**Intent**

At Healdswood Infant and Nursery School our ambition is that every child is a mathematician. Our Mathematics Curriculum:

• Enables children to **EXPLORE** mathematics following a mastery curriculum approach;

• Allows each pupil an opportunity to **BELIEVE** in themselves as mathematicians and develop the power of resilience and perseverance when challenged;

• Recognises that mathematics is everywhere in our lives;

• Engages all children and provides them with a range of quality teaching and learning opportunities in which children strive to **ACHIEVE** their potential, as part of our school community;

• Make connections across mathematical concepts so children can problem solve and reason; describe, explain, convince, justify and prove with an appreciation and excitement about the power of maths.

**Implementation**

In the foundation Stage, our young mathematicians will be provided with many exciting opportunities to be mathematicians through purposeful, adult-led and child-initiated learning. In EYFS we use picture books and Number Blocks to inspire the children’s learning, ensuring our children have early success of being a mathematician.

At Healdswood Infant School, we follow the National Curriculum Programme of study for Mathematics. In KS1 we deliver maths through a mastery approach where all children have opportunities to reason and problem-solve. The mathematics curriculum is sequenced hieratically and structured to ensure progression progressive from EYFS to Year 2 e.g. children require secure understanding in *before using the model of repeated addition for multiplication.*

At our school, emphasis is on the development of conceptual understanding and a Concrete, Pictorial, Abstract (CPA) approach is use throughout our maths lessons, building on



children’s existing knowledge and developing a deep and sustainable understanding of maths by introducing abstract concepts using concrete manipulatives. It involves moving from concrete manipulatives that bring the maths to life in real contexts, to pictorial representations that allow children to make mental connections, to abstract symbols and calculations. Everyday children are encouraged to explore and practice reinforcing pupils’ procedural fluency and developing their conceptual understanding whilst making connections within maths. Our Mathematics Curriculum is cyclical and therefore there are sufficient opportunities for our children to revisit previously learned knowledge, concepts and procedures. This ensures that mathematical knowledge is securely embedded and our children become more independent, applying their mathematical knowledge to more complex concepts. Mathematical vocabulary is taught explicitly and children are provided regular opportunities to engage in ‘Maths Talk’, enabling them to articulate their reasoning with confidence. In Maths, teachers and support staff will ensure that concrete and visual manipulatives are available to support children that require more time on learning the fundamental concepts – ensuring that every child succeeds.

There are daily Number Sense Maths (NSM) sessions with the aim to ensure that the children are secure and fluent with fundamental number facts Number Sense Maths is a structured programme focused on teaching derived number facts and calculation strategies for addition and subtraction.

**Impact**

Children engage in Mathematics and enjoy the learning journey together, exploring, discovering, and deepening knowledge of key ideas needed to underpin future learning. Maths Talk has become an integral aspect of the teaching in mathematics and Our curious mathematicians are empowered to explore and make links, inspiring their curiosity to be flexible and discover different ways to solve problems. Most children achieve in maths and the number of children achieving at the Expected Standard at the end of Key Stage One is in line with National Average.

**Mathematics Curriculum**





**Year 2 1 2020-21**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Autumn** | **30.8.21** | **6.9.21** | | | **13.9.21** | | | **20.9.21** | | | **27.9.21** | | | **4.10.21** | | | **11.10.21** | | | | **1.11.21** | | **8.11.21** | | | **15.11.21** | | **22.11.21** | | **29.11.21** | | **6.12.21** | |
| **Assessments** | **Number: Place Value** | | | | | | | | | | | | | | | | **Number: Addition and Subtraction** | | | | | | | | | | | | | | | |
| **Spring** |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **3.1.21** | | | **10.1.21** | | | **17.1.21** | | | **24.121** | | | **31.121** | | | **7.221** | | | | | **21.2.21** | | **28.2.21** | | | **7.2.21** | | **14.3.21** | | **21.3.21** | | **28.3.21** | |
| **Measurement: Money** | | | | | | **Statistics** | | | | | | **Geometry: Properties of Shape** | | | | | | | | **Multiplication and Division** | | | | | | | **Addition and Subtraction** | | **Fractions** | | | **Assessment** |
| **Summer** |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **18.4.21** | | **25.4.21** | | | **2.5.21** | | | **9.5.21** | | | **16.5.21** | | | **23.5.21** | | | | **6.6.21** | | | **13.6.21** | | **20.6.21** | | | **27.6.21** | | **4.7.21** | | **11.7** | | |
| **Fractions** | | | | | **Measurement: length and Height** | | | | | | **Geometry: Position and Direction** | | | | | | | | **Measurement: Time** | | | | | **Four Operations** | | **Measurement: Mass, Capacity and Temperature** | | | | **Four Operations** | | |
| **Year 1 1 2020-21** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Autumn** | **30.8.21** | **6.9.21** | | | **13.9.21** | | | **20.9.21** | | | **27.9.21** | | | **4.10.21** | | | **11.10.21** | | | | **1.11.21** | | **8.11.21** | | | **15.11.21** | | **22.11.21** | | **29.11.21** | | **6.12.21** | |
|  | **Number**  **(Within 10)** | | | | | | | | | **Addition and Subtraction**  **(Within 10)** | | | | | | | | | | | | **Geometry** | | | | | **Number**  **(Within 20)** | | | | | |
| **Spring** |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **3.1.21** | | | **10.1.21** | | | **17.1.21** | | | **24.121** | | | **31.121** | | | **7.221** | | | | | **21.2.21** | | **28.2.21** | | | **7.2.21** | | **14.3.21** | | **21.3.21** | | **28.3.21** | |
| **Addition and Subtraction (Within 20)** | | | | | | | | | **Number**  **(Within 50)** | | | | | | | | | | | | | | | | **Measurement:**  **Length and Height** | | | | **Review** | | | |
| **Summer** |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **3.1.21** | | **10.1.21** | | | **17.1.21** | | | **24.121** | | | **31.121** | | | **7.221** | | | | **21.2.21** | | | **28.2.21** | | **7.2.21** | | | **14.3.21** | | **21.3.21** | | **28.3.21** | | |
| **Number: Multiplication and Division** | | | | | | | | **Fractions** | | | | | | **Geometry: Position and Direction** | | | | **Number: Place Value (within 100)** | | | | | | | | **Measurement: Time** | | | | **Measurement: Money** | | |





**FS2 1 2020-21**

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| **Autumn** | **31.8.20** | **7.9.20** | | | **14.9.20** | | | **21.9.20** | | | **28.9.20** | | | **5.10.20** | | | **12.10.20** | | **2.11.20** | | **9.11.20** | | **16.11.20** | | **23.11.20** | | **30.11.20** | | **7.12.20** |
|  | **Numbers 0-10:** Cardinality, Subitising and <, > numbers  **Shape, Space and Measure:** 2D shape and Positional Language | | | | | | | | | | | | | | | | | **Numbers 0-10:** One more and one less and portioning  **Shape, Space and Measure:** 3D shape, length and height | | | | | | | | | |  |
| **Spring** |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4.1.21** | | | **11.1.20** | | | **18.1.21** | | | **25.1.21** | | | **1.2.21** | | | **8.2.21** | | | **22.2.21** | | **1.3.21** | | **8.3.21** | | **15.3.21** | | **22.3.20** | | **19.2.21** |
| **Numbers 0-15:** Addition and Subtraction  **Shape, Space and Measure:** weight, capacity, time and measure. | | | | | | | | | | | | | | | | | | **Numbers 0-20:** Cardinality, Subitising, and One more and one less  Partitioning  **Shape, Space and Measure:** Position and Direction | | | | | | | | | | |
| **Summer** |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **19.4.21** | | **26.4.20** | | | **3.5.21** | | | **10.5.21** | | | **17.5.21** | | | **24.5.5** | | | **7.6.21** | | **14.6.21** | | **21.6.21** | | **28.6.21** | | **5.7.21** | | **12.2.21** | |
| **Numbers 0-20:** Addition and subtraction; doubling and halving.  **Shape, Space and Measure:** weight, capacity, money, time and measure. | | | | | | | | | | | | | | | | | **Numbers 0-20:** addition and subtraction; doubling, halving and counting in 2s, 5s and 10s | | | | | | | | | |  | |





**Progression | 2020-21**

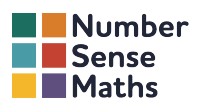
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| --- | --- | --- | --- |
|  | **EYFS** | **Year 1** | **Year 2** |
| **PV (counting)** | * Select the correct numeral to represent 1 to 5, then 1 to 10 objects. * Count objects to 10 and begin to count beyond 10. * Count reliably with numbers from 1 to 20 | * Count to 100, forwards and backwards, beginning with 0 or 1, or from any given number. * Count numbers to 100 in numerals; count in multiples of twos, fives or tens.   **Autumn 1**  **Autumn 4**  **Spring 1**  **Summer 4** | * Count to 100, forwards and backwards, beginning with 0 or 1, or from any given number. * Count in multiples of 2, 3 and 5 from 0, and in tens from any number.   **Autumn 1** |
| **PV (Represent)** | * Select the correct numeral to represent 1 to 5, then 1 to 10 objects. * Count an irregular arrangement of up to ten objects. | * Identify and represent numbers using Pictorial representations. Read and write numbers to 100 in numerals. * Read and write numbers from 0 – 20 in words.   **Autumn 1**  **Autumn 4**  **Spring 2**  **Summer 4** | * Read and write numbers 100 in numerals and words. * Identify, represent and estimate numbers using different representations including a number line.   **Autumn 1** |
| **PV**  **(Use PV & Compare)** | * Represent numbers up to 10 using fingers. * order numbers 1 – 20 and count one more or one less than a given number. * Recognise, create and describe patterns. | * Given a number, identify one more and one less.   **Autumn 1** | * Recognise the PV of each digit in a two-digit number (tens, ones). * Compare and order from 0 – 100; use <, > and =.   **Autumn 1** |
| **Addition & Subtraction** | * Count an irregular number of objects to ten. * Count reliably with numbers 1 – 20. * Using quantities, add and subtract one-digit numbers and count on. | * Read, write and interpret mathematical statements involving addition, subtraction and equals. * Represent and use number bonds and related subtraction facts within 20.   **Autumn 2**  **Spring 1** | * Recall and use additions and subtractions facts to 20 fluently and derive and use related facts to 100. * Show that addition of two numbers is cumulative. * recognise and use inverse relationships between addition and subtraction and use this to check calculations.   **Autumn 2** |
| **Addition & Subtraction**  **Calculations** |  | * Add and subtract one-digit and two-digit numbers to 20, including 0.   **Autumn 2**  **Spring 1** | * Add and subtract numbers using concrete manipulatives and pictorial representations. * Add and subtract, including: * A two-digit number and ones; * A two-digit numbers and tens; * Two two-digit numbers * Adding three-one-digit numbers.   **Autumn 2** |
| **Addition & subtraction Solve Por Problems** |  | * Solve-one step problems that involve addition and subtraction using concrete manipulatives and pictorial representations.   **Autumn 2**  **Spring 1** | * Solve problems with addition and subtraction. * Using concreate manipulatives and pictorial representations, including those involving numbers, quantities and measures.   Autumn 2 |
| **Multiplication & Division: Recall and Re present** | * Halve an object from 1 – 10. * Double an object from 1 –10. * Count in 2s to 20. |  | * Recall and use multiplication and division facts for the 2, 5 and 10 multiplication, including recognising odd and even numbers/ * Show that multiplication of two numbers is cumulative.   **Autumn 4**  **Spring 1** |
| **Multiplication & Division**  **Calculations** |  |  | * Calculate mathematical statements for multiplication and division within the multiplication tables and write them using multiplication (x), division and equals (=).   **Autumn 4**  **Spring 1** |
| **Multiplication & Division:**  **Solve Problems** |  |  | * Represent multiplication and division using arrays, repeated addition and using multiplication and division facts.   **Autumn 4**  **Spring 1** |
| **Fractions**  **(Recognise and Write)** |  | * Recognise and identify a half as one of two equal parts of a shape or quantity. * Recognise and identify a quarter as one of four equal parts of a shape or quantity.   **Summer 2** | * Recognise and identify a half as one of two equal parts of a shape or quantity. * Recognise and identify a quarter as one of four equal parts of a shape or quantity. * Recognise, identify and write fractions: thirds and quarters of a shape, quantity or length.   **Spring 4** |
| **Fractions**  **(Compare)** |  |  | * Recognise the equivalences of two-quarters and a half.   **Spring 4** |
| **Fractions** |  |  | Identify fractions of amounts, for example, *½ of 6 = 3.*  **Spring 4** |
| **Measurement**  **(Using Measures)** | * Use everyday language to talk about size, weight and capacity. * Use everyday language to talk about money. | * Compare and describe lengths and heights; mas/weight; capacity and volume and time. * Measure lengths and height; mass/weight; capacity and volume and time (hours minutes and seconds).   **Spring 3**  **Spring 4**  **Summer 4** | * Compare and describe lengths and heights; mas/weight; capacity and volume and time. * Measure lengths and height; mass/weight; capacity and volume and time (hours minutes and seconds). * Use appropriate standard units to estimate and measure length/height (m/cm); mass (kg/g); temperature; capacity (litres/ml) to the nearest appropriate unit. * Compare and order lengths, mass and volume/capacity and record using <, > or =.   **Spring 5**  **Summer 4** |
| **Measurement**  **(Money)** | * Use everyday language to talk about money. | * Recognise and identify the value of different denominations of coins and notes.   **Summer 6** | * Recognise and identify the value of different denominations of coins and notes. * Recognise and use £ and pence (p); combine amounts to make a particular value. * Find different combinations of coins that equal the same amounts of money. * Use subtraction and addition of money of the same unit, including giving change.   **Autumn 3** |
| **Measurement**  **Time** | * Use everyday language to talk about time. | * Sequence events using appropriate vocabulary [*e.g. before, today, tomorrow, yesterday, afternoon, evening etc*.] * Recognise and use vocabulary related to days of the week, weeks, months and years. * Identify the time to the hour and half past the hour and represent these times on a clock.   **Summer 6** | * Sequence events using appropriate vocabulary [*e.g. before, today, tomorrow, yesterday, afternoon, evening etc*.] * Recognise and use vocabulary related to days of the week, weeks, months and years. * Identify the time to the hour and half past the hour and represent these times on a clock. * Compare and sequence intervals of time. * Identify the time to five minutes, including quarter past/to the hour and represent on a clock. * Identify the number of minutes in an hour and the number of hours in a day.   **Summer 2** |
| **Geometry**  **(2-D Shapes)** | * Recognise the name for ‘2D’ shapes and mathematical terms to describe shapes. | * Recognise the names- and common 2-D shapes [ e.g. rectangle (including squares), circles and triangles].   **Autumn 3** | * Identify and describe the properties of 2-D shapes, including the number of sides, and lines of symmetry. * Identify 2-D shapes surfaces of 3-D shapes. * Compare 2-D shapes.   **Spring 3** |
| **Geometry**  **(3-D Shapes)** | * Recognise the name for ‘3D’ shapes and mathematical terms to describe shapes. | * Recognise and identify 3-D shapes, including: cuboids, pyramids and spheres.   **Autumn 3** | * Recognise and identify 3-D shapes, including: cuboids, pyramids and spheres. * Compare 3-D shapes.   **Spring 3** |
| **Geometry**  **(Position and Direction)** | * Recognise, create and describe patterns. | * Describe position and direction, including whole, half, quarter and three-quarter turns.   **Summer 3** | * Describe position and direction, including whole, half, quarter and three-quarter turns. * Describe position and direction, including movement in a straight line and distinguishing between rotation as a turn (right angles for a quarter, half and three-quarter turns).   **Spring 3**  **Summer 1** |
| **Statistics** |  |  | * Interpret and construct pictograms, tally charts and block diagrams.   **Spring 2** |
| **Statistics**  **(Solve Problems)** |  |  | * Ask and answer questions about totalling and comparing categorical data.   **Spring 2** |





**Core Knowledge**

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| **Place Value** | | **Vocabulary** |
| **Year 1** | * Know how to identify one more (numbers to 100) and one less (numbers to 100). * Know the language of equal to, more than, less than (fewer), most least * Know how to identify and represent numbers using different representations. * Know how to read numbers 1-100 in numerals. * Know how to read and write numbers 1-20 and tens numbers in words. | Ten more/less, digit, , size, value, between, halfway between, above, below, tens, ones, Equal, more than less than, fewer, most least, tens and ones. |
| **Year 2** | * Know how to count forwards and backwards in 2’s, 3’s,5’s and 10’s from any given number. * Know how to compare and order numbers 0 to 100 using ›, ‹ and =. * Know how to Represent numbers using concrete apparatus including: place value counters and base. * Know how to read and write numbers to 100 and beyond in numerals * Know how to read and write numbers to 100 in words | Skip counting, hundreds, Greater than, Less than, Equal to fewer, Place value and digits. |
| **Addition and Subtraction** | | **Vocabulary** |
| **Year 1** | * Know and derive and recall addition facts for totals up to 10 * Know number bonds and related subtraction facts within 20 * Know addition doubles for all numbers to at least 10 * Know how to add one-digit and two-digit numbers to 20, including zero * Know how to subtract one-digit and two-digit-numbers to 20, including zero * Know how to add a multiple of 10 to a one-digit number * Know adding near doubles * Know how to read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs | Number bonds, number line, add, more, plus, sum, total. |
| **Year 2** | * Know use addition and subtraction facts within 20 * Know and derive number facts to 100 * Know how to use concrete objects to   - Add and subtract two-digit number and ones  -Add and subtract two-digit number and tens  -Add and subtract two-digit numbers   * Know how to use pictorial representations to:   - Add and subtract two-digit number and ones  - Add and subtract two-digit number and tens  - Add and subtract two-digit numbers   * Know mental strategies to   - Add and subtract two-digit number and ones  - Add and subtract two-digit number and tens   * Know how to add three one-digit numbers * know that addition can be done in any order (commutative). * know that addition and subtraction are inverses * Know how the inverse operation to find missing numbers. | Concrete Pictorial, Mental Representation, Ones, Tens Commutative, Inverse operation, addition plus subtraction, minus, less fewer, more, total, altogether, calculation |
| **Multiplication and Division** | | **Vocabulary** |
| **Year 1** | * Know how to solve one-step problems involving multiplication and division using concrete objects, pictorial representations and arrays |  |
| **Year 2** | * Know multiplication and division facts for the 2 times tables * Know multiplication and division facts for the 5 times tables * Know multiplication and division facts for the 10 times tables * Know how to recognise if a number is odd or even and explain how I know. * Know and recognise the symbols x, ÷ and = * Know that multiplication is commutative and division is not * Know how to use an array to represent and support me to solve multiplication and division problems * Know that multiplication is the same as repeated addition |  |
| **Measurement** | | **Vocabulary** |
| **Year 1** | **Length and Height**   * Know how to measure and record lengths and heights * Know how to compare, describe and solve practical problems, moving from non-standard to standard units of length and height |  |
| **Year 2** | **Length and Height**   * Know that meter (m), centimetre (cm) and millimetre(mm) are units for measuring length and height * Know that to measure the length or height in any direction using a ruler, tape measure or meter stick. * Know how to read the scale on the ruler, tape measure or meter stick. * Know how to compare and order length and height using ‹, › and = * Know that 10mm= 1cm * Know that 100cm= 1m Weight/mass * Know that gram (g), kilogram(kg) are units for measuring   **Weight and Mass**   * Know how to measure and begin to record mass / weight * Know how to compare, describe and solve practical problems, moving from non-standard to standard units of mass and weight * Know how to measure the weight or mass using scales. * Know how to read the scale on the scales. * Know how to compare and order weight and mass using ‹, › and =   **Time**   * Know how to recognise and use language relating to dates days of the week, weeks, months and years * Know how to compare, describe and solve practical problems, using standard units of time * Know how to compare events saying which one is longer or shorter * Know how to sequence events that happen over a period of time identifying which came first, second, last * Know the time in 15-minute intervals, o’clock, half past, quarter past and quarter to. * Know how to write the time in words to match a clock that shows o’clock, half past, quarter past and quarter to * Know how to draw the hands on a clock to show o’clock, half past, quarter past and quarter to. * Know how to tell the time to 5 minutes. * Know that there are 60 minutes in 1 hour • * Know that there are 24 hours in 1 day   **Money**   * Know the value of different denominations of coins and notes: 1p, 2p, 5p, 10p, 20p, 50p, £1, £2, £5, £10, £20, £50 * Know that £ is used for pounds * Know that p is used for pence * Know how to use different coins to make an amount. * Know how to find different combinations of coins to make the same amount * Know to add and subtract money in the same unit to solve problems. * Know how to give change in one unit   **Capacity and Volume**   * Know how to measure and begin to record capacity and volume. * Know how to compare, describe and solve practical problems moving from non-standard to standard units of capacity and volume * Know that millilitres (ml), litres (l) are units for measuring capacity and volume * Know how to measure the capacity or volume using measuring jugs and cylinders. * Know how to read the scale on the measuring jug and cylinder. * Know how to compare and order capacity and volume using ‹, › and = | Temperature, Unit Centimetre, Meter, Millimetre, Ruler, Tape Measure, Compare, Order, Greater than Less than, Equal to, Equivalent, Grams Kilograms, Scales Sequence, Period Quarter past, Quarter to Interval, Minute hand, Hour hand, Clock face, Minutes, Hours, pounds, pence, combination, change, millilitre, litre, Celsius, Thermometer, Degrees |
| **Properties of Shape and Measure** | |  |
| **Year 1** | * Know and recognise common 2-D shapes. * Know and recognise common 3-D shapes. | Vertices Line of symmetry Right angle symmetrical |
| **Year 2** | * Know and recognise 2D shapes- i.e. circle, semi-circle, triangle, square, rectangle, kite, pentagon, hexagon, heptagon, octagon. * Know and recognise 3D shapes- sphere, cylinder, cone, cube, cuboid. triangular prism, square based pyramid, triangular based pyramid * Know the properties of 2D shapes (number of sides and corners) identify the properties of 3D shapes (number of faces, vertices, edges) * Know how to identify the faces on a 3D shapes with 2D shapes (e.g. circle on a cylinder, triangle on a pyramid) * Know how to identify lines of symmetry on 2D shapes compare and sort 2 and 3D shapes • * Know and recognise theshapes of some everyday objects (e.g. can is a cylinder) | Vertices Line of symmetry Right angle symmetrical |
| **Position and Direction** | |  |
| **Year 1** | . |  |
|  | * Know describe position and direction e.g. left and right; top, middle and bottom; on top of, below; in front of, behind; above, below; between, around, near, close and far, up and down, forwards and backwards, inside and outside. de * Know how to scribe and make movements e.g. half, quarter, three-quarter and whole turns. * Know that turning clockwise and anti-clockwise with movement on a clock face. * Know how to use language to describe the position of an object * Explain how a shape has been rotated * Know how to use use terms such as right angle, clock wise and anti-clockwise to describe a turn | Rotation, left right, quarter turn, half turn, three quarter turn, clock wise and anti-clockwise |
| **Statistics** | |  |
| **Year 1** |  |  |
| **Year 2** | * Know how to create and use tally charts to gather data. * Know how to create a pictogram or block diagram to present data. * Know how to respond to questions about the categories of data. * Know how to respond to questions that include totalling data. * Know how to respond to questions that include comparing the categories in data. | Data, Compare, Total Block diagram categories Graph Bar chart Intersection Carroll diagram vote, block graph, represent, group, list, table, most, least. |
| **Algebra** | |  |
| **Year 1** | * Know how to Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = \* - 9 * Know number bonds and related subtraction facts within 20 * Know how to sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening | Concrete, pictorial, representation, number bonds, fact families, sequence, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening |
| **Year 2** | * Know how to recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. * Know addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 * Know and compare and sequence intervals of time * Know how to order and arrange combinations of mathematical objects in patterns |  |

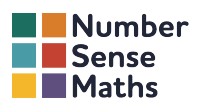




**Number Sense Maths**

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| **Place Value** | | **Vocabulary** |
| **Stage 1**  **Visual Number Foundations** | Year 1 | * Building deep and visual understanding of number within 1 – 10. * Subitising quantities 1 – 5 and subitising structured arranmgkents for quantities 6 – 10 * Recognising quantities 1 – 10 two-wise and fives-wise on ten frames |
| **Stage 2**  **Make and Break Number to 10** | * Exploring the different wats that every number to 10 can be partitioned. * Introduction of the addition and subtraction equations. |
| **Stage 3**  **Facts and Strategies within 10** | * Learning calculation strategies for and adding and subtraction within 10. * Achieving fluency in addition and subtraction within 10. |
| **Stage 4**  **Ten and a Bit** | Year 2 | * Building visual understanding of the numbers and quanties 11 – 20. * Understanding the concept of place value * Learning the Ten and a Bit Calculation strategy. |
| **Stage 5**  **Facts and Strategies across 10** | * Learning the remaining calculation strategy. * Practicing strategy selection to promote efficient and flexible thinking. * Achieving Fluency in addition and subtraction facts across 10 |
| **Stage 6**  **Extending Facts and Strategies** | * Learning to extend and apply strategy to addition and subtraction calculations involving 2-digit numbers. |

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| **Stage** | **Teaching Sequence** | | | | | | |
| **Visual Number Foundations** | Subitising  1 – 10 | Subitising  1 – 10 | Subitising  1 – 10 |  |  |  |  |
| **Make and Break Number to 10** | **Make and Break**  **5** | **Make and Break**  **4, 3 & 2** | **Make and Break**  **10** | **Make and Break**  **6** | **Make and Break**  **7** | **Make and Break**  **8** | **Make and Break**  **10** |
| **Facts and Strategies within 10** | **One more, One Less** | **Think Odds and Evens** | **Number 10 Fact Families** | **Five and a Bit** | **Doubles and Near Doubles** | **Number Neighbours** | **7 Tree and 9 Square** |
| **Ten and a Bit** | **Ten and a Bit** |  |  |  |  |  |  |
| **Facts and Strategies across 10** | **Make 10 and Then: Addition** | **Make 10 and Then: Subtraction** | **More Doubles and Near Doubles** | **Adjusting** | **Strategy Selection Practice** |  |  |
| **Extending Facts and Strategies** | **Calculating with Multiples of 10** | **Two-Digit Numbers: Calculating with ones** | **Two-Digit Numbers: Calculating with Tens** | **Make the Next 10 and Then** | **Make the Previous 10 and Then** |  |  |





**Number Sense Maths Progression**

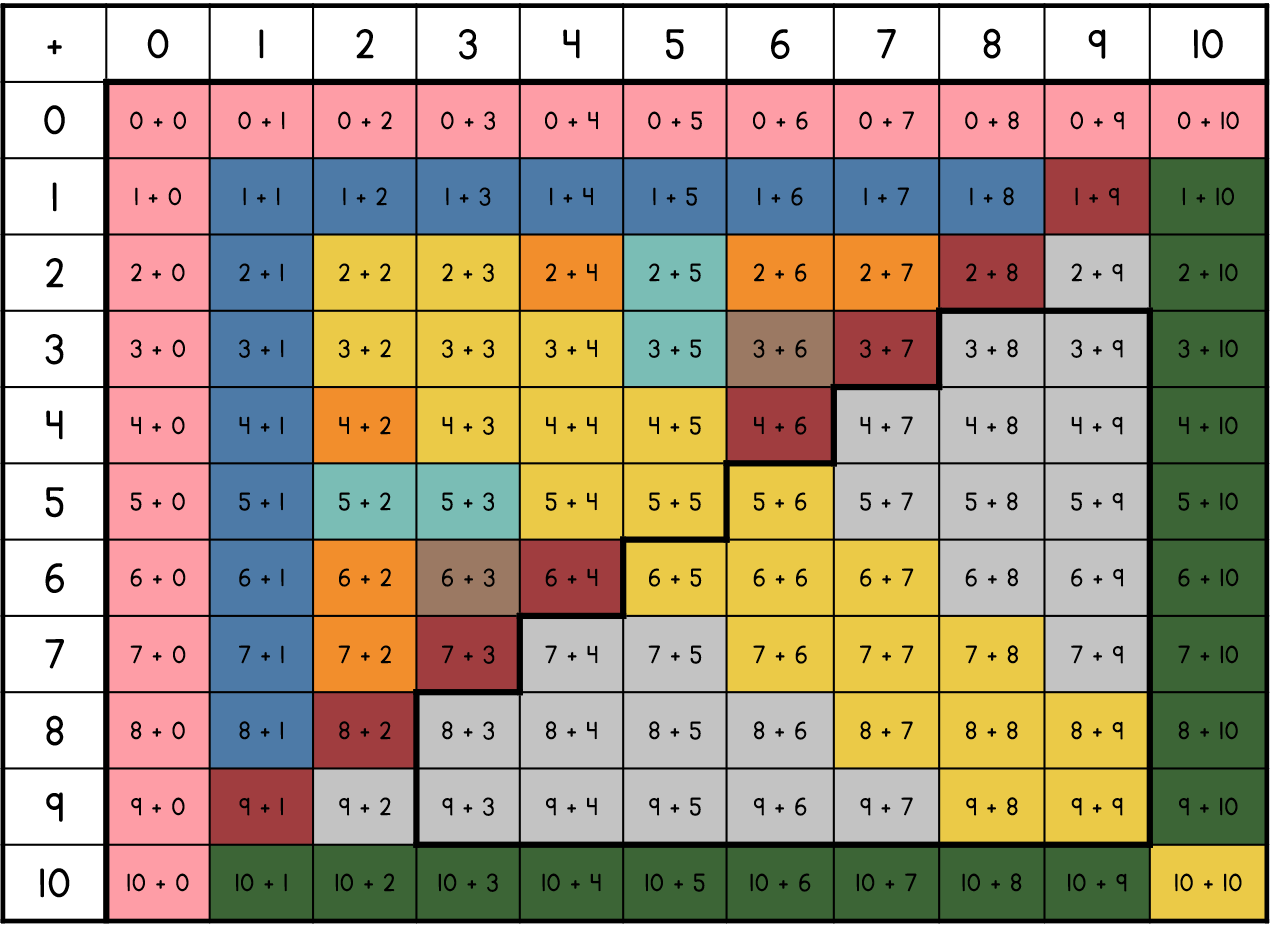
We implement the Number Sense Maths programme in a daily number of facts session. At the core of NSM are the Addition and Subtraction Fact Grids which teaches calculation strategies to 20. Learning and applying these strategies provides children a deep understanding of number and number relationships for all children.

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| **Year 2 | Number Sense Maths Progression** | | | | | | | | | | |
|  | **Week 1** | | **Week 2** | **Week 3** | | | **Week 4** | **Week 5** | **Week 6** | **Week 7** |
| **Autumn 1** |  | | Stage 1 | | **Stage 3** | | **Stage 3** | **Stage 3** | **Stage 3** |  |
|  |  | Subitising 1 – 10 | | One More,  One Less | | Two More, Two Less | | Number 10 Fact Families |  |
| **Autumn 2** | **Stage 3** | | **Stage 3** | **Stage 3** | | | | **Stage 3** | | **Stage 3** |
| Five and A Bit | | Know about Zero | Doubles and Near Doubles | | | | Number Neighbours | | 7 Tree & 9 Squares |
| **Spring 1** | **Stage 3** | | **Stage 3** | **Stage 4** | | | | **Stage 5** | |  |
| Strategy Selection | | Strategy Selection | Ten and Bit | | | | **Make Ten and Then: Addition** | |  |
| **Spring 2** | **Stage 5** | | | | | **Stage 5** | | | |  |
| Make Ten and Then Subtraction | | | | | More doubles and Near Doubles | | | |  |
| **Autumn 2** | **Stage 5** | | **Stage 5** | **Stage 5** | | | | **Stage 6** | |  |
| Adjusting | | Adjusting | Strategy Selection | | | | Calculating with Multiples of 10 | |  |
| **Autumn 2** | **Stage 6** | | **Stage 6** | | | **Stage 6** | | | **Stage 6** | |
| Calculating with Multiples of 10 | | Two-Digit Number. Calculating with ones | | | Two-Digit Number. Calculating with ones | | | Make the Next Ten and Then | |

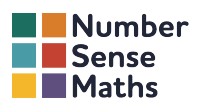
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| **Year 1 | Number Sense Maths Progression** | | | | | | | | | |
|  | **Week 1** | **Week 2** | **Week 3** | | **Week 4** | | **Week 5** | **Week 6** | **Week 7** |
| **Autumn 1** |  | Stage 1 | | | **Stage 2** | | **Stage 2** | **Stage 2** |  |
|  | Subitising 1 – 10 | | | Make and Break 5 | | Make and Break 4, 3 and 2 | Make and Break 10 |
| **Autumn 2** | **Stage 2** | **Stage 2** | **Stage 2** | **Stage 2** | | | **Stage 3** | **Stage 3** |  |
| Make and Break 6 | Make and Break 7 | Make and Break 8 | Make and Break 9 | | | One More, One Less | Two More, Two Less |
| **Spring 1** | **Stage 3** | **Stage 3** | | **Stage 3** | | | | **Stage 3** |  |
| Two More, Two Less | Number 10 Fact Families | | Five and a Bit | | | | Know about Zero |  |
| **Spring 2** | **Stage 3** | | | **Stage 3** | | | | **Stage 3** |  |
| Doubles and Near Doubles | | | Number Neighbours | | | | 7 Tree and  9 Squares |  |
| **Autumn 2** | **Stage 3** | | **Stage 4** | | | | | |  |
| Strategy Selection | | Ten and a Bit | | | | | |  |
| **Autumn 2** | **Stage 5** | | **Stage 5** | | | **Stage 5** | | | |
| Make Ten and Then: Addition | | Make Ten and Then: Subtraction | | | More Doubles and Near Doubles | | | |

**Addition and Subtraction Facts**

The addition calculations within 20 that pupils need to be able to solve with automaticity and shown in the table below. Pupils must be able to solve the corresponding subtractions calculations with automaticity.



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**Path to Addition Fact Fluency**

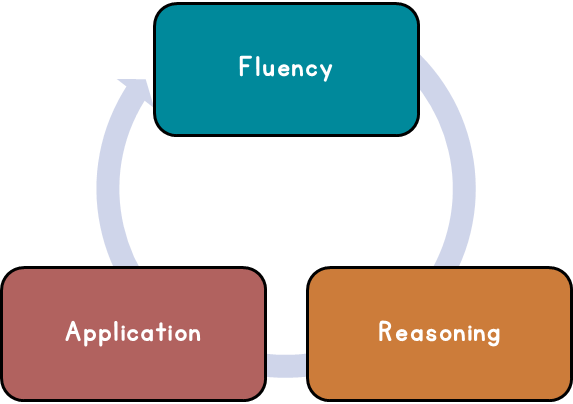


**Mastery Model – Our Vision**

Ref

Teaching is underpinned by methodical curriculum design and supported by expertly crafted lesson sequences to foster deep conceptual and procedural knowledge. Mathematics is taught to whole classes, where the majority of pupils’ progress through the curriculum content at the same pace using the Maths Learning Journey. The Maths Learning Journey allows more opportunities for deeper learning, coinciding with the mastery 5 concepts.

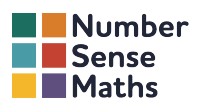
**Pre-Assessment**



**Outcome**

**Reflection and Assessment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Pre-Assessment**  - Previous Years KPI’s  - White Rose  - Speaking and Listening  - Questions  - Problem Solving  - Ready to Progress Criteria (DfE). | **Fluency**  - Intelligent Practice  - Variation  - Mastery  - Concreate  - Pictorial  - Abstract  - Oracy  - Sentence Stems  - Vocabulary  - Generalisation’s | **Reasoning**  - Describing  - Explaining  - Convincing  - Justifying  - Proving  - Sentence Stems | **Application**  - problem Solving questions  - Multi-step problems  -Real-life contexts  - Apply / link to wider & unfamiliar contexts  - link to previous | **Outcome**  - Problem Solving  - Real life links  - Making connections to other mathematical concepts  - linked to KPI  Linked to aspirations | **Reflection and Assessment**  - White Rose  - Journaling  - Reflection through the learning journey |



**Ready to Progress Criteria**



|  |  |  |  |
| --- | --- | --- | --- |
| **Number and Place Value** | **Year 1** | **Year 2** | **Year 3** |
| **1NPV–1** Count within 100, forwards and backwards, starting with any number. |  | **3NPV–1** Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10. |
|  | **2NPV–1** Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and nonstandard partitioning. | **3NPV–2** Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning. |
| **1NPV–2** Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = | **2NPV–2** Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10. | **3NPV–3** Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. |
| **Number Fluency** | **1NF–1** Develop fluency in addition and subtraction. | **2NF–1** Secure fluency in addition and subtraction facts within 10, through continued practice. | **3NF–1** Secure fluency in addition and subtraction facts that bridge 10, through continued practice. |
| **1NF–2** Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers. |  | **3NF–2** Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number. |
| **Addition and Subtraction** | **1AS–1** Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. | **2AS–1** Add and subtract across 10. | **3AS–1** Calculate complements to 100. |
| **1AS–2** Read, write and interpret equations containing addition (+), subtraction (=0) and equals ( =) symbols, and relate additive expressions and equations to real-life contexts. | **2AS–2** Recognise the subtraction structure of ‘difference’ and answer questions of the form, “How many more…?” | **3AS–2** Add and subtract up to three-digit numbers u |
|  | **2AS–3** Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. | **3AS–3** Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction. |
|  | **2AS–4** Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers. |  |
| **Multiplication and Division** |  | **2MD–1** Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables. |  |
|  | **2MD–2** Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division). |  |
| **Geometry** | **1G–1** Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another. | **2G–1** Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties. | **3G–1** Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations. |
| **1G–2** Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations. |  | **3G–2** Draw polygons by joining marked points, and identify parallel and perpendicular sides. |