Reasoning about the Number system Counting

- count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number
- 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

Recognising place value

- recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
- identify, represent and estimate numbers using different representations
- read and write numbers up to 1000 in numerals and in words

Comparing

- compare and order numbers up to 1000
- compare,: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- compare durations of events [for example to calculate the time taken by particular events or tasks].
- compare and order unit fractions, and fractions with the same denominators
- solve number problems and practical problems involving these ideas.

Reasoning about Fractions

- recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
- recognise and show, using diagrams, equivalent fractions with small denominators
- add and subtract fractions with the same denominator within one whole
- solve problems that involve all of the above.

Reasoning about Addition and Subtraction

Add and subtract numbers mentally, including:

- a three-digit number and ones
- a three-digit number and tens
- a three-digit number and hundreds
- add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
- estimate the answer to a calculation and use inverse operations to check answers
- add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- add and subtract amounts of money to give change, using both £ and p in practical contexts
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Statistics

- interpret and present data using bar charts, pictograms and tables
- solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.

Reasoning about Multiplication and Division

- recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- know the number of seconds in a minute and the number of days in each month, year and leap year (link to 60x,12x,7x tables, x6)
- write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods
- Mental method for division of two digit numbers by 1 digit for 2, 5 and 3 x tables
- 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

Reasoning about Measures

- measure: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- measure the perimeter of simple 2-D shapes
- tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
- estimate and read time with increasing accuracy to the 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
- 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].

Reasoning about Geometry - properties of shape

- draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
- recognise angles as a property of shape or a description of a turn
- identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete 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.

Reasoning about Statistics

- interpret and present data using bar charts, pictograms and tables
- solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables