National Curriculum Objectives

Year 5

Number – Number and Place Value

I can:

- [ ] read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit
- [ ] count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000
- [ ] interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero
- [ ] round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000
- [ ] solve number problems and practical problems that involve all of the above
- [ ] read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

Number – Addition and Subtraction

I can:

- [ ] add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- [ ] add and subtract numbers mentally with increasingly large numbers
- [ ] use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
- [ ] solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Number – Multiplication and Division

I can:

- [ ] 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
- [ ] multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-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 method of short division and interpret remainders appropriately for the context
- [ ] multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
- [ ] recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)
- [ ] solve problems involving multiplication and division including using their knowledge 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
- [ ] solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

Number – Fractions

I can:

- [ ] compare and order fractions whose denominators are all multiples of the same number
- [ ] identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
- [ ] recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5]
- [ ] add and subtract fractions with the same denominator and denominators that are multiples of the same number
- [ ] multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
- [ ] read and write decimal numbers as fractions [for example, 0.71 = 71/100]
- [ ] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- [ ] round decimals with two decimal places to the nearest whole number and to one decimal place
- [ ] read, write, order and compare numbers with up to three decimal places

- [ ] solve problems involving number up to three decimal places
- [ ] 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 decimal
- [ ] solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5, and those fractions with a denominator of a multiple of 10 or 25.

Measurement

I can:

- [ ] convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
- [ ] understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
- [ ] measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- [ ] calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes
- [ ] estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]
- [ ] solve problems involving converting between units of time
- [ ] use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Geometry – Properties of Shapes

I can:

- [ ] identify 3-D shapes, including cubes and other cuboids, from 2-D representations
- [ ] 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.
- [ ] know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles

- [ ] draw given angles, and measure them in degrees (o)
- [ ] identify angles at a point and one whole turn (total 360o)
- [ ] identify angles at a point on a straight line and half a turn (total 180o)
- [ ] identify other multiples of 90o

Geometry – Position and Direction

I can:

- [ ] 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.

Statistics

I can:

- [ ] solve comparison, sum and difference problems using information presented in a line graph
- [ ] complete, read and interpret information in tables, including timetables.