | Visualise and build |
| Time | 3D shape pattern | 'On the move' |
|  |  | Number |
|  |  | Deepening understanding |
|  |  | Patterns and relationships Spatial reasoning |
|  |  | Spatial reasoning mapping |
| Year 1 |  |  |
| Autumn | Spring | Summer |
| To read and write numbers from 1 to 20 in numerals and words | To read and write numbers from 1 to 50 in numerals and words | To count to and across 100, forward and backward, beginning with 0 or 1 , or from any given number. |
| To compare numbers and objects | To identify 1 more or 1 less from a given number |  |
| To order numbers and objects | To add and subtract 1-digit and 2- digit numbers to 20 , including zero. | To solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of my teacher. |
| To identify 1 more or 1 less from a given number | To solve one-step problems that involve addition and subtraction, using concrete objects and |  |
| To read, write and interpret mathematical statements involving + - = signs. | and subtraction, using concrete objects and pictorial representations, and missing number | To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. |
| To understand fact families |  |  |
| To represent and use number bonds and related subtraction and addition facts within 10. | To measure and begin to record the following: mass/weight. | To recognise and use language relating to dates, including days of the week, weeks, months, years. |
| To use subtraction to find the difference. | To measure and begin to record the following: length and heights. |  |


| To recognise and name common 2D shapes, including circles and triangles. <br> To recognise and name common 3D shapes, including: cuboids (including cubes), pyramids, spheres. | To measure and begin to record the following: capacity and volume. <br> To compare, describe and solve practical problems for: lengths and heights and mass/weight <br> To compare, describe and solve practical problems for: capacity and volume | To tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. <br> To sequence events in chronological order using language (e.g. before, after, next, first, today, yesterday, tomorrow, morning, afternoon, evening). <br> To compare, describe and solve practical problems for: time. <br> To recognise and know the value of different denominations of coins and notes. <br> To describe position, direction and movement, including half, quarter and three-quarter turns . |
| :---: | :---: | :---: |
| Year 2 |  |  |
| Autumn | Spring | Summer |
| To count in steps of 2 and 5 from 0 , and in tens from any number, forward and backward. <br> To read and write numbers to at least 100 in numerals and in words. <br> To compare and order numbers from 0 up to 100; use < > and = signs. <br> To recognise the place value of each digit in a 2digit number. | To calculate the mathematical statements for multiplication and division within the multiplication tables and write them using the $\mathrm{x} \div$ and $=$ signs. <br> To understand that multiplication of two numbers can be one in any order (commutative) and division of one number by another cannot. <br> To recognise that division is the inverse of multiplication and use to check calculations. | To tell and write the time to quarter past/to the hour and draw the hands on a clock face to show these times. <br> To compare and sequence intervals of time. <br> To choose and use appropriate standard units to estimate and measure: length/height in any direction ( $\mathrm{m} / \mathrm{cm}$ ); mass ( $\mathrm{kg} / \mathrm{g}$ ) to the nearest appropriate unit, using rulers and scales. |

To count in steps of 3 from 0 , and in tens from any number, forward and backward.

To recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100 .

To add and subtract numbers mentally, including: 2-digit numbers and ones; 2-digit numbers and tens; two 2-digit numbers; adding three 1-digit numbers.

To understand that addition of any two numbers can be done in any order (commutative) and subtraction of one number from another cannot.

To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

To make equal groups
To recognise and use symbols for pounds ( $£$ ) and pence (p); combine amounts to make particular values.

To find different combinations of coins that equal the same amounts of money.

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

To identify 2D shapes on the surface of 3D shapes.

To identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line.

To identify and describe the properties of 3D shapes, including the number of edges, vertices and faces.

To compare and sort common 2D and 3D shapes and everyday objects.

To order and arrange combinations of mathematical objects in patterns and sequences.

To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.

To ask and answer questions about totalling and compare categorical data

To interpret and construct: pictograms; tally charts; block diagrams and simple tables.

To compare and order lengths and mass, and record the results using >, < and $=$.

To choose and use appropriate standard units to estimate and measure: temperature ( ${ }^{\circ} \mathrm{C}$ ); capacity ( $1 / \mathrm{ml}$ ) to the nearest appropriate unit, using thermometers and measuring vessels.

To use mathematical vocabulary to describe position, direction and movement, including movement in a straight line distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).

To write simple fractions and recognise the equivalence.

To recognise, find, name and write factions $1 / 3$, $1 / 4,2 / 4,1 / 2,3 / 4$ of a length, shape, set of objects, or quantity.

| To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. |  |  |
| :---: | :---: | :---: |
| Year 3 |  |  |
| Autumn | Spring | Summer |
| Place Value | Multiplication and division | Fractions |
| Represent numbers to 100 | Multiples of 10 |  |
| Partition numbers to 100 | Multiply 2 digit by 1 digit, no exchange | Making the whole |
| Number line to 100 | Multiply 2 digit by 1 digit, with exchange | Tenths |
| Hundreds | Link multiplication with division | Tents |
| Represent numbers to 1,000 | Divide 2 digit by 1 digit no exchange | Count in tenths |
| Partition numbers to 1,000 | Divide 2 digit by 1 digit with exchange | Tenths as decimals |
| Flexible partitioning of numbers to 1000 |  | Fractions on a number line |
| Hundreds, tens and ones | Length and Perimeter | fractions of a set of objects |
| Find 1,10 or 100 more or less | Measure length in cm and m | equivalent fractions |
| Number line to 1,000 | Measure in mm | compare fractions |
| Estimating on a number line to 1,000 | M, CM, MM | order fractions |
| Compare numbers to 1,000 | Equivalent lengths $m$ and cm | Add fractions |
| Order numbers to 1,000 | Equivalent lengths mm and cm | Subtract fractions |
| Count in 50 s | Compare lengths |  |
|  | Add lengths |  |
|  | Subtract lengths | Money |
| Addition and Subtraction | Measure perimeter | Pounds and pence |
| Apply number bonds within 10 | Calculate perimeter | Convert pounds and pence |
| Add and subtract 1s |  | Add money |
| Add and subtract 10s | Fractions | Subtract money |
| Add and subtract 100s | Understand denominators of unit fractions | Give change |
| Spot the pattern | Compareand order unit fractions |  |
| Add 1s across a 10 | Understand the numerator of non unit fractions | Time |
| Add 10s across a 100 | Understand a whole | O clock |


| Subtract 1s across a 10 |
| :--- |
| Subtract 10s across a 100 |
| Make connections |
| Add two numbers (no exchange) Subtract two |
| numbers (no exchange) Add two numbers |
| (across a 10) |
| Add two numbers (across a 100) Subtract two |
| numbers (across a 10) Subtract two numbers |
| (across a 100) |
| Add 2-digit and 3-digit numbers Subtract a 2-digit |
| number from a 3-digit number |
| Complements to 100 |
| Estimate answers |
| Inverse operations |
| Make decisions |
| Multiplication and Division |
| Multiplication - equal groups |
| Use arrays |
| Multiples of 2 |
| Multiples of 5 and 10 |
| Sharing and grouping |
| Multiply by 3 |
| Divide by 3 |
| The 3 times-table |
| Multiply by 4 |
| Divide by 4 |
| The 4 times-table |
| Multiply by 8 |
| Divide by 8 |
| The 8 times-table |
| The 2,4 and 8 times-tables |
|  |

Fractions and scales
Fractions on a number line
Count in fractions on a number line Equivalent fractions on a number line Equivalent fractions as bar models

## Mass and capacity

## Use scales

Measure mass in grams
Measure in KG and G
Equivalent masses
Compare mass
Add and subtract mass
Measure capacity and volume in ml
Measure capacity and volume in I and ml
Equivalent capacity
Compare capacity
Add and subtract capacity and volume

Quarter past quarter to
Months and years
Hours in a day
Telling the time to 5 minutes
Telling the time to 1 minute
Using am and pm
24 hour clock
Finding duration
Comparing duration
Start and end times
Measuring times in seconds
Problem solving with time

## Properties of shape

Turns and angles
Right angles in shapes
Compare angles
Draw accurately
Horizontal and vertical
Parallel and perpendicular
Recognise and describe 2d shapes
Recognise and describe 3d shapes
Make 3D shapes

## Statistics

Make tally charts
Draw pictograms
Interpret pictograms
Bar charts
Tables

| Year 4 |  |  |
| :---: | :---: | :---: |
| Autumn | Spring | Summer |
| Place Value | -Multiplication and division | Decimals |
| -Represent numbers to 1,000 | Factor pairs | Make a whole |
| -Partition numbers to 1,000 | -Use factor pairs | Write decimals |
| -Number line to 1,000 | -Multiply by 10 | Compare decimals |
| -Thousands | -Multiply by 100 | Order decimals |
| -Represent numbers to 10,000 | -Divide by 10 | Round decimals |
| -Partition numbers to 10,000 | -Divide by 100 | Halves and quarters |
| -Flexible partitioning of numbers to 10,000 | - Informal written methods for multiplication |  |
| -Find 1, 10, 100, 1,000 more or less | -Multiply a 2-digit number by a 1-digit number | Money |
| -Number line to 10,000 | -Multiply a 3-digit number by a 1-digit number | -Pounds \& pence |
| -Estimate on a number line to 10,000 | -Divide a 2-digit number by a 1-digit number (1) | -Ordering money |
| -Compare numbers to 10,000 | -Divide a 3-digit number by a 1-digit number | -Add money |
| -Order numbers to 10,000 | -Correspondence problems | -Subtract money |
| -Roman numerals | -Efficient multiplication | -Multiply money |
| -Round to the nearest 10 |  | -Divide money |
| -Round to the nearest 100 | Length and Perimeter |  |
| -Round to the nearest 1,000 | -Measure in kilometres and metres | Time |
| -Round to the nearest 10, 100 or 1,000 | -Equivalent lengths (kilometres and metres) | -Units of time |
|  | -Perimeter on a grid | -Hours, minutes, seconds |
| Addition and subtraction | -Perimeter of a rectangle | -Weeks, months, years |
| -Add and subtract $1 \mathrm{~s}, 10 \mathrm{~s}, 100 \mathrm{~s}$ and 1,000s | -Perimeter of rectilinear shapes | -12 hour and 24-hour clocks |
| -Add up to two 4-digit numbers - no exchange | -Find missing lengths in rectilinear shapes |  |
| -Add two 4-digit numbers - one exchange | -Calculate perimeter of rectilinear shapes | Statistics |
| -Add two 4-digit numbers- more than one | -Perimeter of regular polygons | -Bar charts <br> -Pictograms |
| -Subtract two 4-digit numbers - no exchange | Fractions | -Interpret charts |
| -Subtract two 4-digit numbers - one exchange | -Understand the whole | -Using tables |
| -Subtract two 4-digit numbers - more than one | -Count beyond 1 | -Line graphs |
| exchange | -Partition a mixed number | Geometry |
| -Efficient subtraction | -Number lines with mixed numbers | -2D Shapes |
| -Estimate answers | -Compare and order mixed numbers | -Comparing angles |


| -Checking strategies <br> Measurement: Area <br> -What is area? <br> -Counting squares <br> -Make shapes <br> - Compare area <br> Multiplication and division <br> -Multiply by 10 \& 100 <br> -Divide by 10 \& 100 <br> -Multiply by 1 \& 0 <br> -Divide by 1 and itself <br> -To recognise and use factor pairs and commutativity in mental calculations. <br> -To multiply 2 -digit and 3-digit numbers by a 1digit number using formal written layout. <br> -To divide 2-digit and 3-digit numbers by a 1-digit number using formal written layout with no remainder. | -Understand improper fractions -Convert mixed numbers to improper fractions <br> -Convert improper fractions to mixed numbers <br> -Equivalent fractions on a number line <br> -Equivalent fraction families <br> -Add two or more fractions <br> -Add fractions and mixed numbers <br> -Subtract two fractions <br> -Subtract from whole amounts <br> -Subtract from mixed numbers <br> Decimals <br> -Tenths as decimals <br> -Tenths on a place value chart <br> -Tenths on a number line <br> -Divide a 1-digit number by 10 <br> -Divide a 2-digit number by 10 <br> -Hundredths as fractions <br> -Hundredths as decimals <br> -Hundredths on a place value <br> -Divide a 1- or 2-digit number by 100 | -Identify angles <br> -Triangles <br> -Quadrilaterals <br> -Line of symmetry <br> Position \& Direction <br> -Position <br> -Co-ordinates <br> -Translations |
| :---: | :---: | :---: |
| Year 5 |  |  |
| Autumn | Spring | Summer |
| Place Value <br> -Roman numerals to 1,000 <br> -Numbers to 10,000 <br> -Numbers to 100,000 <br> -Numbers to 1,000,000 <br> -Read and write numbers to 1,000,000 <br> -Powers of 10 | Multiplication \& Division B <br> - Multiply up to a 4-digit number by a 1-digit number <br> - Multiply a 2-digit number by a 2-digit number (area model) <br> -Multiply a 2-digit number by a 2-digit number | Shape <br> Measuring angles in degrees <br> Measuring with a protractor <br> Drawing lines and angles accurately <br> Calculating angles on a straight line <br> Calculating angles round a point <br> Calculating lengths and angles in shapes |

-10/100/1,000/10,000/100,000 more or less
-Partition numbers to $1,000,000$
-Number line to 1,000,000
-Compare and order numbers to 100,000
-Compare and order numbers to 1,000,000
-Round to the nearest 10,100 or 1,000
-Round within 100,000
-Round within 1,000,000

## Addition and subtraction

-Mental strategies
-Add whole numbers with more than four digits -Subtract whole numbers with more than four digits
-Round to check answers
-Inverse operations (addition and subtraction)
-Multi-step addition and subtraction problems
-Compare calculations
-Find missing numbers
Multiplication \& Division A
-Multiples
-Common multiples
-Factors
-Common factors
-Prime numbers
-Square numbers
-Cube numbers
-Multiply by 10,100 and 1,000
-Divide by 10, 100 and 1,000
-Multiples of 10, 100 and 1,000

- Multiply a 3-digit number by a 2-digit number
- Multiply a 4-digit number by a 2-digit number
- Solve problems with multiplication
- Short division
- Divide a 4-digit number by a 1-digit number
- Divide with remainders
- Efficient division
- Solve problems with multiplication and division


## Fractions B

- Multiply a unit fraction by an integer
- Multiply a non-unit fraction by an integer
- Multiply a mixed number by an integer
- Calculate a fraction of a quantity
- Fraction of an amount
- Find the whole
- Use fractions as operators


## Decimals \& Percentages

-Decimals up to 2 decimal places
-Equivalent fractions and decimals (tenths)

- Equivalent fractions and decimals (hundredths)
-Equivalent fractions and decimals


## Decimals \& Percentages

- Thousandths as fractions
- Thousandths as decimals
- Thousandths on a place value chart
- Order and compare decimals (same number of decimal places)
- Order and compare any decimals with up to 3 decimal places - Round to the nearest whole number

Regular and irregular polygons
Reasoning about 3d shapes

## Negative numbers

## Position \& Direction

Position in the first quadrant
Reflection
Reflection with coordinates
Translation with coordinates

## Decimals

Adding and subtracting decimals within 1
Complements to 1
Adding decimals crossing the whole
Adding and subtracting decimals with the same number of decimal places
Adding and subtracting decimals with a different number of decimal places
Adding and subtracting wholes as decimals
Decimal sequences
Multiplying and dividing decimals by 10,100 and 1000

## Measurement - converting units

Kilograms \& kilometres
Milligrams \& millilitres
Metric \& Imperial units

## Volume

Compare volume
Estimate volume
Estimate capacity

| -Find fractions equivalent to a unit fraction <br> -Find fractions equivalent to a non-unit fraction <br> -Recognise equivalent fractions <br> -Convert improper fractions to mixed numbers <br> -Convert mixed numbers to improper fractions <br> -Compare fractions less than 1 <br> -Order fractions less than 1 <br> -Compare and order fractions greater than 1 <br> -Add and subtract fractions with the same denominator <br> -Add fractions within 1 <br> -Add fractions with total greater than 1 -Add to a mixed number <br> -Add two mixed numbers <br> -Subtract fractions <br> -Subtract from a mixed number <br> -Subtract from a mixed number - breaking the whole <br> - Subtract two mixed numbers | - Round to 1 decimal place <br> - Understand percentages <br> - Percentages as fractions <br> - Percentages as decimals <br> - Equivalent fractions, decimals and percentages <br> Perimeter \& Area <br> - Perimeter of rectangles <br> - Perimeter of rectilinear shapes <br> - Perimeter of polygons <br> - Area of rectangles <br> - Area of compound shapes <br> - Estimate area <br> Statistics <br> - Draw line graphs <br> - 2 Read and interpret line graphs <br> - Read and interpret tables <br> - Two-way tables <br> - Read and interpret timetables |  |
| :---: | :---: | :---: |
| Year 6 |  |  |
| Autumn | Spring | Summer |
| Place Value <br> Numbers to 1,000,000, numbers to 10,000,000 <br> Read and write numbers to $10,000,000$ <br> Powers of 10 <br> Number line to $10,000,000$ <br> Compare and order any integers <br> Round any integers <br> Negative numbers | Ratio \& Proportion - add or multiply, use ratio language, ratio symbol, ratio and fractions, scale drawings, scale factors, ratio problems, proportion problems <br> Algebra - function machines, form expression, substitution, formula, $1 \& 2$ step equations, solving problems with 2 unknowns Decimals - place value within 1, round decimals, add, subtract, multiply \& divide decimals | Properties of shape <br> Measuring with a protractor, calculating angles, vertically opposite angles, angles in triangle, angles in special quadrilaterals, angles in regular polygons, drawing shapes accurately and drawing nets of 3d shapes <br> Position and direction <br> The first quadrant <br> Four quadrants |


| Addition, subtraction, multiplication and division <br> Add and subtract integers <br> Common factors <br> Common multiples <br> Rules of divisibility <br> Primes to 100 <br> Square and cube numbers <br> Multiply up to a 4-digit number by a 2-digit number <br> Solve problems with multiplication <br> Short division <br> Division using factors <br> Introduction to long division <br> Long division with remainders <br> Solve problems with division <br> Solve multi-step problems <br> Order of operations <br> Mental calculations and estimation <br> Reason from known facts <br> Fractions (and decimals) <br> Equivalent fractions and simplifying <br> Equivalent fractions on a number line <br> Compare and order (denominator) <br> Compare and order (numerator) <br> Add and subtract simple fractions <br> Add and subtract any two fractions <br> Add mixed numbers <br> Subtract mixed numbers <br> Multi-step problems <br> Multiply fractions by integers <br> Multiply fractions by fractions | Fractions, decimals \& percentages - decimal and fraction equivalents, fractions as divison, understanding \%, fractions as \%, equivalent fractions, decimals and \%, percentage of amount Area, Perimeter \& Volume - area \& perimeter, area of triangles, area of a parallelogram, volume of a cuboid <br> Statistics - line graphs, dual bar charts, pie charts, mean | Translations reflections |
| :---: | :---: | :---: |

## Divide a fraction by an integer

Divide any fraction by an integer
Mixed questions with fractions
Fraction of an amount
Fraction of an amount - find the whole

## Converting Units

Metric measures
Convert metric measures
Calculate with metric measures
Miles and kilometres
Imperial measures

