

## Meadgate Primary School Progression of Skills by Year Group

### Maths

Year 5	
<b>Place Value Counting</b>	Can they count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000? Can they count forwards and backwards with positive and negative whole numbers including through zero?
<b>Place Value Representing</b>	Can they read, write (order and compare) numbers to at least 1 000 000 and determine the value of each digit? Can they read Roman numerals to 1000 (M) and recognise years written in Roman numerals?
<b>Place Value Use PV and Compare</b>	Can they read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit?
<b>Place Value Problems and Rounding</b>	Can they interpret negative numbers in context? Can they round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000? Can they solve number problems and practical problems that involve all of the above?
<b>Addition and Subtraction Recall, Represent, Use</b>	Can they use inverse operations to check answers to a calculation and determine, in the context of a problem, levels of accuracy?
<b>Addition and Subtraction Calculations</b>	Can they add and subtract whole numbers with more than four digits using formal written methods (columnar addition and subtraction)? Can they add and subtract numbers mentally with increasingly larger numbers?
<b>Addition and Subtraction Solve Problems</b>	Can they solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why? Can they solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign?
<b>Multiplication and Division Recall, Represent, Use</b>	Can they recall factors, including finding all factor pairs of a number and common factors of two numbers? Can they know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers? Can they establish whether a number up to 100 is prime and recall prime numbers up to 19? Can they recognise and use square numbers and cube numbers, and the notation for square ( <sup>2</sup> ) and cubed ( <sup>3</sup> ) numbers?
<b>Multiplication and Division Calculations</b>	Can they multiply numbers up to four-digits by a one-digit or two-digit number using a formal written method, including long multiplication for two-digit numbers? Can they multiply and divide numbers mentally drawing upon known facts? Can they divide numbers up to four-digits by a one-digit number using the formal written method of short division and interpret remainders approximately for the context?

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	Can they multiply and divide whole numbers and those involving decimals by 10, 100 and 1000?
<b>Multiplication and Division Solve Problems</b>	Can they solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes? Can they solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates?
<b>Multiplication and Division Combined Operations</b>	Can they solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign?
<b>Fractions Recognise and Write</b>	Can they identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths? Can they recognise mixed numbers and improper fractions and convert one for to the other and write mathematical statements $>1$ as a mixed number (for example $\frac{3}{5} + \frac{1}{5} = \frac{6}{5} = 1 \frac{1}{5}$ )
<b>Fractions Compare</b>	Can they compare and order fractions whose denominators are all multiples of the same number?
<b>Fractions Calculations</b>	Can they add and subtract fractions with the same denominator and denominators that are multiples of the same number? Can the multiply proper fraction and mixed numbers by whole numbers, supported by materials and diagrams?
<b>Decimals Recognise and Write</b>	Can they read and write decimal numbers as fractions (for example $0.71 = \frac{71}{100}$ )? Can they recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents?
<b>Decimals Compare</b>	Can they round decimals with two decimal places to the nearest whole number and to one decimal place? Can they read, write, order and compare numbers with up to three decimal places?
<b>Decimals Calculations and Problems</b>	Can they solve problems involving numbers with up to three decimal places?
<b>Fractions, Decimals and Percentages</b>	Can they 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? Can they solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ and $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25?

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<b>Geometry 2D Shapes</b>	<p>Can they distinguish between regular and irregular polygons based on reasoning about equal sides and angles?</p> <p>Can they use the properties of rectangles to deduce related facts and find missing lengths and angles?</p>
<b>Geometry 3D Shapes</b>	<p>Can they recognise and name common 3D shapes including cubes and cuboids, from 2D representations?</p>
<b>Geometry Angles and Lines</b>	<p>Do they know that angles are measured in degrees?</p> <p>Can they estimate and compare acute, obtuse and reflex angles?</p> <p>Can they draw given angles and measure them in degrees?</p> <p>Can they identify angles at a point and one whole turn (total <math>360^\circ</math>)?</p> <p>Can they identify angles at a point on a straight line and <math>\frac{1}{2}</math> a turn (total <math>180^\circ</math>)?</p> <p>Can they identify other multiples of <math>90^\circ</math>?</p>
<b>Geometry Position and Direction</b>	<p>Can they represent the position of a shape following reflection or translation, using the appropriate language, and know that the shape has not changed?</p>
<b>Measurement Using Measures</b>	<p>Can they choose and use different units of metric measure?</p> <p>Can they understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints?</p> <p>Can they use all four operations to solve problems involving measure using decimal notation, including scaling?</p>
<b>Measurement Money</b>	<p>Can they use all four operations to solve problems involving measure?</p>
<b>Measurement Time</b>	<p>Can they use all four operations to solve problems involving converting between units of time?</p>
<b>Measurement Perimeter, Area and Volume</b>	<p>Can they measure and calculate the perimeter of composite rectilinear shapes in cm and m?</p> <p>Can they calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres (<math>\text{cm}^2</math>) and square metres (<math>\text{m}^2</math>) and estimate the area of irregular shapes?</p> <p>Can they estimate volume (for example using <math>1\text{cm}^3</math> blocks to build cuboids (including cubes)) and capacity (for example using water)?</p>

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<b>Statistics Present and Interpret</b>	Can they complete, read and interpret information in tables, including timetables?
<b>Statistics Solve Problems</b>	Can they solve comparison, sum and difference problems using information presented in a line graph?