

St Stephens Community Academy - Maths Scheme of Learning (Year 5) 2016

Year 5	Autumn Term		Spring Term		Summer Term	
Week	1	2	1	2	1	2
1	Number - Place value Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	Number - Place value Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. Solve number problems and practical problems that involve all of the above	Number - Addition and Subtraction Add and subtract numbers mentally with increasingly hard numbers Add and subtract whole numbers with more than 4 digits using columnar addition and subtraction	Number – Place value Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	Number – Place value Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 Round any number up to 1 000 000 to the nearest 10,100,1000, 10 000 and 100 000	Number – Addition and Subtraction Add and subtract whole numbers with more than 4 digits using columnar addition and subtraction Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
2	Number - Addition Add whole numbers with more than 4 digits, including using columnar addition Add numbers mentally with increasingly large numbers	Number – Fractions Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. Compare and order fractions whose denominators are all multiples of the same number.	Number - Multiplication and Division 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	Number – Fractions Identify, name and write equivalent fractions of a given fractions, represented visually, including tenths and hundredths Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Number – Multiplication and Division Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).	Number - Multiplication and Division Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

3	<p>Number - Subtraction</p> <p>Subtract numbers mentally with increasingly large numbers</p> <p>Subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</p>	<p>Number – Decimals</p> <p>Read and write decimal numbers as fractions (for example, $0.71 = 71/100$)</p> <p>Round decimals with two decimal places to the nearest whole number and to one decimal place</p>	<p>Number - Multiplication and Division</p> <p>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.</p>	<p>Number – Fractions</p> <p>Recognise mixed numbers and improper fractions and convert from one form to another and write mathematical statements > 1 as a mixed number (e.g. $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$)</p> <p>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.</p>	<p>Number – Multiplication and Division</p> <p>Multiply numbers up to 4 digits by a one or two digit number using short and long multiplication</p> <p>Divide numbers up to 4 digits using short division and interpret remainders appropriately for the context</p>	<p>Number - Multiplication and Division</p> <p>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</p> <p>Divide numbers up to 4 digits by a one digit number using short division and interpret remainders appropriately for the context</p>
4	<p>Number – Multiplication</p> <p>Multiply numbers mentally drawing upon known facts.</p> <p>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</p>	<p>Number – Percentages</p> <p>Recognise the per cent symbol (%) and understand that per cent relates to “number of parts per hundred”, and write percentages as a fraction with the denominator 100, and as a decimal.</p> <p>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 fractions with a denominator of multiple of 10 or 25.</p>	<p>Number - Problem solving, reasoning and communicating</p> <p>Problem solving involving all 4 operations in context of money and time.</p>	<p>Number – Decimals</p> <p>Round decimals with two decimal places to the nearest whole number and to one decimal place</p> <p>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</p>	<p>Measurement – Perimeter and Area</p> <p>Convert between different units of metric measure</p> <p>Measure and calculate the perimeter of composite rectilinear shapes in cm and m</p>	<p>Number – Fractions, decimals and percentages</p> <p>Add and subtract fractions with the same denominator and denominators that are multiples of the same number</p> <p>Compare and order fractions whose denominators are all multiples of the same number.</p> <p>Read, write, order and compare numbers with up to three decimal places</p>

5	Number – Division 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.	Measurement – Time Solve problems involving converting between units of time.	Measurement - Volume and capacity Estimate volume [for example, using 1cm ³ blocks to build cuboids (including cubes)] and capacity [for example, using water]	Geometry – Position and direction 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.	Measurement – Perimeter and Area 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 all four operations to solve problems involving measure using decimal notation, including scaling	Number – Fractions, decimals and percentages Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number. Recognise the per cent symbol (%) and understand that per cent relates to “number of parts per hundred”, and write percentages as a fraction with the denominator 100, and as a decimal.
6	Geometry - 2D and 3D shape Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	Statistics – Time Complete, read and interpret information in tables, including timetables	Geometry –Angles Know angles are measured in degrees: estimate and compare acute, obtuse, and reflex angles. Draw given angles, and measure them in degrees (°)	Statistics – Line graphs Solve comparison, sum and difference problems using information presented in a line graph	Geometry – Angles and 2D shape Draw given angles and measure them in degrees Use the properties of rectangles to deduce related facts and find missing lengths and angles.	Statistics – Line graphs Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including time tables



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