

Maths

Age related expectations Assessment Grid for maths: Year 4

| | Number & Place Value | Addition & Subtraction | Multiplication & Division | Fractions | Measurement | Geometry: Shape Properties | Geometry: Position & Direction | Statistics |
|--------------------------|--|--|---|--|---|--|---|--|
| Year 4: Emerging | <p>Can count in multiples of 6, 7 and 1000</p> <p>Recognise the place value of each digit in a 4 digit number (thousands, hundreds, tens and ones)</p> <p>Round any number to the nearest 10 and 100</p> <p>Solve number problems that involve all values above</p> | <p>Starts to add and subtract numbers of up to 4 digits using the formal written method of column addition and subtraction (in line with school's individual calculation policy)</p> <p>Beginning to estimate with some degree of accuracy answers to calculations</p> | <p>Recognise and use factor pairs in mental calculations</p> <p>Uses known facts and place value knowledge to multiply and divide mentally, including multiplication by 0 and 1, dividing by 1</p> <p>Evidence that the above is done when put into problems</p> | <p>Count up and down in hundredths; knowing that hundredths occur when an object is split into ten and by dividing tenths by 10</p> <p>Add and subtract fractions with the same denominator</p> <p>Round decimals with one decimal place to the nearest whole number</p> <p>Recognise and write decimal equivalents of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$</p> | <p>Measure and calculate the perimeter of rectilinear shapes (including squares)</p> <p>Find the area of rectilinear shapes by counting squares</p> | <p>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and size</p> | <p>Describe the positions on a 2D grid as coordinates in the first quadrant</p> | <p>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs</p> |
| Year 4: Meeting | <p>Order and compare numbers beyond 1000</p> <p>Round any number to the nearest 10, 100 and 1000</p> <p>Find 1000 more or less than a given number</p> <p>Count backwards through zero to include negative numbers</p> <p>Solve number and practical problems that involve all values above</p> <p>Identify, represent and estimate numbers using different representations</p> <p>Read Roman Numerals to 100 (I to C) - some awareness that over time the numeral system changed to incorporate concept of zero and place value</p> | <p>Can add and subtract numbers of up to 4 digits using the formal written method of column addition and subtraction (in line with school's individual calculation policy)</p> <p>Able to provide reason for estimations</p> <p>Can use the inverse operation to check calculations</p> <p>Solve addition and subtraction 2 step problems in a context: deciding which operations to use and why</p> | <p>Recognise and use factor pairs and commutativity in mental calculations</p> <p>Multiply a 2 digit number and 3 digit number by a 1 digit number using a formal written layout (in line with school's individual calculation policy)</p> <p>Uses known facts and place value knowledge to multiply 3 numbers together</p> <p>Recalls multiplication and division facts for tables up to 12x12</p> <p>Solve problems using multiplication, adding, including using the distributive law to multiply 2-digit numbers by 1-digit, integer scaling problems and correspondence problems, such as x objects are connected to y objects</p> | <p>Recognise and show, using diagrams, families of common equivalent fractions.</p> <p>Recognise and write decimal equivalents of any number in tenths and hundredths</p> <p>Solve simple measure and money problems involving fractions and decimals to 2 decimal places</p> <p>Compare numbers with the same number of decimal places up to two decimal places</p> <p>Find the effect of dividing a one or two digit number by 10 and 100 - identifying the value of the digits in the answer as ones, tenths and hundredths</p> <p>Solve problems involving increasingly harder fractions to find quantities, fractions being used to divide quantities (including where the answer may be a whole number - non-unit fractions)</p> | <p>Estimate, compare and calculate different measures, including money, in pounds and pence</p> <p>Read, convert and write time between 12hour and 24hour clocks and between analogue and digital</p> <p>Solve problems involving converting from hours to minutes, minutes to seconds, years to months and weeks to days</p> <p>Convert between different units of measure, for example hour to minute, kilometre to metre</p> | <p>Identify acute and obtuse angles</p> <p>Compare and order angles by size up to 2 right angles</p> <p>Identify lines of symmetry in 2D shapes presented in different orientations</p> <p>Complete a simple symmetric shape from a given line of symmetry</p> | <p>Describe movements between positions as translations of a given unit to the left/right and up/down</p> <p>Plot specified points and draw sides to complete a given polygon</p> | <p>Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</p> |
| Year 4: Deepening | <p>Use tenths, hundredths and thousandths when comparing values and solving addition and subtraction problems</p> <p>Round any number to 100,000 to the nearest 10, 100, 1000 or 10,000</p> | <p>Solve multi-step problems involving more than one of the operations</p> | <p>Rapidly recall answer when multiplying and dividing whole numbers and decimal numbers by 10</p> | <p>Work out simple percentage values of whole numbers as is related to on-going learning in science, history and geography</p> <p>Relate tenths and hundredths to fractional values</p> <p>Compare, order and add fractions whose denominators are all multiples of the same number</p> | <p>Use a 24 hour time table to find out times for a journey between various places</p> | <p>Use knowledge of perimeter to work out perimeter of large areas around school using metres and centimetres</p> | | <p>Apply the skills above to other areas of the curriculum</p> <p>Collect own data on given project and present information in graphical formats of their choosing</p> |