
Number and Place Value
Read, write, order and compare number
Read, waste , order and compare number
to at least $1,000,000$ and determine the
value of each digit.
Count forwards or backwards in steps of
owers of 10 for any given number up to
1,000,000
Interpret negative numbers in context
count forwards and backwards with
le numbers
cluding through zero
Round any number up to $1,000,000$ to the
nearest $10,100,1000,10000$ and 100000
solve number problems and practica
problems that involve all of the above.
Read, write, order and compare numbers
with up to three decimal places.
Round decimals with two decimal place
to the nearest whole number and to one
decimal place.
solve problems involving number up to
three decimal places.
Multiply and divide whole numbers and
保
000.

Number - Addition and Subtraction more than 4 digits, including using forma written methods (columnar addition and subtraction

Add and subtract numbers mentally with increasingly large numbers.
Use rounding to check answers to calculations.

Solve addition and subtraction multi-step problems in contexts.

## Number - Multiplication and Division

 Multiply numbers up to 4 digits by a one two-digit number using a formal written method, incluaingtwo-digit numbers
Multiply and divide numbers mentally drawing upon known facts.

Divide numbers up to 4 digits by a one digit number using the formal written remainders appropriately for the context

Number - Multiplication and Division
Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.
Know and use the vocabulary of prime numbers, prime factors and composite non-prime) numbers.
Establish whether a number up to 100 is prime and recall prime numbers up to 19 Recognise and use square numbers and cube numbers, and the notation fo
Solve problems involving multiplication and division including using their kowledge of factors and multiples, squares and cubes.
Solve problems involving addition subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.
Number - Fractions (including decima and percentages)
Compare and order fractions whose denominators are all multiples of the same
number. number.
entify, name and write equivalent fractions of a given fraction, represented
visually, including tenths and hundredths.
Add and subtract fractions with the same denominator and denominators that are multiples of the same number.
Wultiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.

## Number - Fractions (including decimals and percentages) and percentages)

 Recognise mixed numbers and improper other.rac and write decimal numbers as fractions.
Recognise and use thousandths and relat hem to tenths, hundredths and decimal equivalents.

Recognise the per cent symbol (\%) and understand that per cent relates to number of parts per hundred', and write
percentages as a fraction with denominator 100 , and as a decim
solve problems which require knowing percentage and decimal equivalents.

Geometry - Properties of Shape
Geometry - Properties of Shape
Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.
Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.
Draw given angles, and measure them in degrees
denify: angles at a point and one whole furn (total $360^{\circ}$ ) angles at a point on a straight ine and $1 / 2$ a furn (total $180^{\circ}$ )
other multiples of $90^{\circ}$ tstraight muliples of 90
other mut

Use the properties of rectangles to deduce related facts and find missing lengths and angles.
Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

## Measurement Estimate volum

Estimate volume [for example, using 1 cm rectangles (including squares), and including using standard units, square
centimetres (cm2) and square metres ) and estimate the area of iregular shapes.
Geometry - Position and Direction Identify, describe and represent the
position of a shape following a reflection or translation, using the appropriate language, and know that the shape has
not changed.

## Measuremen

easure /fween different units of metric etre: cerexample, kilometre and and millimetre: and millilitre).

Understand and Use approximate equivalences between metric units and ommon imperial units such as inche pounds and pints.

Measure and calculate the perimeter of omposite rectilinear shapes in entimetres and metres.

Solve problems involving converting between units of time.
se all four operations to solve problems involving measure [for example, length. notation, including scaling.

## Statistics

solve comparison, sum and difference problems using information presented in a ine graph.
complete, read and interpret no tables, including timetables.

## MATHS Subject Overview 2023.24

Number and Place Value
Recognise the place value of each digit in a four-digit number (thousands, hundreds. ens, and ones)
Order and compare numbers beyond 1000.

Identify, represent and estimate numbers
using different representations.
Round any number to the nearest 10,100 or 1000 .
umber - Addition and Subtractio Add and subtract numbers with up to 4 columnar addition and subtraction.

Estimate and use inverse operations to check answers to a calculation.

Solve addition and subtraction two-step problems in contexts.
Number - Multiplication and Division dentify and find factors and multiples. Recognise and use factor pairs and
commutativity in mental calculations.

Number - Multiplication and Division
 Use place value, known and derived facts to multiply and divide mertally facts to moliply and divide mentally
including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers.
Recognise and use factor pairs and commutativity in mental cals and

Multiply two-digit and three-digit numbers by a one-digit number using formal by a one-aigit
written layout

## Statistics

Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts, line graph

Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Geometry - Properties of Shape Identify and d
parallel lines.

Number - Fractions (including decimals) Recognise and show, using diagrams,
families of common equivalent fractions.
Count up and down in hundredths; recognise that hundredths arise when recognise that hundredths arise when
dividing an object by one hundred and dividing tenths by ten.
Solve problems involving increasingly harder fractions to calculate quantities, nd fractions to divide quantities answer is a whole number.
Add and subtract fractions with the same denominator

Geometry - Properties of Shape
dentify acute and obtuse angles and angles by size order angles up to two righ angles by size

Number - Fractions (including decimals) Number - Fractions (including decimals)
Recognise and write decimal equivalent
of any number of tenths or hundredths.
Recognise and write decimal equivalents Recognise and

Find the effect of dividing a one- or twodigit number by 10 and 100 , identifying the value of the digits in the answer as ones,
tenths and hundredths.

Round decimals with one decimal place to the nearest whole number.
Compare numbers with the same number of decimal places up to two decimal places.
Geometry - Properties of Shape
Compare and classify geometric shapes,
including quadrilaterals and triangles based on their properties and sizes.

## Measurements

Measure and calculate the perimeter of a rectilinear figure (incluc
centimetres and metres.

Find the area of rectilinear shapes by counting squares.

Read, write and convert time between analogue and digital 12-and 24 -hour clocks.

Solve problems involving converting from hours to minutes; minutes to seconds;
years to months; weeks to days.
Solve simple measure and money problems involving frac
to two decimal places.

Geometry - Properties of Shape denify lines of symmetry in 2-D shape presented in different orientations.
Complete a simple symmetric figure with respect to a specific line of symmetry.

Geometry - Position and Direction ordin in 2 gria

Describe movements between positions as translafions of given unif to the ft/right and up/down

Rot specified points and draw sides to omplete a given polygon

Number - Roman numerals
Read Roman numerals to 100 ( to C ) and now that over time, the numeral system changed to include the concept of 0 and place value

Adding and subtracting across 10

- 2AS-1 Add and subtract acros
3NF-1 Secure fluency in addition and subtraction facts that bridge 10 ,
through continued practice.
1.11 Addition and subtraction
bridging 10


## Numbers to 1,000

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 10 s there are in other three-digit multiples of 10 .
3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit standard partitioning

- 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 .
3NPV-4 Divide 100 into $2,4,5$ and 10 equal parts, and read scales/numbe
lines marked in multiples of 100 with 2 . 4,5 and 10 equal parts.

Numbers to 1000

- 3AS-1 Calculate complements to 100 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10 ). 1.17 Composition and calculation: 100 and bridging 100
and calculation: three-digit numbers

Right angles
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.

## Manipulating the additive relationship and

 securing mental calculation- 3AS-3 Manipulate the addilive relationship: Understand the inverse relationship between addition and the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction. 1.19 Securing mental strategies: calculation up to 999

Column addifition
3AS-2 Add and subtract up to threedigit numb
methods.
1.20 Algorithms: column addition

2, 4, 8 times tables
2MD-1 Apply known multiplication and division facts to solve contextua problems with different structures, incluaing
division.

- 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.
3NF-3 Apply place-value knowledge
to known additive and multilicative to known adaditive and multiplicafiv
number facts (scaling facts by 10 ). 2.7 Times tables: 2,4 and 8 , and the relationship between them

Column subtraction
3AS-2 Add and subtract up to three digit numb
1.21 Algorithms. column suble

Unif fractions

- 3F-1 Interpret and write proper fractions to represent 1 or severa parts of a whole that is divided into equal parts.
- 3F-2 Find unit fractions of quantities using known division facts
- 3F-3 Reason about the location of any fraction within 1 in the linear number system.
- 3.1 Preparing for fractions: the part whole relationship
3.2 Unit fractions: identifying
representing and comparing

Non-unit fractions
3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.

- 3F-3 Reason about the location of any fraction within 1 in the linear number system.
- 3F-4 Add and subtract fractions with the same denominator, within 1 .
- 3.3 Non-unit fractions: identifying
representing and comparing
3.4 Adding and subtracting within
one whole


## Parallel and perpendicular sides in

## polygons

3G-2 Draw polygons by joining marked points, and identify parallel and perpendicular sides.

## Time

NC (statutory) tell and write the time from an analogue clock, including and 12 -hour and 24 -hour clocks

- NC (statutory) estimate and read nearest minute: record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning,
afternoon, noon and midnight seconds in a minute and the number of days in each month, year and leap year
NC
Istatuto
NC (statutory) compare durations of events ffor example to calculate th time taken by particular events or tasks].
NC (non-statutory) Pupils use both analogue and digital 12 -hour clock and record their times. In this way for using digital 24 -hour clocks in Year


Fluently add and subtract within 10

- $2 \mathrm{NF}-1$ Secure fluency in subtraction facts within 10 , through continued practice.
- 1.7 Addition and subtraction strategies within 10


## Additio numbe

numbers

- 2AS-3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only ten
to/from a two-digit number.

$$
13 \text { Addition and subtraction: two }
$$ digit and single-digit numbers

- 1.14 Addition and subtraction: two digit numbers and multiples of ten
Introduction to multiplication
2MD-1 Recognise repeated addition contexts, representing them w calculating the product, within the 5 and 10 multiplication tables. 2.2 Structures: multiplication
representing equal groups
- 2.3 Times tables: groups of 2 and commutativity (part 1 )
- 2.4 Times tables: groups of 10 and of - $\quad$, and factors of 0 and 1 ty (part 2), doubling and halving

Introduction to division structures 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). 2.6 Structures: quotitive and parritive division

Shape
2G-1 Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities
differences in properties.

## Addition and subtraction of two-digit

numbers
2AS-4 Add and subtract within 100 by applying related one-digit
adddition and subtraction facts adaition and subtraction facts: add numbers.

- 1.15 Addition: two-digit and two-digit numbers
1.16 Subtraction: two-digit and two digit numbers

Money $\quad$ (statutory) recognise and use symbols for pounds (f) and pence (p); combine amounts to make a particular value

- NC (statutory) find different combinations of coins that equal the same amounts of money
- NC (statutory) solve simple problems in a practical context involving he same unit, including giving change.
- NC (non-statutory) Pupils become fluent in counting and recognising coins. They read and say amounts of symbols £ and p accurately. ecoraing pounds and pence separately.


## Fractions

Fractions
3.0 Guidance on the teaching of fractions in Key Stage 1
Time
NC (statutory) compare and sequence intervals of time

- NC (statutory) tell and write the time o five minutes, including quarter past/to the hour and draw the hands - NC (statutory) know the number of minutes in an hour and the number of hours in a day.
- NC (non-statutory) Pupils use standard Units of measurement with increasing accuracy, using their knowledge of fluent in telling the time on analogue clocks and recording it.

Position and direction - NC (statutory) order and arrange combinations of mathematical

- objects in patterns and sequences
- NC (statutory) use mathematical vocabulary to describe position, direction and movement, including
movement in a straight line and distinguishing between rotation as turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).
- NC (non-statutory) Pupils should work with patterns of shapes, including those in different orientations. - NC (non-starutory) $\quad$ concept and language of angles to describe 'turn' by applying rotations, including in practical contexts for example, pupils themselves moving in turns, giving instructions to other pupis to do so, and programming robots angles).

Multiplication and division
2.5 Commutativity (part 2), doubling and halving
2.6 Structures: quotitive and parritive division

Sens
mass
mass
appopiory) choose and use estimate and measure length/heia in any direction ( $\mathrm{m} / \mathrm{cm}$ ): mass (kg/g) temperature $\left({ }^{\circ} \mathrm{C}\right.$ ); capacity (litres $/ \mathrm{ml}$ ) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
NC (statutory) compare and order lengths, mass, volume/capacity and record the results using >> < and Pupils use ment with
g their knowledge of the number syst They use the appropriate language and record using standard abbreviations.
NC (non-statutory) Comparing measures includes simple multiples such as 'half as high'; 'twice as wide'

Maths fluency (NCETM Mastering Number)
opportunity to consolidate their understanding and recall of number bonds within 10

- re-cap the composition of the numbers 11 to 20
- reason about their position within the linear number system


## Previous Reception Experience and

 Counting Within 100- 1NPV-1 Count within 100 , forwards and backwards, starting with any number
1.9 Composition of numbers: 20-100

Comparison
Relationship

- INPV-1 Count within 100 , Whole and backwards sin 100, forwards number.
- INPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<>$ and $=$
- Comparison of quantities and measures
- Introducing 'whole' and 'parts': part-part-whole
Numbers 0 to 5
$-\quad 1 N P V-2$ Re
- INPV-2 Reason about the location of numbers to 20 within the linear usinger system, including comparing - Using $<>$ and $=$ 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.
- 1.3 Composition of numbers: 0-5

Maths fluency (NCETM Mastering Number)
have an opportunity to use their knowledge of the composition of numbers within 10 to calculate within 20
explore the links between the numbers in the linear number system within 10 to
numbers within 100 , focusing on multiples of 10 and the midpoint of 50

Recognise, compose, decompose and manipulate 2D and 3D

- 1G-1 Recognise common 2D and 3D shapes presented in differen rectangles, triangles, cuboids and pyramids are not always similar to one another.
G-2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating hapes to place them in particula orientations


## Numbers 0 to 10

INPV-2 Reason about the location numbers to 20 within the linear number system, including comparing using $<>$ and $=$.
1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and
even numbers. 1.4 Composition of numbers: 6-10


Maths fluency (NCETM Mastering Number)

- consolidate the Early Learning Goals
- continue to explore the composition of numbers within 10 , the position of these numbers in the linear number system

Addiifive structures

- 1 AS-2 Read, write and interpret equations containing addition ( + ), subtraction ( - ) and equals ( $=$ ) symbols, and relate additive
expressions and equations to real-life contexts.
1.5 Additive structures: introduction
to aggregation and partitioning
1.6 Additive structures: introduction to augmentation and reduction

Addition and subtraction facts within 10

- 1 NF -1 Develop fluency in addition
and subtraction facts within 10 .
1.7 Adarion and subtraction:
strategies within 10


## Maths fluency (NCETM Mastering Number)

- continue to explore the composition of numbers within 10
explore addition and subtraction structures and the related language (without the use of symbols)

Maths fluency (NCETM Mastering Number)
Maths fluency (NCETM Mastering Number)
opportunities to use their knowledge
calculate within 20

- reason about equations and inequalities

Numbers 0 to 20
$-\quad 1 \mathrm{NPV}-2$ Reason about the location of numbers to 20 within the linear number system, including comparing using $<>$ and $=$

- 1.10 Composition of numbers: 11-19

Unitising and coin recognition

- INF-2 Count forwards and backward in multiples of 2,5 and 10 , up to 10 multiples, beginning with any multiple and count forwards and backwards through the odd numbers.
- 2.1 Counting, unitising and coins

Unitising and coin recognition

- iNF-2 Count forwards and
backwards in multiples of 2,5 and 10 , up to 10 multiples, beginning with and backwards through the odd numbers.
2.1 Counting, unitising and coins


## Position and direction

NC (statutory) describe position. direction and movement, including whole, half, qu

- quarter turns. NC (non-statutory) Pupils use the language of position, direction and middle and bottom, on top of, in front of, above, between, around near, close and far, up and down. forwards and backwards, inside and outside.
- NC (non-statutory) Pupils make whole, half, quarter and threequarter turns in both directions and connect turning clockwise with movement on a clock face.

Time
NC (statutory) sequence events in chronological order using language for example, before and after, next first, today, yesterday, tomorrow NC (statutory) recognise and use language relating to dates, including days of the week, weeks, months and years
NC (statutory) tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.

## Maths fluency (NCETM Mastering Number)

explore the composition of numbers within 20 and their position in the linear
connect addition and subtraction expressions and equations to 'number stories')

| EYFS | Number <br> - Explore the composition of numbers 0 and 1 <br> - Subitise quantities up to 3 <br> Numerical patterns <br> - Counting to 5 forwards and backwards <br> - Compare quantities up to 3 <br> Shape, space and measure <br> - FSG Identifying circles and ovals in the environment and comparing properties <br> - Comparing size of objects | Number <br> - Explore the composition of numbers 2 and 3 <br> - Subitise quantities up to 4 <br> - FSNF Recall number bonds up to 3 <br> - FSAS Compose and decompose numbers to 3 in two parts <br> Numerical patterns <br> - Counting to 10 forwards and backwards <br> - Compare quantities up to 3 <br> Shape, space and measure <br> - FSG Identifying triangles in the environment and comparing properties <br> - Identify and continue $A B A B$ and $A B C$ patterns <br> - Identify and match identical and nonidentical pairs <br> - Explore and compare capacity and volume | Number <br> - Explore the composition of numbers 4 and 5 <br> - Subitise quantities up to 5 <br> - $\quad$ FSNF Recall number bonds up to 5, including doubles within 5 <br> - FSAS Compose and decompose numbers to 5 in two parts <br> Numerical patterns <br> - FSNPV Counting to 20 <br> - Compare quantities up to 5 <br> Shape, space and measure <br> - FSG Identifying squares, rectangles and hexagons in the environment and comparing properties <br> - Identify and continue $A B B$ and $A B B C$ patterns <br> - FSG Compose and decompose shapes and shape pictures and identify shapes within shape pictures <br> - Comparing and measuring mass | Number <br> - Explore the composition of numbers 6 and 7 <br> - FSNF Conceptually subitise quantities up to 7 <br> - FSNF Recall number bonds up to 7, including doubles within 7 <br> - FSAS Compose and decompose numbers to 7 in two parts <br> Numerical patterns <br> - FSNPV Counting to 50 <br> - Compare quantities up to 10 Comparing and identifying odd and even numbers <br> Shape, space and measure <br> - FSG Identifying 3D shapes in the environment and comparing properties <br> - Comparing and measuring mass | Number <br> - Explore the composition of numbers 8 and 9 <br> - FSNF Conceptually subitise quantities up to 9 <br> - $\quad$ FSNF Recall number bonds up to 9 . including doubles within 9 <br> - FSAS Compose and decompose numbers to 9 in two parts <br> Numerical patterns <br> - FSNPV Counting to 50 <br> - Compare quantities up to 15 <br> - Comparing and identifying odd and even numbers <br> - Exploring the concept of equal sharing <br> Shape, space and measure <br> - FSG Identifying 3D shapes in the environment and comparing properties <br> - Comparing size <br> - Comparing and measuring length | Number <br> - FSNPV Explore the composition of numbers 10 and above <br> - FSNF Conceptually subitise quantities up to 10 <br> - $\quad$ FSNF Recall number bonds up to 10, including doubles within 10 <br> - FSAS Compose and decompose numbers to 10 in two parts <br> Numerical patterns <br> - FSNPV Counting to 100 <br> - Compare quantities up to 20 <br> - Comparing and identifying odd and even numbers <br> - FSMD Exploring the concept of equal sharing <br> Shape, space and measure <br> - FSG Identifying 3D shapes in the environment and comparing properties <br> - Comparing and measuring height <br> - Exploring ordinal numbers <br> - Exploring concepts related to money |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maths fluency (NCETM Mastering Number) <br> - build on previous experiences of number from their home and nursery environments <br> - further develop their subitising and counting skills <br> - explore the composition of numbers within 5 compare sets of objects and use the language of comparison |  | Maths fluency (NCETM Mastering Number) <br> - develop their subitising and counting skills <br> - explore the composition of numbers within and beyond 5 <br> - identify when two sets are equal or unequal and connect two equal groups to doubles <br> - they will begin to connect quantities to numerals |  | Maths fluency (NCETM Mastering Number) <br> - pupils will consolidate their counting skills <br> - counting to larger numbers <br> - developing a wider range of counting strategies <br> - secure knowledge of number facts through varied practice |  |

