

Maths Planning Overview – Year 5

| Term 1 | Term 2 | Term 3 |
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| <p>Number and place value</p> <ul style="list-style-type: none"> ● <u>read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</u> ● <u>count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</u> ● <u>round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</u> ● <u>solve number problems and practical problems that involve all of the above</u> <p>Multiplication and division</p> <ul style="list-style-type: none"> ● <u>multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</u> <p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> ● <u>read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$]</u> ● <u>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</u> ● <u>round decimals with two decimal places to the nearest whole number and to one decimal place</u> ● <u>read, write, order and compare numbers with up to three decimal places</u> ● <u>solve problems involving number up to three decimal places</u> <p>Measurement</p> <ul style="list-style-type: none"> ● <u>convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</u> ● <u>solve problems involving converting between units of time.</u> <p>Addition and subtraction</p> <ul style="list-style-type: none"> ● <u>add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</u> ● <u>add and subtract numbers mentally with increasingly large numbers</u> ● <u>use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</u> ● <u>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</u> <p>Measurement</p> | <p>Addition and subtraction</p> <ul style="list-style-type: none"> ● <i>add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</i> ● <i>add and subtract numbers mentally with increasingly large numbers</i> ● <i>use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</i> ● <i>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</i> <p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> ● <i>solve problems involving number up to three decimal places</i> <p>Measurement</p> <ul style="list-style-type: none"> ● <i>use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling</i> ● <i>measure and calculate the perimeter</i> <p>Statistics</p> <ul style="list-style-type: none"> ● <i>solve comparison, sum and difference problems using information presented in a line graph</i> ● <i>complete, read and interpret information in tables, including timetables.</i> <p>Multiplication and division</p> <ul style="list-style-type: none"> ● <i>multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</i> <p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> ● <u>compare and order fractions whose denominators are all multiples of the same number</u> ● <u>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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]</u> ● <u>read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$]</u> ● <u>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</u> ● <u>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</u> | <p>Addition and subtraction</p> <ul style="list-style-type: none"> ● <i>add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</i> ● <i>add and subtract numbers mentally with increasingly large numbers</i> ● <i>use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</i> ● <i>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</i> <p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> ● <i>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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]</i> ● <u>add and subtract fractions with the same denominator and denominators that are multiples of the same number</u> ● <i>solve problems involving number up to three decimal places</i> <p>Measurement</p> <ul style="list-style-type: none"> ● <i>use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling</i> ● <i>solve problems involving converting between units of time</i> <p>Statistics</p> <ul style="list-style-type: none"> ● <i>solve comparison, sum and difference problems using information presented in a line graph</i> ● <i>complete, read and interpret information in tables, including timetables.</i> <p>Multiplication and division</p> <ul style="list-style-type: none"> ● <i>multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</i> <p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> ● <i>compare and order fractions whose denominators are all multiples of the same number</i> ● <i>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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]</i> ● <u>read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$]</u> |

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| <ul style="list-style-type: none"> ● <u>use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling</u> <p>Statistics</p> <ul style="list-style-type: none"> ● <u>solve comparison, sum and difference problems using information presented in a line graph</u> ● <u>complete, read and interpret information in tables including timetables</u> <p>Multiplication and division</p> <ul style="list-style-type: none"> ● <u>identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</u> ● <u>multiply numbers up to 4 digits by a one-digit number using a formal written method</u> ● <u>multiply and divide numbers mentally drawing upon known facts</u> ● <u>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</u> ● <u>multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</u> ● <u>solve problems involving multiplication and division including using their knowledge of factors and multiples</u> ● <u>solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</u> <p>Measurement</p> <ul style="list-style-type: none"> ● <u>use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling.</u> <p>Geometry: properties of shapes</p> <ul style="list-style-type: none"> ● <u>identify 3-D shapes, including cubes and other cuboids, from 2-D representations</u> ● <u>know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</u> ● <u>draw given angles, and measure them in degrees (°)</u> ● <u>identify:</u> <ul style="list-style-type: none"> – <u>angles at a point and one whole turn (total 360°)</u> – <u>angles at a point on a straight line and ½ a turn (total 180°)</u> – <u>other multiples of 90°</u> ● <u>use the properties of rectangles to deduce related facts and find missing lengths and angles</u> ● <u>distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</u> <p>Number and place value</p> | <ul style="list-style-type: none"> ● <u>identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths.</u> <p>Multiplication and division</p> <ul style="list-style-type: none"> ● <u>identify multiples and factors, including finding all factor pairs</u> ● <u>know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</u> ● <u>solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</u> ● <u>establish whether a number up to 100 is prime and recall prime numbers up to 19</u> ● <u>multiply numbers up to 4 digits by a one-digit number using a formal written method</u> ● <u>multiply and divide numbers mentally drawing upon known facts</u> ● <u>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</u> ● <u>multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</u> ● <u>recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³)</u> ● <u>solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</u> ● <u>solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</u> <p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> ● <u>solve problems which require knowing percentage and decimal equivalents of ½, ¼, ⅓, ⅔, ⅕ and those with a denominator of a multiple of 10 or 25</u> <p>Measurement</p> <p><u>use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling.</u></p> <p>Geometry: properties of shapes</p> <ul style="list-style-type: none"> ● <u>identify 3-D shapes, including cubes and other cuboids, from 2-D representations</u> ● <u>know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</u> ● <u>draw given angles, and measure them in degrees (°)</u> | <ul style="list-style-type: none"> ● <i>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</i> ● <i>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.</i> <p>Measurement</p> <ul style="list-style-type: none"> ● <i>convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre].</i> <p>Multiplication and division</p> <ul style="list-style-type: none"> ● <i>identify multiples and factors, including finding all factor pairs, and common factors of two numbers</i> ● <i>know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</i> ● <i>establish whether a number up to 100 is prime and recall prime numbers up to 19</i> ● <i>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</i> ● <i>multiply and divide numbers mentally drawing upon known facts</i> ● <i>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</i> ● <i>multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</i> ● <i>recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³)</i> ● <i>solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</i> ● <i>solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</i> ● <i>solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</i> <p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> ● <i>identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths</i> ● <i>multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</i> |
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| <ul style="list-style-type: none"> ● 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 ● <u>interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero</u> ● 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 ● <u>read Roman numerals to 1000 (M) and recognise years written in Roman numerals</u> <p>Multiplication and division</p> <ul style="list-style-type: none"> ● multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 <p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> ● read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] ● 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 <p>Measurement</p> <ul style="list-style-type: none"> ● convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimeter and millimetre; kilogram and gram; litre and millilitre) ● solve problems involving converting between units of time. | <ul style="list-style-type: none"> ● Identify: <ul style="list-style-type: none"> – angles at a point and one whole turn (total 360°) – angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) – other multiples of 90° ● 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 <p>Geometry: position and direction <u>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</u></p> <p>Number and place value</p> <ul style="list-style-type: none"> ● 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 <p>Multiplication and division</p> <ul style="list-style-type: none"> ● multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 <p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> ● compare and order fractions whose denominators are all multiples of the same number ● 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] ● read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] ● 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 | <ul style="list-style-type: none"> ● solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25 <p>Measurement</p> <ul style="list-style-type: none"> ● use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling ● <u>understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</u> ● solve problems involving converting between units of time. <p>Geometry: properties of shapes</p> <ul style="list-style-type: none"> ● 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 <p>Geometry: position and direction</p> <ul style="list-style-type: none"> ● 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 <p>Measurement</p> <ul style="list-style-type: none"> ● 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 ● <u>estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water].</u> |
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