## MATHEMATICS ASSESSMENT RECORD

YEAR 4

| Number and Place Value | Introduction | Independence | Application | Mastery | Surpassing |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Count in multiples of 6, 7, 9, 25 and 1,000 |  |  |  |  |  |
| Find 1,000 more or less than a given number |  |  |  |  |  |
| Count backwards through 0 to include negative numbers |  |  |  |  |  |
| Recognise the place value of each digit in a four-digit number ( $1,000 \mathrm{~s}, 100 \mathrm{~s}, 10 \mathrm{~s}$, and 1 s ) |  |  |  |  |  |
| Order and compare numbers beyond 1,000 |  |  |  |  |  |
| Identify, represent and estimate numbers using different representations |  |  |  |  |  |
| Round any number to the nearest 10, 100 or 1,000 |  |  |  |  |  |
| Solve number and practical problems that involve all of the above and with increasingly large positive number |  |  |  |  |  |
| Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value |  |  |  |  |  |
| Addition and Subtraction |  |  |  |  |  |
| Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate |  |  |  |  |  |
| Estimate and use inverse operations to check answers to a calculation |  |  |  |  |  |
| Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why |  |  |  |  |  |
| Multiplication and Division |  |  |  |  |  |
| recall multiplication and division facts for multiplication tables up to $12 \times 12$ |  |  |  |  |  |
| use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together 3 numbers |  |  |  |  |  |
| recognise and use factor pairs and commutativity in mental calculations |  |  |  |  |  |
| multiply two-digit and three-digit numbers by a one-digit number using formal written layout | $\bigcirc$ |  |  |  |  |
| solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects |  |  |  |  |  |
| Fractions |  |  |  |  |  |
| Recognise and show, using diagrams, families of common equivalent fractions |  |  |  |  |  |
| Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 |  |  |  |  |  |
| Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number |  |  |  |  |  |
| Add and subtract fractions with the same denominator |  |  |  |  |  |
| Recognise and write decimal equivalents of any number of tenths or hundreds |  |  |  |  |  |
| Recognise and write decimal equivalents to 1/4, 1/2, 3/4 |  |  |  |  |  |
| 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 |  |  |  |  |  |
| Round decimals with 1 decimal place to the nearest whole number |  |  |  |  |  |
| Compare numbers with the same number of decimal places up to 2 decimal places |  |  |  |  |  |
| Solve simple measure and money problems involving fractions and decimals to 2 decimal places |  |  |  |  |  |
| Measurement |  |  |  |  |  |
| Convert between different units of measure [for example, kilometre to metre; hour to minute] |  |  |  |  |  |
| Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres |  |  |  |  |  |
| Find the area of rectilinear shapes by counting squares |  |  |  |  |  |


| Estimate, compare and calculate different measures, including <br> money in pounds and pence |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Read, write and convert time between analogue and digital 12- <br> and 24-hour clocks |  |  |  |  |
| Solve problems involving converting from hours to minutes, <br> minutes to seconds, years to months, weeks to days |  |  |  |  |
|  |  |  |  |  |
| Compare and classify geometric shapes, including quadrilaterals <br> and triangles, based on their properties and sizes |  |  |  |  |
| Identify acute and obtuse angles and compare and order angles <br> up to 2 right angles by size |  |  |  |  |
| Identify lines of symmetry in 2-D shapes presented in different <br> orientations |  |  |  |  |
| Complete a simple symmetric figure with respect to a specific <br> line of symmetry |  |  |  |  |
| Position and Direction |  |  |  |  |
| Describe positions on a 2-D grid as coordinates in the first <br> quadrant |  |  |  |  |
| Describe movements between positions as translations of a given <br> unit to the left/right and up/down |  |  |  |  |
| Plot specified points and draw sides to complete a given polygon |  |  |  |  |
|  |  |  |  |  |
| Interpret and present discrete and continuous data using <br> appropriate graphical methods, including bar charts and time <br> graphs |  |  |  |  |
| Solve comparison, sum and difference problems using information <br> presented in bar charts, pictograms, tables and other graphs |  |  |  |  |

