Mathematics in Year 5

The National Curriculum is split into three main areas for mathematics. These are fluency, problem solving and reasoning. Every maths lesson will encompass all or part of these three main areas.

Key Objectives

These are not all the objectives children will cover during their time in Year 5, however these are considered the key objectives for the year.

Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero

Read Roman numerals to 1000 (M) and recognise years written in Roman numerals

Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})

Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

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 and divide whole numbers and those involving decimals by 10, 100 and 1000

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

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

Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number

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

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

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

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

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 (cm^2) and square metres (m^2) and estimate the area of irregular shapes

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.

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 (°)

Identify angles at a point and one whole turn (total 360°); at a point on a straight line and ½ a turn (total 180°)

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

Complete, read and interpret information in tables, including timetables

Key Vocabulary

Children are exposed to a range of vocabulary during maths lessons which we encourage you to use at home when completing maths activities.

New maths vocabulary for year 5						
Number and place value	**Addition and subtraction**	**Multiplication and division**	**Measure**	**Geometry (position and direction)**	**Geometry (properties of shape)**	**Fractions, decimals and percentages**
Powers of 10	Efficient written method	Factor pairs Composite numbers, prime number, prime factors, square number, cubed number Formal written method	Volume Imperial units, metric units	Reflex angle Dimensions	Regular and irregular polygons	Proper fractions, improper fractions, mixed numbers Percentage Half, quarter, fifth, two fifths, four fifths Ratio, proportion

How you can help at home

Number walks:

- Help with the shopping budget in the supermarket.
- Play times table games using 'mymaths' or 'active learn.'
- Count forwards and backwards (starting with numbers like 10,098, 10,099, 10,100, 10,101 then back again)
- Find and read large numbers in your environment eg nineteen thousand, three hundred and twenty-three. Anything up to 1,000,000.
- Learn number pairs to 100 eg 81 and what equals 100?
- Read car number plates, look at the car's odometer to see how far you've gone.
- Work out patterns – make codes from numbers.

Shapes:

- Use shapes to build pictures during play.
- Look for 2D and 3D shapes in the environment.
- Draw shape pictures.
- Build different shapes with Lego.
- Use blocks that fit together to make a model.
- Draw what it looks like from each side and above. Then draw what they think it looks like from underneath. Once finished, check the underneath of the real object against the drawing.

Measures:

- Feel objects and compare their weight.
- Baking together.
- Measuring how tall we are and seeing how much we grow.

- Looking at the weight or capacity on food and drinks containers.
- Making and organising lunch or a meal for a party, including equal sharing of fruit/biscuits/sandwiches/drinks
- Helping at the supermarket – choose items to weigh.
- Look for the best buy between different brands of the same items (breakfast cereal, spreads like jam or honey)
- Telling the time e.g., 5 past, 10 past, 20 past, ¼ to, 25 to...

We are always here to help. Please speak to your class teacher if you have any questions or queries on how you can support your child at home.