



## St. Margaret's C.E. Junior School

### Maths Progression Overview including Ready To Progress criteria



	Year 3	Year 4	Year 5	Year 6
<b>Place Value</b>	<ul style="list-style-type: none"> <li>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</li> <li>Compare and order numbers up to 1,000</li> </ul>	<ul style="list-style-type: none"> <li>Recognise the place value of each digit in a four-digit number</li> <li>Order and compare numbers beyond 1000</li> <li>Round any number to the nearest 10, 100 or 1000</li> </ul>	<ul style="list-style-type: none"> <li>Read, write, order and compare numbers up to 1 000 000 and determine the value of each digit</li> <li>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</li> </ul>	<ul style="list-style-type: none"> <li>Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</li> <li>Round any whole number to a required degree of accuracy</li> <li>Solve number and practical problems that involve all of the above</li> </ul>
<b>RTP criteria</b>	<ul style="list-style-type: none"> <li>3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and nonstandard partitioning.</li> </ul>	<ul style="list-style-type: none"> <li>4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100</li> <li>4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning.</li> <li>4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.</li> <li>4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.</li> </ul>		<ul style="list-style-type: none"> <li>6NPV-1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).</li> <li>6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.</li> <li>6NPV-3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.</li> <li>6NPV-4 Divide powers of 10, from 1</li> </ul>

				hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.
<b>Counting</b>	<ul style="list-style-type: none"> <li>Count from 0 in multiples of 4, 8, 50 and 100</li> <li>Find 10 or 100 more or less than a given number</li> </ul>	<ul style="list-style-type: none"> <li>Count in multiples of 6, 7, 9, 25 and 1000</li> <li>Find 1000 more or less than a given number</li> </ul>	<ul style="list-style-type: none"> <li>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</li> <li>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero</li> </ul>	<ul style="list-style-type: none"> <li>Use negative numbers in context, and calculate intervals across zero</li> </ul>
<b>RTP criteria</b>	<ul style="list-style-type: none"> <li>3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10</li> </ul>	<ul style="list-style-type: none"> <li>4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100</li> </ul>		
<b>Identifying, Reading &amp; Representing Number</b>	<ul style="list-style-type: none"> <li>Identify, represent and estimate numbers using different representations</li> <li>Read and write numbers up to 1000 in numerals and in words</li> <li><i>Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks (copied from Measurement)</i></li> </ul>	<ul style="list-style-type: none"> <li>Identify, represent and estimate numbers using different representations</li> <li>Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value</li> </ul>	<ul style="list-style-type: none"> <li>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals</li> <li>Recognise and use square numbers and cube numbers, and the notation for squared (<sup>2</sup>) and cubed (<sup>3</sup>)</li> </ul>	
<b>RTP criteria</b>	<ul style="list-style-type: none"> <li>3NPV-3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10</li> <li>3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.</li> </ul>			

<b>Addition &amp; Subtraction (calculations)</b>	<ul style="list-style-type: none"> <li>• Add multiples of 10, 100 and 1,000 to a number (up to 9,999)</li> <li>• Add &amp; subtract numbers <b>mentally</b> including a 3 digit number &amp; ones/tens/100s</li> <li>• Add numbers up to 3 digits using <b>formal method</b> of column addition</li> </ul>	<ul style="list-style-type: none"> <li>• Add &amp; subtract multiples of 10, 100 and 1,000 to a number (up to 9,999)</li> <li>• Add &amp; subtract numbers up to 4 digits using <b>formal method</b> of column addition</li> <li>• Add &amp; subtract with decimals (up to tenths and hundredths)</li> </ul>	<ul style="list-style-type: none"> <li>• Add &amp; subtract numbers <b>mentally</b> with increasingly large numbers</li> <li>• Add &amp; subtract whole numbers with more than 4 digits, including using <b>formal written methods</b></li> </ul>	<ul style="list-style-type: none"> <li>• Perform mental calculations, including with mixed operations and large numbers</li> </ul>
<b>RTP criteria</b>	<ul style="list-style-type: none"> <li>• <b>3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice.</b></li> <li>• <b>3AS-1 Calculate complements to 100</b></li> <li>• <b>3AS-2 Add and subtract up to three-digit numbers using columnar methods.</b></li> </ul>			
<b>Addition &amp; Subtraction (problem solving)</b>	<ul style="list-style-type: none"> <li>• Estimate the answer to a calculation and use inverse operations to check answers</li> <li>• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</li> </ul>	<ul style="list-style-type: none"> <li>• Estimate and use inverse operations to check answers to a calculation</li> <li>• Solve addition and subtraction two-step problems in context, deciding which operations and methods to use and why</li> </ul>	<ul style="list-style-type: none"> <li>• Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>• Solve addition &amp; subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> </ul>	<ul style="list-style-type: none"> <li>• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>• Solve problems involving addition, subtraction, multiplication and division</li> </ul>
<b>RTP criteria</b>	<ul style="list-style-type: none"> <li>• <b>3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.</b></li> </ul>			<ul style="list-style-type: none"> <li>• <b>6AS/MD-1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).</b></li> <li>• <b>6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.</b></li> </ul>

<b>Multiplication &amp; Division (calculations)</b>	<ul style="list-style-type: none"> <li>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental methods</li> <li>Progress to formal written methods calculations as above</li> </ul>	<ul style="list-style-type: none"> <li>Recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></li> <li>Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers</li> <li>Recognise and use factor pairs and commutativity in mental calculations</li> <li>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 (Y5)</li> <li>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout</li> </ul>	<ul style="list-style-type: none"> <li>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</li> <li>Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</li> <li>Establish whether a number up to 100 is prime and recall prime numbers up to 19</li> <li>Multiply and divide numbers mentally drawing upon known facts</li> <li>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</li> <li>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</li> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Identify common factors, common multiples and prime numbers</li> <li>Perform mental calculations, including with mixed operations and large numbers</li> </ul>
<b>RTP criteria</b>	<ul style="list-style-type: none"> <li>3NF-2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.</li> <li>3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).</li> <li>3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotative and partitive division.</li> </ul>	<ul style="list-style-type: none"> <li>4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100</li> <li>4NF-1 Recall multiplication and division facts up to <math>12 \times 12</math> and recognise products in multiplication tables as multiples of the corresponding number</li> <li>4NF-2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.</li> <li>4NF-3 Apply place-value knowledge to known additive and multiplicative</li> </ul>	<ul style="list-style-type: none"> <li>5NF-1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.</li> <li>5NF-2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).</li> <li>5MD-1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.</li> <li>5MD-2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given</li> </ul>	<ul style="list-style-type: none"> <li>6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.</li> </ul>

		<p>number facts (scaling facts by 100).</p> <ul style="list-style-type: none"> <li>• 4MD-1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.</li> <li>• 4MD-2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.</li> <li>• 4MD-3 Understand and apply the distributive property of multiplication.</li> </ul>	<p>number as a product of 2 or 3 factors.</p> <ul style="list-style-type: none"> <li>• 5MD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.</li> <li>• 5MD-4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context.</li> </ul>	
<p><b>Multiplication &amp; Division (problem solving)</b></p>	<ul style="list-style-type: none"> <li>• Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.</li> </ul>	<ul style="list-style-type: none"> <li>• Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects</li> </ul>	<ul style="list-style-type: none"> <li>• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> <li>• Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</li> <li>• Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</li> </ul>	<ul style="list-style-type: none"> <li>• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</li> <li>• Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</li> <li>• Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to context</li> <li>• Use their knowledge of the order of operations to carry out calculations involving the four operations</li> <li>• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>• Solve problems involving addition, subtraction, multiplication and division</li> <li>• Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> </ul>

<b>RTP criteria</b>	<ul style="list-style-type: none"> <li>• 3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.</li> </ul>			<ul style="list-style-type: none"> <li>• 6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.</li> </ul>
<b>Fractions</b>	<ul style="list-style-type: none"> <li>• Count up and down in tenths;</li> <li>• Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</li> <li>• Compare and order unit fractions, and fractions with the same denominators</li> <li>• Recognise and show, using diagrams, equivalent fractions with small denominators</li> <li>• Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</li> <li>• Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</li> <li>• Add and subtract fractions with the same denominator within one whole e.g. <math>5/7 + 1/7 = 6/7</math></li> <li>• Solve problems using all fraction knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Count up and down in hundredths;</li> <li>• Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten</li> <li>• Recognise and show, using diagrams, families of common equivalent fractions</li> <li>• 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</li> <li>• Add and subtract fractions with the same denominator</li> <li>• Solve simple measure and money problems involving fractions and decimals to two decimal places</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <math>&gt; 1</math> as a mixed number</li> <li>• Compare and order fractions whose denominators are all multiples of the same number</li> <li>• Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> <li>• Add and subtract fractions with the same denominator and denominators that are multiples of the same number</li> <li>• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</li> <li>• Solve problems which require knowing percentage and decimal equivalents of <math>1/2</math>, <math>1/4</math>, <math>1/5</math>, <math>2/5</math>, <math>4/5</math> and those fractions with a denominator of a multiple of 10 or 25</li> </ul>	<ul style="list-style-type: none"> <li>• Use common factors to simplify fractions</li> <li>• Use common multiples to express fractions in the same denomination</li> <li>• Compare and order fractions, including fractions <math>&gt; 1</math></li> <li>• Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>• Multiply simple pairs of proper fractions, writing the answer in its simplest form</li> <li>• Divide proper fractions by whole numbers</li> <li>• Solve problems which require answers to be rounded to specified degrees of accuracy</li> <li>• Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</li> </ul>
<b>RTP criteria</b>	<ul style="list-style-type: none"> <li>• 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).</li> <li>• 3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.</li> <li>• 3F-3 Reason about the location of any fraction within 1 in the linear number system.</li> </ul>	<ul style="list-style-type: none"> <li>• 4F-1 Reason about the location of mixed numbers in the linear number system.</li> <li>• 4F-2 Convert mixed numbers to improper fractions and vice versa.</li> <li>• 4F-3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.</li> </ul>	<ul style="list-style-type: none"> <li>• 5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.</li> <li>• 5F-1 Find non-unit fractions of quantities.</li> <li>• 5F-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.</li> <li>• 5F-3 Recall decimal fraction equivalents for <math>1/4</math>, <math>1/2</math>, <math>1/5</math> and <math>1/10</math></li> </ul>	<ul style="list-style-type: none"> <li>• 6F-1 Recognise when fractions can be simplified, and use common factors to simplify fractions.</li> <li>• 6F-2 Express fractions in a common denomination and use this to compare fractions that are similar in value.</li> <li>• 6F-3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a</li> </ul>

	<ul style="list-style-type: none"> <li>• 3F-4 Add and subtract fractions with the same denominator, within 1</li> </ul>		and for multiples of these proper fractions.	comparison strategy.
<b>Decimals</b>		<ul style="list-style-type: none"> <li>• Recognise and write decimal equivalents of any number of tenths or hundredths</li> <li>• Recognise and write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math> and <math>\frac{3}{4}</math></li> <li>• 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</li> <li>• Round decimals with one decimal place to the nearest whole number</li> <li>• Compare numbers with the same number of decimal places up to two decimal places</li> <li>• Solve simple measure and money problems involving fractions and decimals to two decimal places</li> </ul>	<ul style="list-style-type: none"> <li>• Read and write decimal numbers as fractions</li> <li>• Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>• Round decimals with two decimal places to the nearest whole number and to one decimal place</li> <li>• Read, write, order and compare numbers with up to three decimal places</li> <li>• Solve problems involving number up to three decimal places</li> <li>• Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25</li> </ul>	<ul style="list-style-type: none"> <li>• Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction</li> <li>• Identify the value of each digit in numbers given to three decimal places</li> <li>• Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places</li> <li>• Multiply one-digit number with up to two decimal places by whole numbers</li> <li>• Use written division methods in cases where the answer has up to two decimal places</li> </ul>
<b>RTP criteria</b>			<ul style="list-style-type: none"> <li>• 5NPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01</li> <li>• 5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.</li> <li>• 5NPV-3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.</li> </ul>	

<b>Percentages</b>			<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison</li> </ul>
<b>Ratio &amp; Proportion</b>				<ul style="list-style-type: none"> <li>Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</li> <li>Solve problems involving similar shapes where the scale factor is known or can be found</li> <li>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</li> </ul>
<b>RTP criteria</b>				<ul style="list-style-type: none"> <li>6AS/MD-1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).</li> <li>6AS/MD-3 Solve problems involving ratio relationships.</li> </ul>
<b>Algebra</b>				<ul style="list-style-type: none"> <li>Use simple formulae</li> <li>Generate and describe linear number sequences</li> <li>Express missing number problems algebraically</li> <li>Find pairs of numbers that satisfy an equation with two unknowns</li> <li>Enumerate possibilities of combinations of two variables</li> </ul>
<b>RTP criteria</b>				<ul style="list-style-type: none"> <li>6AS/MD-4 Solve problems with 2 unknowns.</li> </ul>
<b>Measurement</b>	<ul style="list-style-type: none"> <li>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> <li>Measure the perimeter of simple 2-D shapes</li> <li>Add and subtract amounts of money to give change, using both £</li> </ul>	<ul style="list-style-type: none"> <li>Convert between different units of measure</li> <li>Estimate, compare and calculate different measures, including money in pounds and pence</li> <li>Measure and calculate the perimeter of a rectilinear figure (including squares)</li> </ul>	<ul style="list-style-type: none"> <li>Convert between different units of metric measure</li> <li>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</li> <li>Estimate volume and capacity</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</li> <li>Use, read, write and convert between standard units, converting</li> </ul>



	and p in practical contexts	in centimetres and metres • Find the area of rectilinear shapes by counting squares	<ul style="list-style-type: none"> <li>• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</li> <li>• Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes</li> <li>• Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling</li> </ul>	<p>measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places</p> <ul style="list-style-type: none"> <li>• Convert between miles and kilometres</li> <li>• Recognise that shapes with the same areas can have different perimeters and vice versa</li> <li>• Recognise when it is possible to use formulae for area and volume of shapes</li> <li>• Calculate the area of parallelograms and triangles</li> <li>• Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units</li> </ul>
<b>RTP criteria</b>	<ul style="list-style-type: none"> <li>• 3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10</li> <li>• 3AS-1 Calculate complements to 100</li> <li>• 3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.</li> </ul>		<ul style="list-style-type: none"> <li>• 5NPV-5 Convert between units of measure, including using common decimals and fractions.</li> </ul>	<ul style="list-style-type: none"> <li>• 6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.</li> </ul>

<b>Time</b>	<ul style="list-style-type: none"> <li>• Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</li> <li>• Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight</li> <li>• Know the number of seconds in a minute and the number of days in each month, year and leap year</li> <li>• Compare durations of events</li> </ul>	<ul style="list-style-type: none"> <li>• Convert between different units of measure (e.g. Hours to minutes)</li> <li>• Read, write and convert time between analogue and digital 12- and 24-hour clocks</li> <li>• Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days</li> </ul>	<ul style="list-style-type: none"> <li>• Solve problems involving converting between units of time</li> </ul>	
<b>Shape &amp; Geometry</b>	<ul style="list-style-type: none"> <li>• Identify horizontal and vertical lines and pairs of perpendicular and parallel lines</li> <li>• Draw 2-D shapes</li> <li>• Make 3-D shapes using modelling materials</li> <li>• Recognise 3-D shapes in different orientations and describe them</li> <li>• Recognise angles as a property of shape or a description of a turn</li> <li>• Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn</li> <li>• Identify whether angles are greater or less than right angle</li> </ul>	<ul style="list-style-type: none"> <li>• Compare and classify geometric shapes, including quadrilaterals and triangles, based on properties and sizes</li> <li>• Identify lines of symmetry in 2-D shapes presented in different orientations</li> <li>• Complete a simple symmetric figure with respect to a specific line of symmetry</li> <li>• Identify acute and obtuse angles and compare and order angles up to two right angles by size</li> <li>• Describe positions on a 2-D grid as coordinates in the first quadrant</li> <li>• Describe movements between positions as translations of a given unit to the left/right and up/down</li> <li>• Plot specified points and draw sides to complete a given polygon</li> </ul>	<ul style="list-style-type: none"> <li>• Use the properties of rectangles to deduce related facts and find missing lengths and angles</li> <li>• Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</li> <li>• Identify 3-D shapes, including cubes and other cuboids, from 2-D representations</li> <li>• Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</li> <li>• Draw given angles, and measure them in degrees (°)</li> <li>• Identify angles at a point and one whole turn (total 360°); at a point on a straight line and ½ a turn (total 180°)</li> <li>• Identify other multiples of 90°</li> <li>• 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</li> </ul>	<ul style="list-style-type: none"> <li>• Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> <li>• Draw 2-D shapes using given dimensions and angles</li> <li>• Compare and classify geometric shapes based on their properties and sizes</li> <li>• Recognise, describe and build simple 3-D shapes, including making nets</li> <li>• Find unknown angles in any triangles, quadrilaterals, and regular polygons</li> <li>• Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li> <li>• Describe positions on the full coordinate grid (all four quadrants)</li> <li>• Draw and translate simple shapes on the coordinate plane, and reflect them in the axes</li> </ul>

<b>RTP criteria</b>	<ul style="list-style-type: none"> <li>• 3G-1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.</li> <li>• 3G-2 Draw polygons by joining marked points, and identify parallel and perpendicular sides.</li> </ul>	<ul style="list-style-type: none"> <li>• 4G-1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.</li> <li>• 4G-2 Identify regular polygons, including equilateral triangles and squares, as those in which the side lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.</li> <li>• 4G-3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.</li> </ul>	<ul style="list-style-type: none"> <li>• 5G-1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.</li> <li>• 5G-2 Compare areas and calculate the area of rectangles (including squares) using standard units.</li> </ul>	<ul style="list-style-type: none"> <li>• 6G-1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.</li> </ul>
<b>Statistics</b>	<ul style="list-style-type: none"> <li>• Interpret and present data using bar charts, pictograms and tables</li> <li>• Solve one-step and two-step questions [for example, ‘How many more?’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs</li> <li>• Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</li> </ul>	<ul style="list-style-type: none"> <li>• Complete, read and interpret information in tables, including timetables</li> <li>• Solve comparison, sum and difference problems using information presented in a line graph</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret and construct pie charts and line graphs</li> <li>• Calculate and interpret the mean as an average</li> <li>• Use pie charts and line graphs to solve problems</li> </ul>
<b>Mathematical Vocabulary</b>	<ul style="list-style-type: none"> <li>• Read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling</li> </ul>	<ul style="list-style-type: none"> <li>• Read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling</li> </ul>	<ul style="list-style-type: none"> <li>• Read, spell and pronounce mathematical vocabulary correctly</li> </ul>	<ul style="list-style-type: none"> <li>• Read, spell and pronounce mathematical vocabulary correctly</li> <li>• Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> </ul>