Aims
The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

| Early Years Foundation Stage | Key Stage 1 |
| :---: | :---: |
| Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes. <br> Early Learning Goal. <br> Number. <br> Children at the expected level of development will: <br> - Have a deep understanding of number to 10 , including the composition of each number <br> - Subitise (recognise quantities without counting) up to 5 <br> - Automatically recall number bonds up to 5 (including subtraction facts) and some number bonds to 10 , including double facts. <br> Numerical Patterns <br> - Children at the expected level of development will: <br> - Verbally count beyond 20 , recognising the pattern of the counting system <br> - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity <br> - Explore and represent patterns within numbers up to 10 , including evens and odds, double facts and how quantities can be distributed equally. | The principal focus of mathematics teaching in Key Stage 1 is to ensure that pupils: <br> - develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the 4 operations, including with practical resources [for example, concrete objects and measuring tools]. <br> - develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. <br> - know, by the end of Year 2, the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. <br> - read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at Key Stage 1 |

Nursery Mathematician

- begin to compare and recognise changes in numbers of things, using words like more, lots or 'same
- say numbers 0 to 5 in order
- accurately respond when asked to give 1, 2 or 3 items from a group
- recognise numerals $0,1,2$ and 3
- begin to count on their fingers (up to 5)
- touch/ point to objects as they count them
- fill and empty containers
- move their bodies and toys around objects and explores fitting into spaces
- remember their way around familiar environments
- respond to some spatial and positional language
- explore how things look from different viewpoints including things that are near or far away
- push objects through different shaped holes,
- begin to select a shape for a specific space (jigsaw puzzles)
- create a structure using block
- recognise that two objects
have the same shape
- make simple constructions
- become familiar with patterns in daily routines
- join in with and predict what
comes next in a story or rhyme
- begin to arrange items in their own patterns, e.g. lining up toys
- join in and anticipates repeated sound and action patterns
- know what happens next using the pattern of everyday routines
- understand that things might happen now or at another time, in routines
- explore differences in size,
- length, weight and capacity
- begin to understand some talk about immediate past and
future
- anticipate times of the day such as mealtimes or home such

|  | Reception Mathematician |
| :--- | :--- |
| Number |  |

compare two small groups of up to five objects, saying when there are the same number of objects in each group

- point or touch each item, saying one number for each item,
- begin to recognise numerals 0 to 10 use number names and symbols when comparing numbers, showing interest in large numbers
- estimate numbers of things, showing understanding of relative size
- enjoy reciting numbers from 0 to 10 (and beyond) and back from 10 to 0
- place numerals in order 0 to 10 (ordinality)
- subitise one, two, three four and five objects (without counting)
- count up to ten items, recognising that the last number said represents the total counted so far count out up to 10 objects from a larger group
- match the numeral with a group of items to show how many there are (up to 10)


## Composition

- Through play and exploration, begin to learn that numbers are made up (composed) of smaller numbers
- Begin to use understanding of number to solve practical problems in play and meaningful activities
- Begin to recognise that each counting number is one more than the one before
- Separate a group of three or four objects in different ways, beginning to recognise that the total is still the same
- Show awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects
- Begin to conceptually subitise larger numbers by subitising larger numbers by subiter groups within the number
- Practically add one and subtracts one with numbers to 10
- Begin to explore and work out mathematical problems, using signs

Year 1 Mathematician
Year 2 Mathematician

## Number and Place Value

- count in steps of 2,3, and 5 from 0, and in 10s from any number, forward and backward
- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of $2 \mathrm{~s}, 5 \mathrm{~s}$ and 10s
- given a number, identify 1 more and 1 less
- 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
- read and write numbers from 1 to 20 in numerals and words
- recognise the place value of each digit in a twodigit number (10s, 1s)
- identify, represent and estimate numbers using different representations, including the number line
- compare and order numbers from 0 up to 100; use <, > and = signs
- read and write numbers to at least 100 in numerals and in words
- use place value and number facts to solve problems


## Number - Addition and Subtraction

- read, write and interpret mathematica statements involving addition (+), subtraction (-) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20 , including 0
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=$ ? $-9$


## Number - Addition and Subtraction

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

O applying their increasing knowledge of mental and written methods

- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
- a two-digit number and ones
- a two-digit numbers and 10s
- 2 two-digit numbers
- Adding 3 one-digit numbers
- show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot

|  |  | and strategies of their own choice |  | between addition and subtraction and use this to check calculations and solve missing number problems |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Number - Multiplication and Division <br> - solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher | Number - Multiplication and Division <br> - recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers <br> - calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals ( $=$ ) signs <br> - show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot <br> - solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts |
|  |  |  | Number - Fractions <br> - recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity <br> - recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity | Number - Fractions <br> - recognise, find, name and write fractions $\frac{1}{3}, \frac{1}{4}, \frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity <br> - write simple fractions, for example $\frac{1}{2}$ of $6=3$ and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ |
|  |  | Measures <br> - In meaningful contexts, finds the longer or shorter, heavier or lighter and more/less full of two items <br> - Recall a sequence of events in everyday life and stories <br> - Enjoy tackling problems involving prediction and discussion of comparisons of length, weight or capacity <br> - Become familiar with measuring tools in everyday experiences and play <br> - Able to order and sequence events using everyday language related to time <br> - Begin to experience measuring time with timers and calendars | Measurement <br> - compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] mass/weight [for example, heavy/light, heavier than, lighter than] capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] time [for example, quicker, slower, earlier, later] <br> - measure and begin to record the following: lengths and heights mass/weight capacity and volume time (hours, minutes, seconds) | Measurement <br> - choose and use appropriate standard units to estimate and measure length/height in any direction ( $\mathrm{m} / \mathrm{cm}$ ); mass ( $\mathrm{kg} / \mathrm{g}$ ); temperature $\left({ }^{\circ} \mathrm{C}\right)$; capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels <br> - compare and order lengths, mass, volume/capacity and record the results using >, < and = <br> - recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value <br> - find different combinations of coins that equal the same amounts of money <br> - solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change |


|  |  |  | - recognise and know the value of different denominations of coins and notes <br> - sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] <br> - recognise and use language relating to dates, including days of the week, weeks, months and years <br> - tell the time to the hour and half past the hour and draw the hands on a clock face to show these times | - compare and sequence intervals of time <br> - tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times <br> - know the number of minutes in an hour and the number of hours in a day |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Shape. <br> Respond to both informal language and common shape names Show awareness of shape similarities and differences between objects <br> - Enjoy partitioning and combining shapes to make new shapes with 2D and 3D shapes <br> - Attempt to create arches and enclosures when building, using trial and improvement to select blocks <br> - Compose and decompose shapes, learning which shapes combine to make other shapes <br> - Use own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build <br> - Explore and add to simple linear patterns of two or three repeating items (ABB, ABAB, AAABBB etc.) <br> - Spot patterns in the environment, beginning to identify the pattern "rule" <br> - Choose familiar objects to create and recreate repeating patterns beyond $A B$ patterns and begins to identify the unit of repeat | Geometry - Properties of Shape <br> - recognise and name common 2-D and 3-D shapes, including: <br> - 2-D shapes [for example, rectangles (including squares), circles and triangles] <br> - 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] | Geometry - Properties of Shape <br> - identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line <br> - identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces <br> - identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] <br> - compare and sort common 2-D and 3-D shapes and everyday objects |


|  | Position. <br> - Use spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints <br> - Investigate turning and flipping objects in order to make shapes fit and create models <br> - Use positional language to describe where an object is | Geometry - Position and Direction <br> - describe position, direction and movement, including whole, half, quarter and three-quarter turns | Geometry - Position and Direction <br> - order and arrange combinations of mathematical objects in patterns and sequences <br> - use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) |
| :---: | :---: | :---: | :---: |
|  | Enabling Environments. <br> - Count while engaging in everyday tasks and moving around <br> - Regularly sing songs with counting strings (use objects to support) <br> - Provide buckets and bags for children to create collections of objects which they can count <br> - Design outdoor spaces where children can learn through a variety of spatial experiences <br> - Provide a range of inset and jigsaw puzzles od increasing complexity for children to choose <br> - Provide a numeral rich environment <br> - Provide numerals that can pick up and use within all aspects of their play <br> - Explore different arrangements of the same number <br> - Provide spaces for children to display their ongoing mathematical thinking <br> - Estimation station (record guesses, order guess, give benchmarks( <br> - Involve children in voting <br> - Play subitising games which involve quickly revealing and hiding numbers of objects <br> - Provide numeral cards for children to order on a washing line <br> - Play games focusing on the properties of shapes <br> - Provide opportunities for printing patterns <br> - Provide objects in a range of contexts varying in length, capacity or weight <br> - Model using measuring tools (tape measures, scales etc) |  |  |

## White Rose Maths Scheme of Learning Overview



## Year 1

|  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ¢ | Number: Place Value (within 10) |  |  |  | Number: Addition and Subtraction (within 10) |  |  |  |  |  | Number: Place Value (within 20) |  |
| - |  | Numb | r: Additi ubtractio within 20) | n and | Number: Place Value (within 50) |  |  | Measurement: Length and Height |  | Measurement: Weight and Volume |  |  |
| ¢ E ¢ ज |  | Number: Multiplication and Division |  |  | Number: <br> Fractions |  |  | Number: Place Value (within 100) |  |  | Measurement: Time |  |

Year 2

|  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\stackrel{E}{5}$ | Number: Place Value |  |  | Number: Addition and Subtraction |  |  |  |  | Measurement: Money |  |  |  |
|  | Number: Multiplication and Division |  |  |  | Stat | tics | Geometry: Properties of Shape |  |  | Number: Fractions |  |  |
|  | Measu Leng He | ment: and ht | Geometry: Position and Direction |  | Conso and p sol | dation blem ng | Measurement: Time |  | Measurement: Mass, Capacity and Temperature |  |  |  |


| Reception Mathematician |  |  |
| :---: | :---: | :---: |
| Number | Shape | Measure |
| Autumn <br> - Match objects that are the same <br> - Sort objects based on common attributes <br> - Compare amounts (object based) <br> - Represent 1, 2 and 3 <br> - Compare 1, 2 and 3 <br> - Composition of 1,2 and 3 <br> - Count on and back to 4 <br> - Subitise up to 4 <br> - Count on and back to 5 <br> - Subitise up to 5 <br> - Make numbers 1, 2, 3, 4 and 5 on a tens frame <br> - One more/ one less to 5 | Autumn <br> - Make simple patterns <br> - Recognise circles and triangles <br> - Begin to use positional language <br> - Shapes with 4 sides (squares and rectangles) <br> - Recognise circles, triangles, squares and rectangles in the environment | Autumn <br> - Compare size, mass, and capacity (big/ small) <br> - Night and day (key vocabulary for our own daily routine) |
| Spring <br> - Introduce 0 <br> - Compare numbers to 5 <br> - Composition of 4 and 5 <br> - Introduce 6, 7 and 8 <br> - Count forwards and backwards to 6,7 and 8 <br> - Subitise 6, 7 and 8 <br> - Make matching pairs <br> - Combine 2 groups together <br> - Introduce 9 and 10 <br> - Count forwards and backwards to 9 and 10 <br> - Represent 6, 7, 8, 9 and 10 on a tens frame <br> - Compare numbers to 10 <br> - Find number bonds to 10 using real objects | Spring <br> - Explore and manipulate 3d shapes <br> - Make more complex patterns | Spring <br> - Compare mass (heavy and light) <br> - Compare capacity <br> - Length and height (taller/ shorter/ the same) <br> - Sequence the day <br> - Identify things that happen on the same day each week |
| Summer Consolidate: <br> - Subitising 1 to 10 <br> - Counting 1 to 10 <br> - Composition of numbers 1 to 10 <br> - Compare and order numbers to 10 | Summer Consolidate: <br> - Naming 2d shapes <br> - Recognising 2d shapes in the environment <br> - Space spatial reasoning | Summer <br> Consolidate the key vocabulary for*: <br> Capacity <br> Mass <br> Length <br> Height <br> Time |

- Build numbers beyond $10^{*}$
- Count patterns beyond $10^{*}$
*Likely to change based on new framework.
- 3d shapes- can they roll?
- Joining shapes spatial reasoning
- Adding more (first, then, now structure)
- Taking away within 10
- Doubling to 10
- Share numbers within 10
- Group numbers within 10
- Explore even and odd (structure of representations
- Copy and continue complex repeating patterns
- Copy and continue symmetrical constructions

| Number and Place Value | The Four Operations (+ - x and $\div$ ) Including Fractions. | Measurement | Geometry |
| :---: | :---: | :---: | :---: |
| Autumn (within 10) <br> - Sort objects into groups <br> - Count objects (to 10 ) <br> - Represent objects (to 10) <br> - Count, read and write forwards from any number 0 to 10 <br> - Count, read and write | Autumn <br> Addition and Subtraction. <br> - Understand the structure of a part-whole model <br> - Recognise the addition symbol <br> - Fact families- addition facts <br> - Find number bonds for numbers within 10 | Autumn N/A | Autumn <br> - Recognise and name 3-d shapes <br> - Sort 3-d shapes <br> - Recognise and name 2-d shapes <br> - Sort 2-d shapes <br> - Patterns with 3-d and 2-d shapes |


| Spring <br> (within 50) <br> - Numbers to 50 <br> - Tens and ones <br> - Represent numbers <br> - One more and one less <br> - Compare objects <br> - Compare numbers <br> - Order numbers <br> - Count in 2 s <br> - Count in 5 s | Spring <br> Addition and Subtraction. <br> - Add by counting on <br> - Find and make number bonds <br> - Add by making 10 <br> - Subtract- not crossing 10 <br> - Subtract- crossing 10 <br> - Addition and subtraction related facts <br> - Compare number sentences <br> - Add lengths together <br> - Subtract lengths | Spring <br> Length and Height. <br> - Compare lengths and heights <br> - Measure length (nonstandard units) <br> - Introduce the ruler <br> - Measure length (standard units, cm ) <br> Weight and Mass <br> - Introduce weight and mass <br> - Measure mass <br> - Compare mass <br> - Solve weight and mass problems <br> - Introduce capacity and volume <br> - Measure capacity <br> - Compare capacity | Spring <br> - Continue recognising 2d and 3d shapes in the environment. |
| :---: | :---: | :---: | :---: |
| Summer <br> (within 100) <br> - Counting to 100 in tens <br> - Counting forwards and backwards within 100 <br> - Introducing the 100 square <br> - Partitioning numbers <br> - Comparing numbers <br> - Ordering numbers <br> - One more, one less | Summer <br> Multiplication and Division <br> - Count in 2s <br> - Count in 5 s <br> - Count in 10s <br> - Make equal groups <br> - Add equal groups <br> - Make arrays <br> - Make doubles (up to double 10) <br> - Make equal groups- through grouping <br> - Make equal groups- through sharing <br> Fractions <br> - Make a half <br> - Make a whole <br> - Find a half (of an object) <br> - Find a half (of a quantity) <br> - Make a quarter <br> - Find a quarter (of an object) <br> - Find a quarter (of a quantity) | Summer <br> Money <br> - Recognising British coins <br> - Recognising British notes <br> - Counting coins <br> Time. <br> - Before and after <br> - Dates <br> - Time to the hour <br> - Time to the half hour <br> - Writing time <br> - Comparing time | Summer <br> Position and Direction <br> - Describe turns <br> - Describe position <br> See vocabulary progression for further detail. |


| Year Two Mathematician |  |  |  |
| :---: | :---: | :---: | :---: |
| Number and Place Value | The Four Operations (+-x and $\div$ ) Including Fractions. | Measurement | Geometry |
| Autumn <br> - Counting forwards and backwards within 20 <br> - Tens and ones within 20 <br> - Counting forwards and backwards within 50 <br> - Tens and ones within 50 <br> - Compare numbers within 50 <br> - Count objects to 100 <br> - Read and write numbers in numerals and words <br> - Represent numbers to 100 <br> - Tens and one with a whole part model <br> - Tens and ones using addition <br> - Use a place value chart <br> - Compare objects <br> - Compare numbers <br> - Order objects and numbers <br> - Count in 2 s <br> - Count in 5 s <br> - Count in 10s <br> - Count in 3s <br> Money <br> - Two-step problems. | Autumn <br> Addition and Subtraction <br> - Fact families- addition and subtraction bonds to 20 <br> - Check calculations <br> - Compare number sentences <br> - Number bonds to 10 and 20 <br> - Addition and subtraction related facts <br> - Bonds to 100 (tens) <br> - Add and subtract 1 s <br> - 10 more and 10 less <br> - Add and subtract 10 s <br> - Add by making 10 <br> - Add a 2 -digit and 1 -digit number- crossing 10 <br> - Subtraction- crossing 10 <br> - Subtract a 1 -digit number from a 2-digit numbercrossing 10 <br> - Add two 2-digit numbers (not crossing 10) <br> - Add two 2-digit numbers (crossing 10) <br> - Subtract a 2-digit number from a 2-digit number (not crossing 10) <br> - Subtract a 2-digit number from a 2-digit number (crossing 10) <br> - Find and make number bonds <br> - Bonds to 100 (tens and ones) <br> - Add three 1-digit numbers <br> Multiplication and Division <br> - Make equal groups <br> - Add equal groups <br> - Make arrays | Autumn <br> Money <br> - Recognising coins and notes <br> - Count money-pence <br> - Count money- pounds <br> - Count money- notes and coins <br> - Select money <br> - Make the same amount <br> - Compare money <br> - Find the total <br> - Find the difference <br> - Find change <br> - Two-step problems, involving money | Autumn N/A |


| Spring <br> Fractions <br> Problem solving with fractions. | Spring <br> Multiplication and Division <br> - Recognise equal groups <br> - Make equal groups <br> - Add equal groups <br> - Using the $x$ symbol <br> - Multiplication sentences from pictures <br> - Use arrays <br> - Make doubles <br> - 2times-table <br> - 5 times-table <br> - 10 times- table <br> - Make equal groups-sharing <br> - Make equal groups- grouping <br> - Divide by 2 <br> - Odd and even numbers <br> - Divide by 5 <br> - Divide by 10 <br> Fractions <br> - Working with parts and wholes <br> - Make equal parts <br> - Recognise a half <br> - Find a half <br> - Recognise a quarter <br> - Find a quarter <br> - Recognise a third <br> - Find a third <br> - Unit fractions <br> - Non-unit fractions <br> - Equivalence of half and 2 quarters <br> - Find three quarters <br> - Count in fractions | Spring <br> Statistics <br> - Make tally charts <br> - Draw pictograms (1-1) <br> - Interpret pictograms (1-1) <br> - Draw pictograms (2,5 and 10) <br> - Interpret pictograms (2,5 and 10) <br> - Make block diagrams | Spring <br> Properties of Shape <br> - Recognise 2d and 3d shapes <br> - Make 2d and 3d shapes <br> - Count sides on 2d shapes <br> - Count vertices on 2d shapes <br> - Draw 2d shapes <br> - Lines of symmetry <br> - Lines of symmetry- draw the whole <br> - Sort 2d shapes <br> - Make patterns with 2d shapes <br> - Count faces on 3d shapes <br> - Count edges on 3d shapes <br> - Count vertices on 3d shapes <br> - Sort 3d shapes <br> - Make patterns with 3d shapes |
| :---: | :---: | :---: | :---: |
| Summer <br> Length and Height <br> Problem solving with lengths. | Summer <br> Length and Height <br> The four operations with lengths. Mass, Capacity and Temperature The four operations with mass. The four operations with volume. | Summer <br> Length and Height <br> - Compare lengths and heights <br> - Measure lengths (nonstandard) <br> - Measure length (cm) | Summer <br> Position and Direction <br> - Describe position <br> - Problem solving with position <br> - Describe movement |


|  |  | - Measure length (m) <br> - Compare lengths <br> - Order lengths <br> Time <br> - Telling time to the hour <br> - Telling time to the half hour <br> - O'clock and half past <br> - Quarter past and quarter to <br> - Telling time to 5 minutes <br> - Writing time <br> - Hours and days <br> - Find durations of time <br> - Compare durations of time <br> Mass, Capacity and Temperature <br> - Introduce weight and mass <br> - Measure mass <br> - Compare mass <br> - Measure mass (in grams) <br> - Measure mass (in kilograms) <br> - Introduce capacity and volume <br> - Measure capacity <br> - Compare volume <br> - Millilitres <br> - Litres <br> - Temperature | - Describe turns <br> - Making patterns with shapes <br> See vocabulary progression for further detail |
| :---: | :---: | :---: | :---: |

## St Chad's Maths Vocabulary Progression

This document sets out EYFS and Key Stage 1 maths vocabulary from the EYFS framework and nee National Curriculum. The vocabulary is separated into each term, for each year group based on when it will be introduced. It is expected that the key vocabulary is displayed on 'Maths Working Walls' at appropriate times during the academic year and in line with the current topic area being taught within the class. These words must be promoted through mathematical talk during lessons.

You will see that some vocabulary repeats itself in different year groups. This is essential mathematical language that must be continuously consolidated.

| Reception Vocabulary |  |  |
| :---: | :---: | :---: |
| Autumn | Spring | Summer |
| Number <br> - match <br> - same <br> - different <br> - colour <br> - size <br> - shape <br> - compare <br> - sort <br> - order <br> - number <br> - one, two, three, four and five <br> - how many...? <br> - count <br> - is the same as <br> - more, less <br> - pattern <br> - pair <br> - repeat <br> - composition <br> - represent <br> - subitise <br> - forwards <br> - backwards <br> - fewer, smaller, less <br> - one more/ one less | Number <br> - zero <br> - none <br> - six, seven, eight, nine, ten <br> - count up <br> - count on <br> - count back <br> - few <br> - digit <br> - the same number as, as many as <br> - more, larger, bigger, greater <br> - fewest, smallest, least <br> - most, biggest, largest, greatest <br> - before, after <br> - next <br> - between <br> Addition and Subtraction <br> - add, more, and <br> - make, sum, total <br> - altogether <br> - how many more to make...? | Number <br> - eleven, twelve, thirteen, fourteen <br> - fifteen, sixteen, seventeen, eighteen <br> - nineteen, twenty <br> - odd <br> - even <br> - ones <br> - tens <br> - ten more <br> - ten less <br> Addition and Subtraction <br> - one more, two more... ten more <br> - how many more is... than... <br> - how much more is...? <br> - take away <br> - how many are left/ left over? <br> - how many have gone? <br> - one less, two less... ten less <br> - how many fewer is... than...? <br> - how much less is...? <br> - difference between <br> Multiplication and Division <br> - sharing <br> - doubling <br> - halving <br> - number patterns <br> - grouping <br> - sharing |
| Shape <br> Properties of Shape <br> - shape <br> - pattern <br> - curved <br> - straight <br> - sort | Shape <br> Properties of Shape <br> - face, edge, vertex, vertices <br> - cube <br> - pyramid <br> - sphere <br> - cone | Shape <br> Position and Direction. <br> - along <br> - through <br> - to, from, towards, away from <br> - movement <br> - slide |

- size
flat
- roll
- bigger, larger, smaller
- round
- solid
- pattern, repeating pattern
- 2-D shape
- corner
- side
- rectangle (including square)
- circle
- triangle

Position and Direction

- position
- over, under
- above, below
- top, bottom, side
- on, in
- outside, inside
- around
- in front, behind
- front, back
- beside, next to
- between
- direction
- left, right
- up, down
- forwards, backwards, sideways
- size
- compare
- longer
- shorter
- taller
- higher

Time

- day
- time
- night
- morning
- afternoon
- evening
- night
- before
- after
- today


## Measure

- measure
- guess
- estimate

Length

- metre
- length, height, width, depth
- long, short, tall
- high, low
- wide, narrow
- thick, thin
- longest, shortest, tallest, highest
- far, near, close


## Weight

- weigh, weighs, balances
- heavy, light
- heavier than, lighter than
- stretch, bend
- whole turn, half turn
- tomorrow
- until
- birthday
- heaviest, lightest
- scales

Capacity and Volume

- full
- empty
- half full
- holds
- container

Time
Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

- week
- holiday
- bedtime, dinner time, playtime
- yesterday
- next
- last
- now
- soon
- early
- late
- quick, quicker, quickest, quickly
- slow, slower, slowest, slowly
- old, older, oldest
- new, newer, newest
- clock
- watch

| Year One Vocabulary |  |  |
| :---: | :---: | :---: |
| Autumn | Spring | Summer |
| Number and Place Value <br> - sort <br> - count <br> - total <br> - zero, one two, three... ten <br> - represent <br> - pictorially <br> - numeral <br> - word <br> - eleven... twenty <br> - teen <br> - ty <br> - number <br> - zero <br> - none <br> - how many...? <br> - count, count on, count back <br> - forwards <br> - backwards <br> - equal to <br> - equivalent to <br> - in the same as <br> - more, less <br> - most, least <br> - many <br> - pattern <br> - greater than <br> - less than <br> - smaller <br> - larger <br> - number track <br> - one more/ one less <br> - smallest <br> - ones <br> - tens <br> - digit <br> - the same as <br> - more, larger, bigger, greater <br> - most, biggest, largest, greatest <br> - compare <br> - order <br> - size <br> - first, second, third... twentieth <br> - last, last but one | Number and Place Value <br> - sort <br> - count <br> - total <br> - zero, one two, three... ten <br> - represent <br> - pictorially <br> - numeral <br> - word <br> - eleven... twenty <br> - teen <br> - ty <br> - number <br> - zero <br> - none <br> - how many...? <br> - count, count on, count back <br> - forwards <br> - backwards <br> - equal to <br> - equivalent to <br> - in the same as <br> - more, less <br> - most, least <br> - many <br> - pattern <br> - greater than <br> - less than <br> - smaller <br> - larger <br> - number track <br> - one more/ one less <br> - smallest <br> - ones <br> - tens <br> - digit <br> - the same as <br> - more, larger, bigger, greater <br> - most, biggest, largest, greatest <br> - compare <br> - order <br> - size <br> - first, second, third... twentieth <br> - last, last but one | Number and Place Value <br> - sort <br> - count <br> - total <br> - zero, one two, three... ten <br> - represent <br> - pictorially <br> - numeral <br> - word <br> - eleven... twenty <br> - teen <br> - ty <br> - number <br> - zero <br> - none <br> - how many...? <br> - count, count on, count back <br> - forwards <br> - backwards <br> - equal to <br> - equivalent to <br> - in the same as <br> - more, less <br> - most, least <br> - many <br> - pattern <br> - greater than <br> - less than <br> - smaller <br> - larger <br> - number track <br> - one more/ one less <br> - smallest <br> - ones <br> - tens <br> - digit <br> - the same as <br> - more, larger, bigger, greater <br> - most, biggest, largest, greatest <br> - compare <br> - order <br> - size <br> - first, second, third... twentieth <br> - last, last but one |


|  | - 2 s <br> - 5 s <br> - numbers to 50 | - numbers to 100 <br> - 100 square <br> - rows <br> - columns |
| :---: | :---: | :---: |
| The Four Operations (inc. Fractions) <br> Addition and Subtraction <br> - part-whole <br> - part <br> - whole <br> - symbol <br> - equal to <br> - fact family <br> - commutative <br> - partitioned <br> - systematically <br> - number bonds <br> - number sentence <br> - addition <br> - add, more, and <br> - make, sum, total <br> - altogether <br> - one more, two more... ten more <br> - how many more to make...? <br> - how many more is... than...? <br> - how much more is...? <br> - subtract <br> - take away <br> - how many are left/ left over? <br> - how many have gone? <br> - one less, two less... ten less <br> - how many fewer is... than...? <br> - how much less is...? <br> - difference between | The Four Operations (inc. Fractions) <br> Addition and Subtraction <br> - part-whole <br> - part <br> - whole <br> - symbol <br> - equal to <br> - fact family <br> - commutative <br> - partitioned <br> - systematically <br> - number bonds <br> - number sentence <br> - addition <br> - add, more, and <br> - make, sum, total <br> - altogether <br> - one more, two more... ten more <br> - how many more to make...? <br> - how many more is... than...? <br> - how much more is...? <br> - subtract <br> - take away <br> - how many are left/ left over? <br> - how many have gone? <br> - one less, two less... ten less <br> - how many fewer is... than...? <br> - how much less is...? <br> - difference between | The Four Operations (inc. Fractions) <br> Multiplication and Division <br> - equal groups <br> - counting in <br> - doubles <br> - equally <br> - equal <br> - grouping <br> - sharing <br> - doubling <br> - halving <br> - array <br> - number patterns <br> Fractions <br> - fraction <br> - equal part <br> - equal grouping <br> - equal sharing <br> - parts of a whole <br> - half <br> - one of two equal parts <br> - quarter <br> - one of four equal parts <br> - whole <br> - quantity |
| Measurement <br> Not covered in Autumn Term in Year One. | Measurement <br> Length and Height <br> - measure <br> - measurement <br> - size <br> - compare <br> - centimetre <br> - metre <br> - length, height, width, depth <br> - long, short, tall <br> - high, low <br> - wide, narrow | Measurement Money <br> - money <br> - coin <br> - note <br> - penny, pence, pound <br> - price <br> - cost <br> - buy, sell <br> - spend, spent <br> - pay <br> - change |


|  | - thick, thin <br> - longer, shorter, taller, higher <br> - longest, shortest, tallest, highest <br> - far, near, close <br> - ruler <br> - metre stick <br> Weight and Volume <br> - kilogram <br> - gram <br> - weigh, weighs, balances <br> - heavy, light <br> - heaviest, lightest <br> - scales <br> - litres <br> - millilitre <br> - capacity <br> - volume <br> - full <br> - empty <br> - more than <br> - less than <br> - half full <br> - quarter full <br> - holds <br> - container | - costs more <br> - costs less <br> - costs the same as <br> - how much...? <br> - how many...? <br> - total amount <br> Time <br> - time <br> - days of the week <br> - months of the year <br> - seasons <br> - day, week, weekend, month, year <br> - birthday, holiday <br> - morning, afternoon, evening, night <br> - bedtime, dinner time, playtime <br> - today, yesterday, tomorrow <br> - before, after <br> - earlier, later <br> - next, first, last <br> - midnight <br> - date <br> - now, soon, early, late <br> - quick, quicker, quickest, quickly <br> - slow, slower, slowest, slowly <br> - old, older, oldest <br> - new, newer, newest <br> - takes longer, takes less time <br> - how long ago? <br> - how long will it be to...? <br> - how long will it take to...? <br> - how often? <br> - always, never, often, sometimes <br> - usually <br> - hours, minutes <br> - o'clock, half past <br> - hour hand <br> - minute hand <br> - clock <br> - clock face |
| :---: | :---: | :---: |
| Geometry <br> Properties of Shape. <br> - shape <br> - pattern <br> - flat | Geometry <br> Not covered in Spring Term in Year One. | Geometry <br> Position and Direction <br> - position <br> - over/ under <br> - above, below |

- curved
- straight
- round
- hollow
- solid
- sort
- make, build, draw
- size
- bigger, larger, smaller
- pattern, repeating pattern
- match
- properties
- 2-D shape
- corner
- side
- point
- pointed
- rectangle
- square
- circle
- triangle
- 3-D shape
- face
- edge
- vertex
- vertices
- cube
- cuboid
- pyramid
- sphere
- cone
- cylinder
- top, bottom, side
- on, in
- outside, inside
- in front, behind
- front back
- beside, next to
- opposite
- between
- direction
- journey
- left, right
- up, down
- forwards, backwards, sideways
- across
- next to, close, near, far
- to, from, towards, away from
- movement
- turn
- whole turn
- half turn
- quarter turn
- three-quarter turn

| Year Two Vocabulary |  |  |
| :---: | :---: | :---: |
| Autumn | Spring | Summer |
| Number and Place Value <br> - number <br> - numeral <br> - word <br> - part-whole model <br> - part <br> - whole <br> - place value chart <br> - zero/ none <br> - numbers 1-100 <br> - count on <br> - count back <br> - forwards <br> - backwards <br> - count in 2 s <br> - count in 5 s <br> - count in 10 s <br> - count in 3 s <br> - equal to <br> - equivalent to <br> - is the same as <br> - more, less <br> - most, least <br> - many <br> - odd, even <br> - multiple of <br> - sequence <br> - continue <br> - few <br> - pattern <br> - pair <br> - > greater than <br> - < less than <br> - ones <br> - tens <br> - digit <br> - place value <br> - represents <br> - more, larger, bigger, greater <br> - fewer, smaller, less <br> - fewest, smallest, least <br> - most, biggest, largest, greatest <br> - one more, ten more <br> - one less, ten less | Number and Place Value <br> Not discretely covered in Spring Term in Year 2. Essential that number and place value run through every strand, when appropriate. Children should be using the words taught in Autumn term all of the time. | Number and Place Value <br> Not discretely covered in Summer Term in Year 2. <br> Essential that number and place value run through every strand, when appropriate. Children should be using the words taught in Autumn term all of the time. |


| - compare <br> - order <br> - size <br> - first... twentieth <br> - between <br> - next to <br> - halfway between <br> - above, below <br> - column <br> - row |  |  |
| :---: | :---: | :---: |
| The Four Operations (inc Fractions) Addition and Subtraction <br> - related facts <br> - fact family <br> - check <br> - calculation <br> - 1 digit <br> - 2 digit <br> - crossing 10 <br> - addition <br> - add, more, and <br> - make, sum, total <br> - altogether <br> - one more/ ten more <br> - one less/ ten less <br> - how many more to make...? <br> - how many more is... than...? <br> - how much more is...? <br> - subtract <br> - take away <br> - how many are left/ left over? <br> - how many have gone? <br> - how many fewer is... than...? <br> - how much less is...? <br> - difference between <br> - equals <br> - is the same as <br> - number bonds/ pairs/ facts <br> - symbol (+) (-) | The Four Operations (inc Fractions) Multiplication and Division <br> - multiplication <br> - multiply <br> - multiplied by <br> - multiple <br> - groups of <br> - times <br> - repeated addition <br> - division <br> - divided by <br> - divided into <br> - grouping <br> - sharing, share, share equally <br> - left, left over <br> - equal groups of <br> - doubling <br> - halving <br> - array <br> - row, column <br> - number pattern <br> - multiplication fact, division fact <br> - 2 times table <br> - 5 times table <br> - 3 times table <br> - 10 times table <br> - odd <br> - even <br> - symbol (x) <br> Fractions. <br> - equivalence <br> - make <br> - recognise <br> - unit fraction | The Four Operations (inc Fractions) Not discretely covered in Summer Term in Year 2. <br> Use vocabulary from Autumn and Spring during problem solving and reasoning. |


|  | - fraction <br> - equivalent <br> - equal part <br> - equal grouping <br> - equal sharing <br> - parts of a whole <br> - half, two halves <br> - one of two equal parts <br> - quarter, two quarters, three quarters <br> - one of four equal parts <br> - one third, two thirds <br> - one of three equal parts |  |
| :---: | :---: | :---: |
| Measurement <br> Money <br> - amount <br> - difference <br> - money <br> - coin <br> - penny, pence, pound <br> - price, cost <br> - buy, sell <br> - spent <br> - pay <br> - change <br> - costs more <br> - costs less <br> - costs the same as <br> - how much...? <br> - how many...? <br> - total | Measurement <br> Statistics <br> - tally <br> - tally chart <br> - pictogram <br> - represent <br> - 1 to 1 correspondence <br> - draw <br> - interpret <br> - block diagram | Measurement <br> - measure <br> - measurement <br> - size <br> - compare <br> Length and Height <br> - compare <br> - centimetre <br> - metre <br> - length, height, width, depth <br> - long, short, tall <br> - high, low <br> - wide, narrow <br> - thick, thin <br> - longer, shorter, taller, higher <br> - longest, shortest, tallest, highest <br> - far, furthest, further, near, close <br> - ruler <br> - metre stick <br> - tape measure <br> Time <br> - time <br> - days of the week <br> - months of the year <br> - seasons <br> - day, week, weekend, month, year <br> - birthday, holiday <br> - morning, afternoon, evening, night <br> - bedtime, dinner time, playtime <br> - today, yesterday, tomorrow <br> - before, after <br> - earlier, later |


|  |  | next, first, last |
| :--- | :--- | :--- | :--- | :--- |
| midnight |  |  |



