



St Joseph's Catholic Primary Voluntary Academy skills progression grid

Maths

Skill	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
Number and place value	Counting	<p>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</p> <p>Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens (also appears in Multiplication and division)</p> <p>Given a number, identify one more and one less</p>	<p>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</p> <p><i>Pupils should count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line (non statutory guidance) (copied from Fractions)</i></p> <p>Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (also appears in Multiplication and division)</p> <p>Find 10 more or less than a given number</p>	<p>Count backwards in 10s, 100s, and 1000s from different starting points</p> <p>Begin to introduce counting through zero to include negative numbers</p> <p>Count up and down in tenths (copied from Fractions)</p> <p>Count from 0 in multiples of 4, 8, 50 and 100; (also appears in Multiplication and division)</p> <p>Find 10 or 100 more or less than a given number</p>	<p>Count backwards through zero to include negative numbers (counting in various equal steps from a variety of starting points – positive and negative)</p> <p>Count up and down in tenths and hundredths (copied from Fractions)</p> <p>Count in multiples of 6, 7, 9, 25 and 1000 (also appears in Multiplication and division)</p> <p>Find 1000 more or less than a given number</p>	<p>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero</p> <p>Count up and down in tenths, hundredths and thousandths (copied from Fractions)</p> <p>Count forwards or backwards in steps of powers of 10 for any given number up to 1000 000 (also appears in Multiplication and division)</p>	<p>Use negative numbers in context, and calculate intervals across zero</p> <p>Count up and down in tenths, hundredths and thousandths (copied from Fractions)</p>
	Comparing numbers	<p>Use the language of: equal to, more than, less than, (fewer), most, least</p>	<p>Compare and order numbers from 0 up to 100; use <, > and = signs</p>	<p>Compare and order numbers up to 1000 use <, > and = signs</p>	<p>Order and compare numbers beyond 1000 use <, > and = signs</p> <p><i>Compare numbers with the same number of decimal places up to two decimal places (copied from Fractions)</i></p>	<p>Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</p> <p>Use <, > and = signs (appears also in Reading and Writing Numbers and understanding place value)</p>	<p>Read, write, order and compare numbers up to 10 000000 and determine the value of each digit</p> <p>Use <, > and = signs (appears also in Reading and Writing Numbers and understanding place value)</p>
	Identifying, representing and estimating number	<p>identify and represent numbers using objects and pictorial representations including the number line</p>	<p>identify, represent and estimate numbers using different representations, including the number line</p>	<p>Identify, represent and estimate numbers using different representations including the number line where appropriate</p>	<p>Identify, represent and estimate numbers using different representations including the number line where appropriate</p>	<p>Identify, represent and estimate numbers using different representations</p>	<p>identify, represent and estimate numbers using different representations</p>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Reading and writing numbers including Roman Numerals</p>	<p>Read and write numbers from 1 to 20 in numerals and words.</p>	<p>Read and write numbers to at least 100 in numerals and in words</p>	<p>Read and write numbers up to 1000 in numerals and in words</p> <p>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)</p>	<p>Read and write numbers up to 100,000 in numerals</p> <p>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.</p>	<p>Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Comparing Numbers and understanding place value)</p> <p>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</p>	<p>Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in comparing numbers and understanding place value)</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Understanding place value</p>		<p>Recognise the place value of each digit in a two-digit number (tens, ones)</p>	<p>Recognise the place value of each digit in a three-digit number (hundreds,tens, ones)</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 unit and tenths (not hundredths) (copied from Fractions)</p>	<p>Recognise the place value of each digit in a four-digit and five digit number (ten thousands thousands, hundreds, tens, and ones)</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 units, tenths and hundredths (copied from Fractions)</p>	<p>Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit(appears also in reading and writing numbers and comparing numbers)</p> <p>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (copied from Fractions)</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 (copied from Fractions)</p>	<p>read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in reading and writing numbers and comparing numbers)</p> <p>Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places (copied from Fractions)</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Number bonds</p>	<p>Represent & use number bonds & related subtraction facts within 20 (also appears in Algebra)</p>	<p>Recall & use addition & subtraction facts to 20 fluently, & derive & use related facts up to 100 (also appears in Algebra)</p>	<p>Recall & use addition & subtraction facts to 20 fluently & derive & use related facts up to 100 (also appears in Algebra)</p>	<p>Derive & use related facts up to 100 (also appears in Algebra)</p>		

Addition & subtraction

Mental calculation	<p>Add & subtract one-digit & two-digit numbers to 20, including zero</p>	<p>Add & subtract numbers using concrete objects, pictorial representations, & mentally, including:</p> <ul style="list-style-type: none"> • A two-digit number & ones • A two-digit number & tens • Two two-digit numbers • Adding three one-digit numbers 	<p>Add & subtract numbers mentally, including:</p> <ul style="list-style-type: none"> • A three-digit number & ones • A three-digit number & tens • A three-digit number & hundreds • Two two-digit numbers • Adding three one-digit numbers 	<p>Add & subtract numbers mentally, including:</p> <ul style="list-style-type: none"> • A three-digit number & two digit numbers • A three-digit number & a three digit number • Strings of single digit numbers 	<p>Add & subtract numbers mentally with increasingly large numbers</p>	<p>Perform mental calculations, including with mixed operations & large numbers</p>
	<p>Read, write & interpret mathematical statements involving addition (+), Subtraction (-) & equals (=) signs (appears also in written methods)</p>	<p>Show that addition of two numbers can be done in any order (commutative) & subtraction of one number from another cannot</p>	<p>Understand that addition & multiplication of two numbers can be done in any order (commutative) & subtraction of one number from another cannot</p>	<p>Understand that addition & multiplication of two numbers can be done in any order (commutative) & subtraction of one number from another cannot</p>	<p>Use their knowledge of the order of operations to carry out calculations involving the four Operations</p>	<p>Use their knowledge of the order of operations to carry out calculations involving the four Operations</p>
Written methods	<p>Read, write & interpret mathematical statements involving addition (+), subtraction (-) & equals (=) signs (appears also in Mental Calculation)</p>	<p>Add & subtract numbers with two digits using informal methods</p>	<p>Add & subtract numbers with up to three digits using formal written methods of columnar addition & subtraction</p>	<p>Add & subtract numbers with up to 4 digits using the formal written methods of columnar addition & subtraction where appropriate</p>	<p>Add & subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition & subtraction)</p>	<p>Add & subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition & subtraction)</p>
Inverse operations, estimating & checking answers		<p>Recognise & use the inverse relationship between addition & subtraction & use this to check calculations & solve missing number problems (also appears in Algebra)</p>	<p>Estimate the answer to a calculation & use inverse operations to check answers (also appears in multiplication & division)</p>	<p>Estimate & use inverse operations to check answers to a calculation (also appears in multiplication & division)</p>	<p>Use rounding to check answers to calculations & determine, in the context of a problem, levels of accuracy</p> <p>Estimate & use inverse operations to check answers to a calculation (also appears in multiplication & division)</p>	<p>Use estimation to check answers to calculations & determine, in the context of a problem, levels of accuracy. (also appears in multiplication & division)</p>

Algebra	Problem solving	<p>Solve one-step problems that involve addition & subtraction, using concrete objects & pictorial representations, & missing number problems such as $7 = \square - 9$ (also appears in Algebra)</p>	<p>Solve problems with addition & subtraction:</p> <ul style="list-style-type: none"> Using concrete objects & pictorial representations, including those involving numbers, quantities & measures Applying their increasing knowledge of mental & written methods solve simple problems in a practical context involving addition & subtraction of money of the same unit, including giving change (copied from measurement) 	<p>Solve problems, including missing number problems, using number facts, place value, & more complex addition & subtraction (also appears in Algebra)</p>	<p>Solve addition & subtraction two-step problems in contexts, deciding which operations & methods to use & why</p> <p>Solve problems, including missing number problems, using number facts, place value, & more complex addition & subtraction (also appears in Algebra)</p>	<p>Solve addition & subtraction multi-step problems in contexts, deciding which operations & methods to use & why</p> <p>Solve problems involving addition, subtraction, multiplication & division</p>
	Equations	<p>Solve one-step problems that involve addition & subtraction, using concrete objects & pictorial representations, & missing number problems such as $7 = \square - 9$ (Copied from addition & subtraction)</p> <p>Represent & use number bonds & related subtraction facts within 20 (Copied from addition & subtraction)</p>	<p>Recognise & use the inverse relationship between addition & subtraction & use this to check calculations & missing number problems. (Copied from addition & subtraction)</p> <p>Recall & use addition & subtraction facts to 20 fluently, & derive & use related facts up to 10 (Copied from addition & subtraction)</p>	<p>Solve problems, including missing number problems, using number facts, place value, & more complex addition & subtraction. (Copied from addition & subtraction)</p> <p>Solve problems, including missing number problems, involving multiplication & division, including positive integer scaling problems & correspondence problems in which n objects are connected to m objects (Copied from addition & subtraction)</p> <p>Recall & use addition & subtraction facts to 20 fluently, & derive & use related facts up to 100 (Copied from addition & subtraction)</p>	<p>Solve problems, including missing number problems, using number facts, place value, & more complex addition & subtraction (Copied from addition & subtraction)</p> <p>Solve problems involving Multiplying & adding, including using the distributive law to multiply Two digit numbers by one digit, integer scaling problems & harder Correspondence problems such as n objects are connected to m objects (copied from multiplication & division)</p> <p>Derive & use related facts up to 100 (Copied from addition & subtraction)</p>	<p>Use the properties of rectangles to deduce related facts & find missing lengths & angles (copied from Geometry: Properties of shapes)</p>

Formulae				Perimeter can be expressed algebraically as $2(a + b)$ where a & b are the dimensions in the same unit. (Copied from NSG measurement)	Perimeter can be expressed algebraically as $2(a + b)$ where a & b are the dimensions in the same unit. (Copied from NSG measurement)	Use simple formulae
	Sequences	Sequence events in chronological order using language such as: before & after, next, first, today, yesterday, tomorrow, morning, afternoon & evening (copied from Measurement)	Compare & sequence intervals of time (copied from Measurement)			Generate & describe linear number sequences

Fractions including decimals & Counting fractional steps		Pupils should count in fractions up to 10, starting from any number & using the $\frac{1}{2}$ & $\frac{2}{4}$ equivalence on the number line (Non Statutory Guidance) (repeated in number & place value)	Count up & down in tenths (repeated in number & place value)	Count up & down in tenths & hundredths (repeated in number & place value)	Count up & down in tenths, hundredths & thousandths (repeated in number & place value)	Count up & down in tenths, hundredths & thousandths (repeated in number & place value)
	Recognising fractions	Recognise, find & name a half as one of two equal parts of an object, shape or quantity Recognise, find & name a quarter as one of four equal parts of an object, shape or quantity	Recognise, find, name & write fractions of a length, shape, set of objects or quantity	Recognise, find & write fractions of a discrete set of objects: unit fractions & non-unit fractions with small denominators Recognise that tenths arise from dividing an object into 10 equal parts & in dividing one – digit numbers or quantities by 10. Recognise & use fractions as numbers: unit fractions & non-unit fractions with small denominators	Recognise that hundredths arise when dividing an object by one hundred & dividing tenths by ten	Recognise & use thousandths & relate them to tenths, hundredths & decimal equivalents (appears also in Equivalence)

Comparing fractions			Compare & order unit fractions, & fractions with the same denominators	Compare & order unit fractions, & fractions with the same denominators	Compare & order fractions whose denominators are all multiples of the same	Compare & order fractions, including fractions > 1
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Geometry: Position & directionometry	Position, direction & movement	Describe position, direction & movement, including half, quarter & three-quarter turns.	Use mathematical vocabulary to describe position, direction & movement including movement in a straight line & distinguishing between rotation as a turn & in terms of right angles for quarter, half & three-quarter turns (clockwise & anti-clockwise)	Use mathematical vocabulary to describe position, direction & movement including movement in a straight line & distinguishing between rotation as a turn & in terms of right angles for quarter, half & three-quarter turns (clockwise & anti-clockwise)	Describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions as translations of a given unit to the left/right & up/down Plot specified points & draw sides to complete a given polygon	Identify, describe & represent the position of a shape following a reflection or translation, using the appropriate language, & know that the shape has not changed Describe positions on a 2-D grid as coordinates in the first & second? quadrant Plot specified points & draw sides to complete a given polygon	Describe positions on the full coordinate grid (all four quadrants) Draw & translate simple shapes on the coordinate plane, & reflect them in the axes.
	Geometry: Properties of shapes	Identifying shapes and their properties	Recognise & name common 2-D & 3-D shapes, including: <ul style="list-style-type: none"> 2-D shapes [e.g. rectangles (including squares), circles & triangles] 3-D shapes [e.g. cuboids (including cubes), pyramids & spheres]. 	Identify & describe the properties of 2-D shapes, including the number of sides & line symmetry in a vertical line Identify & describe the properties of 3-D shapes, including the number of edges, vertices & faces Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder & a triangle on a pyramid]	Identify & describe the properties of 2-D shapes, including the number of sides & line symmetry in a vertical line Identify & describe the properties of 3-D shapes, including the number of edges, vertices & faces Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder & a triangle on a pyramid]	Identify lines of symmetry in 2-D shapes presented in different orientations	Identify 3-D shapes, including cubes & other cuboids, from 2-D representations

Geometry: Properties of shapes	Drawing and construction		Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Complete a simple symmetric figure with respect to a specific line of symmetry	Draw given angles, and measure them in degrees ° ()	Draw 2-D shapes using given dimensions and angles Recognise, describe and build simple 3-D shapes, including making nets (appears also in Identifying Shapes and Their Properties)
	Comparing and classifying	Compare and sort common 2-D and 3-D shapes and everyday objects	Compare and sort common 2-D and 3-D shapes and everyday objects	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	Use the properties of rectangles to deduce related facts and find missing lengths and angles (also appears in Algebra) Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons