

Subject Progression



Maths

	Reception	Year 1	Year 2
Autumn	<p>Number and Place Value For number and place value these statements have come directly from the 'Mastering Number' document:</p> <p>Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers 'hiding' inside larger numbers connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers 	<p>Place Value</p> <ul style="list-style-type: none"> - Count to ten, forwards and backwards, beginning with 0 or 1, or from any given number. - Count, read and write numbers to 10 in numerals and words. - Given a number, identify one more or one less up to 10. - 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. - Order a set of objects and numbers from greatest to fewest and fewest to greatest. <p>End points</p> <ul style="list-style-type: none"> - Represent and explain how numbers up to ten can be composed and decomposed in different contexts - Represent and explain what happens when counting to and across 100, forwards and backwards in ones starting from 0, 1 or any given number - Read and write numbers to 100 in numerals - Represent and explain how they know one more or less than any given number, in different contexts (including measures) <p>Addition and subtraction</p> <ul style="list-style-type: none"> - Represent and use number bonds and related subtraction facts within 10 - Be able to systematically find the number bonds within 10. - Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. - Add and subtract one digit numbers to 10, including zero. - Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems. <p>End points</p> <ul style="list-style-type: none"> - Represent and explain addition and subtraction problems involving 1 and 2-digit numbers to 20, including 0, in different contexts. - Solve problems for numbers up to 20, including missing number problems, by taking account of the numbers involved, appropriately choosing from and using what 	<p>Place Value</p> <ul style="list-style-type: none"> - Read and write numbers to at least 20 in numerals and in words. - Recognise the place value of each digit in a two digit number (tens, ones) - Partition numbers to 100, understanding they are made of 10s and ones. - Identify, represent and estimate numbers using different representations including the number line. - Compare and order numbers from 0 up to 100; use <, > and = signs. - Use place value and number facts to solve problems. - Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward. - Recite the numbers in order to 100. <p>End Points</p> <ul style="list-style-type: none"> - Place and identify numbers on a number line, explaining and justifying their decisions. - Use < > and = signs correctly - partition any two-digit number into different combinations of tens and ones, explaining their thinking verbally, in pictures or using apparatus <p>Addition and Subtraction</p> <ul style="list-style-type: none"> - 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 number and tens; two two-digit numbers; adding three one-digit numbers. - Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. - Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods. - Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. - Automatically recite the number bonds to 20. <p>End points</p>

- hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number
- develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds
- compare sets of objects by matching
- begin to develop the language of 'whole' when talking about objects which have parts

Shape Space and Measure in continuous provision

- Recognise simple 2D shapes in every day objects.
- Begin to use positional language to describe where an object is placed, for example, next to, under.
- Use time language to measure time in simple ways such as night, morning, afternoon, before and after

End points

- I can name simple 2D shapes.
- I can describe the position of an object within a group using simple language such as 'next to, under, by'.
- I can explain my daily routine by using time language to order my day and night.

they know and understand, explaining their decisions and justifying their solutions.

Shape

- Recognise and name common 2-D shapes, including: (for example, rectangles (including squares), circles and triangles)
- Recognise and name common 3-D shapes, including: (for example, cuboids (including cubes), pyramids and spheres.)
- Make patterns using 2-D and 3-D shapes including ABBA ABAB and to be able to continue and describe a pattern.

End points

- Describe what is the same and what is different about 2D shapes and justify their thinking - rectangles (including squares), triangles and circles
- Describe what is the same and what is different about 3D shapes and justify their thinking - cuboids (including cubes), pyramids and spheres

Geometry: Position and Direction (computing)

- Describe position, direction and movement, including whole, half, quarter and three quarter turns
- Describe position including left, right, forwards and backwards.
- Be able to use ordinal language to describe positions, for example, first, second, third, fourth.

End points

- Understand that a quarter is one of four equal parts. Find and name one quarter of an object, shape or quantity.
- Represent and explain what happens when halving in different contexts (including measures)

- Add three 1-digit numbers using concrete objects, pictorial representations, and mentally.
- add and subtract any 2 two-digit numbers using an efficient strategy, explaining their method verbally, in pictures or using apparatus (e.g. $48 + 35$; $72 - 17$)
 - subtraction
 - difference
 - taking away

recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships (e.g. If $7 + 3 = 10$, then $17 + 3 = 20$; if $7 - 3 = 4$, then $17 - 3 = 14$; leading to if $14 + 3 = 17$, then $3 + 14 = 17$, $17 - 14 = 3$ and $17 - 3 = 14$)

Spring

Number and Place Value

Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals. Pupils will:

- continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals
- begin to identify missing parts for numbers within 5
- explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame
- focus on equal and unequal groups when comparing numbers understand that two equal groups can be called a 'double' and connect this to finger patterns
- sort odd and even numbers according to their 'shape'
- continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern
- order numbers and play track games
- join in with verbal counts beyond 20, hearing the repeated pattern.

Shape Space and Measure in continuous provision

- Identify simple 2D to help understand how 3D shapes are made.

End points

- **I can recognise simple 3D shapes using 2D shapes to support.**

Measurement: Weight, Volume and Time

- Compare capacity and length between a set of objects.
- Explain if an object is lighter than or heavier than another.

Addition and Subtraction

- Represent and use number bonds and related subtraction facts within 20
- Find doubles and near doubles up to 20 and use these to solve addition problems.
- Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.
- Add and subtract one-digit and two-digit numbers to 20, including zero.
- Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = _ - 9$
- **Recite their number bonds to 5 and 10 automatically.**

End points

- **Represent and explain addition and subtraction problems involving 1 and 2-digit numbers to 20, including 0, in different contexts.**
- **Solve problems for numbers up to 20, including missing number problems, by taking account of the numbers involved, appropriately choosing from and using what they know and understand, explaining their decisions and justifying their solutions.**

Place Value to 50

- Count to 50 forwards and backwards, beginning with 0 or 1, or from any number.
- Count, read and write numbers to 50 in numerals.
- Count by making groups of tens.
- Represent and partition a 2-digit number as tens and ones.
- Given a number, identify one more or one 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.

End points

- **Represent and explain what happens when counting to and across 100, forwards and backwards in ones starting from 0, 1 or any given number**
- **Read and write numbers to 100 in numerals**
- **Represent and explain how they know one more or less than any given number, in different contexts (including measures)**

Addition and Subtraction

- Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods.
- partition any two-digit number into different combinations of tens and ones, explaining their thinking verbally, in pictures or using apparatus
- Add three 1-digit numbers using concrete objects, pictorial representations, and mentally.
- add and subtract any 2 two-digit numbers using an efficient strategy, explaining their method verbally, in pictures or using apparatus (e.g. $48 + 35$; $72 - 17$)
- recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships (e.g. If $7 + 3 = 10$, then $17 + 3 = 20$; if $7 - 3 = 4$, then $17 - 3 = 14$; leading to if $14 + 3 = 17$, then $3 + 14 = 17$, $17 - 14 = 3$ and $17 - 3 = 14$)

End point

add and subtract any 2 two-digit numbers using an efficient strategy, explaining their method verbally, in pictures or using apparatus (e.g. $48 + 35$; $72 - 17$)

- subtraction

- **difference**
- **taking away**

Measurement: Money

- Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.
- Find different combinations of coins that equal the same amounts of money.
- Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

End point

use different coins to make the same amount and solve problems involving making a pound and giving change.

Multiplication and Division

- Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.
- Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs.
- Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.
- Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.

End points

	<ul style="list-style-type: none"> - Use comparative language to describe if a container is full, half full or nearly empty. - Use comparative language to explain if an object is taller, shorter or longer and shorter than one another. - Order a set of events using before, after, later or soon to describe when the events happen. - I can choose and manipulate different shapes to make patterns and structures increasingly complex. - I can make patterns including AB, ABB, ABBC and spot and correct mistakes in patterns. <p>-</p> <p>End points</p> <ul style="list-style-type: none"> - I can explain if an object is heavier or lighter. - I can explain if a container is full, nearly full or empty. - I can order a set of events in my day using sequential language (before, after, later) - I can create and correct my own AB, ABB, ABBC pattern. 		<ul style="list-style-type: none"> - Recall multiplication and division facts for 2, 5 and 10 and use them to solve simple problems, demonstrating an understanding of commutativity as necessary - Represent (including with arrays, repeated addition, mental methods and known facts) and explain multiplication and division problems (involving 2s, 5s and 10s) in different contexts (including interpreting data and time). - Record using the multiplication (\times), division (\div) and equals ($=$) signs <p>Geometry: Properties of shape (moved from Autumn) 2023</p> <ul style="list-style-type: none"> - Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. - Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. - Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.] - Compare and sort common 2-D and 3-D shapes and everyday objects. <p>End points name and describe properties of 2-D and 3-D shapes, including number of sides, vertices, edges, faces, symmetry</p>
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<p>Summer</p>	<p>Number and Place Value</p> <p>Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • continue to develop their counting skills, counting larger sets as well as counting actions and sounds • explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • compare quantities and numbers, including sets of objects which have different attributes 	<p>Length and Height</p> <ul style="list-style-type: none"> - Measure and begin to record lengths and heights using a measurement such as cm. - Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half). <p>End points</p> <ul style="list-style-type: none"> - Represent and explain how they know one more or less than any given number, in different contexts (including measures) <p>Measurement: Weight and Volume</p> <ul style="list-style-type: none"> - Measure and begin to record mass/weight, capacity and volume. - Compare, describe and solve practical problems for 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] <p>End points</p>	<p>Continued: Multiplication and Division</p> <ul style="list-style-type: none"> - Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. - Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs. - Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. - Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. <p>End points</p> <ul style="list-style-type: none"> - Recall multiplication and division facts for 2, 5 and 10 and use them to solve simple problems, demonstrating an understanding of commutativity as necessary - Represent (including with arrays, repeated addition, mental methods and known facts) and explain multiplication and division problems (involving 2s, 5s and 10s) in different contexts (including interpreting data and time).
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- continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2
- begin to generalise about 'one more than' and 'one less than' numbers within 10
- continue to identify when sets can be subitised and when counting is necessary
- develop conceptual subitising skills including when using a rekenrek

Shape Space and Measure in continuous provision

- Select and rotate a given shape to fill a space.
- Understand that shapes can be combined and separated to make new shapes.
- Be able to replicate models and constructions by using positional language to support.

End points:

- **I can use positional language to describe where my object is and use my language to ask others to help.**

Represent and explain how they know one more or less than any given number, in different contexts (including measures)

Multiplication and division

- Count in multiples of twos, fives and tens.
- Recognise and find equal groups.
- Use double knowledge to solve problems involving multiplication and division.
- Know doubles and halves up to 10.
- 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.

End points

- **Count fluently in 2s in different contexts. Explain what is happening when counting in 2s**
- **Count fluently in 5s in different contexts. Explain what is happening when counting in 5s**
- **Count fluently in 10s in different contexts. Explain what is happening when counting in 10s**
- **Explain how they know which numbers are multiples of two, which are multiples of five and which are multiples of ten.**
- **Represent and explain what happens when doubling in different contexts (including measures)**
- **Represent and explain what happens when halving in different contexts (including measures)**

Fractions

- Recognise, find and name a half as one of two equal parts of an object, shape or quantity.
- Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

End points

- **Solve problems involving doubling and halving.**
- **Understand that a half is one of two equal parts. Find and name a half of an object, shape or quantity.**
- **Understand that a quarter is one of four equal parts. Find and name one quarter of an object, shape or quantity.**
- **Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects and pictorial representations**

Place Value within 100

- Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.
- Partition a 2 digit number into tens and ones.
- Count, read and write numbers to 100 in numerals.
- Given a number up to 100, identify one more and one 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, most, least.
- Compare any two numbers explaining if they are more or less.

End points

Record using the multiplication (×), division (÷) and equals (=) signs

Fractions

- Recognise, find, name and write fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.
- Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.
- Understand that a fraction is of ____ equal parts and understand that the parts need to be equal.
- Recognise the equivalence of a half and two quarters.
- Count in fractions up to a whole.

End points

Identify $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{4}$, of a number or shape, and know that all parts must be equal parts of the whole

Measurement: Length and Height

- Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}$ C); capacity (litres/ml) to the nearest
- appropriate unit, using rulers, scales, thermometers and measuring vessels
- Compare and order lengths, mass, volume/capacity and record the results using >, < and =

End point

Choose and use appropriate standard units to estimate and measure to the nearest appropriate unit

Measurement: Mass, Capacity and Temperature

- Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}$ C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
- Compare and order lengths, mass, volume/capacity and record the results using >, < and =

End points

Choose and use appropriate standard units to estimate and measure to the nearest appropriate unit

Measurement: Time (to be taught as mental orals throughout the year)

- 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. Know the number of minutes in an hour and the number of hours in a day.
- Compare and sequence intervals of time.
- Solve 2 step problems involving time.

End point

**read the time on a clock to the nearest 5 minutes
Answer 2 step problems involving time.**

Statistics (taught in the computing curriculum)

- Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.
- Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.

- Represent and explain what happens when counting to and across 100, forwards and backwards in ones starting from 0, 1 or any given number
- Read and write numbers to 100 in numerals
- Represent and explain how they know one more or less than any given number, in different contexts (including measures)

Money

- Recognise and know the value of different denominations of notes and coins.
- Solve problems involving unitising of 2's/5's/10s

End Points:

- Be able to name the most common coins (2p,5p, and 10p as well as notes)
- Be able to add up to 20p a selection of coins.

Time (through morning tasks and daily tasks)

- Sequence events in chronological order using language (e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening).
- Recognise and use language relating to dates, including days of the week, weeks, months and years.
- Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
- Compare, describe and solve practical problems for time (for example, quicker, slower, earlier, later).
- Measure and begin to record time (hours, minutes, seconds).

End Points:

- Be able to sequence a series of events using the language of before and after.
- Be able to tell the time to o'clock and half past.

- Ask and answer questions about totalling and comparing categorical data.

End point

read scales* in divisions of ones, twos, fives and tens

Position and direction

- 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).
- Order and arrange combinations of mathematical objects in patterns and sequences

End point

name and describe how an object has moved.

Be able to explain a pattern and sequence.