

Mathematics - Objectives

Mental Maths - ongoing

- add and subtract numbers mentally - a three-digit number and ones
- add and subtract numbers mentally - a three-digit number and tens
- add and subtract numbers mentally - a three-digit number and hundreds
- count from 0 in multiples of 4
- count from 0 in multiples of 8
- count from 0 in multiples of 50
- count from 0 in multiples of 100
- recall and use multiplication and division facts for the 3 multiplication table
- recall and use multiplication and division facts for the 4 multiplication table
- recall and use multiplication and division facts for the 8 multiplication table

Number and Place Value

- recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
- read and write numbers up to 1000 in numerals and in words
- compare and order numbers up to 1000
- find 10 or 100 more or less than a given number
- identify, represent and estimate numbers using different representations
- solve number problems and practical problems involving these ideas

Addition and Subtraction

- add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
- estimate the answer to a calculation
- use inverse operations to check answers
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

Multiplication and Division

- write and calculate mathematical statements for multiplication and division using the multiplication tables that they know (2, 3, 4, 5, 8), including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods
- solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Statistics

- interpret and present data using bar charts, pictograms and tables
- solve one-step and two-step questions using information presented in scaled bar charts, pictograms and tables

Fractions

- count up and down in tenths...
- ...recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
- recognise, find and write fractions of a discrete set of objects (unit and non-unit fractions with small denominators)
- recognise and show, using diagrams, equivalent fractions (small denominators)
- recognise and use fractions as numbers (unit and non-unit fractions with small denominators)
- add and subtract fractions with the same denominator (within one whole)
- compare and order unit fractions
- compare and order fractions with the same denominators
- solve problems that involve all of the above

Measurement

- measure, compare, add and subtract - lengths (m/cm/mm)
- measure, compare, add and subtract - mass (kg/g)
- measure, compare, add and subtract - volume/capacity (l/ml)
- measure the perimeter of simple 2-D shapes
- add and subtract amounts of money to give change, using both £ and p in practical contexts

Time

- tell and write the time from an analogue clock [at five minute intervals] (including using Roman numerals from I to XII)
- estimate and read time with increasing accuracy to the nearest minute
- tell and write the time in 12-hour and 24-hour clocks
- record and compare time in terms of seconds, minutes and hours (use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon, midnight)
- know the number of seconds in a minute and the number of days in each month, year and leap year
- compare durations of events [for example to calculate the time taken by particular events or tasks]

Geometry

- draw 2-D shapes
- recognise angles as a property of shape or a description of a turn
- identify right angles (one - quarter turn / two - half turn / three - three quarter turn / four - full turn)
- identify whether angles are greater than or less than a right angle
- identify horizontal and vertical lines and pairs of perpendicular and parallel lines
- make 3-D shapes using modelling materials
- recognise 3-D shapes in different orientations and describe them