

Year 3

Assessment criteria for mathematics

Learning Objective		Key milestone indicator(s)	Introduction	Independence	Application/Mastery
To know and use numbers	Counting	I can count in multiples of 4, 8, 50 and 100	With concrete objects, I can count in multiples of 2, 5 and 100	I can count in multiples of 2, 3, 5, 50 and 100	I can count in multiples of 2 to 5, 8, 50 and 100
	Representing	I can identify, represent and estimate numbers using different representations	With support, I can represent numbers as a collection of ones, groups of 10 and groups of 100 With support, estimation is attempted	Generally, I can represent groups of numbers pictorially and in writing in groups of ones, 10s and 100s Generally my estimation is accurate	I can independently represent numbers in a variety of written and pictorial forms I can estimate accurately and justify why
	Comparing	I can order numbers up to 1,000	With the support of a teacher, I can order numbers up to 1,000 With support, I am beginning to understand the place value of each digit	With reminders, I can order numbers up to 1,000 and understand the place value of each digit	I can independently order numbers past 1,000 and I understand the place value of each digit of a 4 digit number I can use place value to make approximations
	Place value	I know the place value of each digit in a 3-digit number	With reminders, I know the place value of each digit in a 2-digit number	With reminders, I know the place value of each digit in a 3-digit number	I know the place value of each digit in a 3-digit number I know the value of one decimal place, e.g. in the number 132.7 the number 7 is understood as 7/10ths
To add and subtract	Checking	I can estimate and use inverse to check an answer to a calculation	When help or structure is provided, I can use the inverse operation to check an answer	Generally, during problem solving, I can check my work and make corrections Generally, I can use inverse operation to find missing numbers and to check answers to a calculation	During problem solving, I can independently check my work and make corrections I can use inverse operation to find missing numbers and to check answers to a calculation
	Using number facts	I can solve two-step addition and subtraction problems in context, deciding which operations and methods to use and why	I have an awareness of how to solve two-step problems using number facts and place value With the support of a teacher, I can	Generally, I can tackle and solve two-step number problems, including missing number problems, using number facts, place value, addition and	Independently, I can tackle and solve two-step number problems, including missing number problems and balancing equations, using more complex addition and subtraction

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			solve simple missing number problems using number facts and place value	subtraction	
	Methods	I can add and subtract numbers with up to 3-digits using the formal written method of column addition and subtraction where appropriate	With support from a teacher, I can use the formal written method to add and subtract numbers up to 3 digits	Generally, I can use the formal written method to add and subtract numbers up to 3 digits	Independently, I can use the formal written method to add and subtract numbers up to 3 digits
		I can add and subtract numbers mentally, including: — a 3-digits number and ones — a 3-digits number and tens — a 3-digits number and hundreds	With prompts, I can mentally add and subtract a 3-digit number to a 1-digit number	I can mentally add and subtract 3-digit numbers and ones, and 3-digit numbers and tens; <i>Reminders may be needed to address mistakes</i> With prompts, I can mentally add and subtract 3-digit numbers and hundreds	I can mentally add and subtract 3-digit numbers and ones, 3-digit numbers and tens, and 3-digit numbers and hundreds <i>at speed</i> Generally, I can mentally add and subtract 4-digit numbers and ones, tens and hundreds
To multiple and divide	Checking	I understand the inverse operation between multiplication and division and can use this to check calculations and solve missing number problems	I have a developing understanding of the inverse operation between multiplication and division With the support of a teacher, I can use this to solve problems and sometimes check calculations With support, I can find division facts from a known multiplication fact	I recognise the inverse operation between multiplication and division With some support, I can use this to solve problems and check calculations I can find division facts from a known multiplication fact	I can independently use the inverse operation to check calculations and solve problems
		Complexity	I can 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	Using pictorial representations, concrete objects, and at times the support of a teacher, I can solve simple multiplication and division problems	Generally, I can solve simple problems involving integer scaling and correspondence
	Using multiplication and division facts	I know my 3, 4 and 8 times tables and the corresponding division facts	Generally, I can recall my 2, 5 and 10 times tables With support, I can recall my 3 and 4 times tables; I am beginning to recall the corresponding division facts	I can recall my 2, 3, 4, 5 and 10 times tables, and the corresponding division facts, at speed Generally and with a few reminders, I can recall my 8 times	I can recall my 3, 4 and 8 times tables and the corresponding division facts with speed I can answer multiplication and division questions involving multiples of 10, 100 and 1,000 by using my

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				table and corresponding division facts	times table knowledge, e.g. $6 \times 6 = 36$ so $60 \times 6 = 360$
To use fractions	Solving problems	I can add and subtract fractions with the same denominator within one whole	With concrete objects and pictorial representations, I can add and subtract fractions with the same denominator within one whole, e.g. $2/7 + 3/7 = 5/7$	With reminders of processes, I can add and subtract fractions with the same denominator within one whole	I can independently add and subtract fractions with the same denominator within one whole
	Recognising fractions	I can recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	With concrete objects and pictorial images, and the support of a teacher, I can find a $1/2$, $1/3$ and $1/4$ of a discrete set of objects	With reminders, I can recognise and find a $1/2$, $1/3$, $1/4$ and $1/5$ of a discrete set of objects With support, I can recognise and find non-unit fractions, e.g. $2/3$	I can independently find fractions of a discrete set of objects I can identify non-unit fractions of a discrete set of objects
		I can count up and down in tenths; I recognise that tenths arise from dividing an object into 10 equal parts and from dividing 1-digit numbers or quantities by 10	Within the context of counting money and measures, I have an emerging understanding that tenths arise from dividing a measure into 10 equal parts and from dividing 1-digit numbers or quantities by 10	Generally, I can use the metric measurement system to count in tenths and to explain that tenths arise from dividing a measure into 10 equal parts	I can independently divide 1-digit numbers or quantities by 10
		I can order unit fractions and fractions with the same denominators	With the support of a teacher, along with pictorial representations, I can order unit fractions and fractions with the same denominators	Generally, I can order unit fractions and fractions with the same denominators	I can independently compare and order unit fractions and fractions with the same denominators Generally, I can correctly order non-unit fractions
	Equivalence	I can recognise and show, using diagrams, equivalent fractions with small denominators	When concrete objects, pictorial representations and the support of a teacher are provided, I can recognise the equivalence of $2/4$ and $1/2$	I can recognise the equivalence of $2/4$ and $1/2$ as a decimal or a percentage	I can recognise the equivalence of $2/4$, $1/2$ and harder fractions, such as $1/3$, $2/3$, $1/5$ etc., without prompts
To understand the properties of shape		I can draw 2D shapes and make 3D shapes using modelling materials; I can recognise and describe 3D shapes in different orientations	With guidance, I can draw 2D shapes and make 3D shapes using modelling materials I can describe basic properties of a shape, e.g. number of sides, lines of symmetry	Generally, I can draw 2D shapes and make 3D shapes using modelling materials I can recognise 3D shapes in different orientations	Without support, I can draw 2D shapes and make 3D shapes using modelling materials; I can recognise and describe 3D shapes in different orientations
		I recognise angles as a property of a	With support, I recognise a turn of	Generally, I can describe angles as	I can describe angles as a property of

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		shape or a description of a turn	90°	a property of a shape or a description of a turn, including 90° and 180° turns	a shape or a description of a turn, including 90°, 180°, 270° and 360° turns
		I recognise that 2 right angles make a half turn, three make a 3/4 turn and four make a complete turn; I can identify whether angles are greater than or less than a right angle	With support, I can identify right angles and angles that are greater than or less than a right angle	Generally, I can identify right angles, obtuse angles and acute angles and use the correct terminology I can identify right-angled and equilateral triangles. When reminders are given, I can identify isosceles and scalene triangles	I can independently correctly identify right angles, obtuse angles, acute angles and reflex angles and use the correct terminology I can identify angles as a measure of a turn; I have a secure understanding that 180° (two right angles) is a half turn, 270° (three right angles) is a three quarters turn and that 360° (four right angles) is a whole turn
		I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines	I can correctly identify horizontal and vertical lines	I can independently identify horizontal and vertical lines and generally, I can correctly identify pairs of perpendicular and parallel lines	I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines independently and correctly
To describe position, direction and movement		I recognise angles as a property of a shape and as an amount of rotation	With the support of a teacher, I recognise angles as a property of a shape With support, I can relate 90° and 180° rotations to 1/4 and 1/2 turns	I recognise angles as a property of a shape and as an amount of rotation	Independently, I recognise angles as a property of a shape and as an amount of rotation
To use measures		I can measure, compare, add and subtract: lengths/heights (m/cm/mm); mass/volume (kg/g); volume/capacity (l/ml)	With support, I can take and record measurements with support and practical apparatus, I can add and subtract measurements	Generally, I understand measurement scales and can take and record measurements Generally, I can add and subtract a series of measurements	Independently, I can take and record a wide range of measurements I can independently solve problems involving the addition and subtraction of measurements
		I can measure the perimeter of simple 2D shapes	I am beginning to understand the terms area and perimeter with support, I can measure the perimeter of simple 2D shapes in cm and m	Generally, I understand and can correctly use the terminology of area and perimeter I can measure the perimeter of a rectilinear shape in cm and m	<i>The terminology of area and perimeter is secure and used to calculate accurately</i>
		I can add and subtract amounts of money to give change (£ and p)	With the support of a teacher, and with practical apparatus, I can add	Generally, I can add and subtract amounts of money to give change	I can confidently and correctly add and subtract amounts of money to

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			and subtract amounts of money to give change within £1		give change
		I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	With support, I can tell the time from an analogue clock	With support, I can tell the time from an analogue clock, and between 12-hour and 24-hour clocks	Without support, I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
		I can estimate and read time with increasing accuracy to the nearest minute; I can record and compare time in terms of seconds, minutes and hours; I can use appropriate vocabulary	With the support of a teacher, I can read a 12 hour clock and estimate time duration within the hour	Generally, I can estimate time to the nearest minute, five minutes, quarter, half and three quarters of an hour I can compare and record time and use the correct vocabulary: hours, minutes, seconds, etc.	Generally, I can estimate time to the nearest minute, five minutes, quarter, half and three quarters of an hour
		I know the number of seconds in a minute and the number of days in each month, year and leap year; I can compare durations of events	With support, I can remember the number of seconds in a minute and the number of days in a year.	I can remember the number of seconds in a minute and the number of days in each month, year and leap year, with prompts when necessary	I can independently remember the number of seconds in a minute and the number of days in each month, year and leap year
To use statistics		I can interpret and present data using bar charts, pictograms and tables	With the support of a teacher, I can construct and interpret pictograms, tally charts, block diagrams and simple tables	Generally, I can interpret and present data using bar charts, pictograms, tables Venn diagrams and Carroll diagrams	I can interpret and present data using bar charts, pictograms, tables, Venn diagrams and Carroll diagrams, without support
		I can solve one-step and two-step questions (e.g. 'How many more?' and 'How many fewer?') using information presented in scaled bar charts, pictograms and tables	I understand the terminology of many more and many fewer	I can solve one-step and two-step questions (e.g. 'How many more?' and 'How many fewer?') using information presented in scaled bar charts, pictograms and tables	I understand the terminology of many more and many fewer
		I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	With support, I can ask and answer questions about totalling and comparing categorical data	When reminders are provided, I can make the most appropriate choice as to how to present and collect data I have a developing understanding of the difference between discrete and continuous	I have a secure understanding of the difference between discrete and continuous data (<i>discrete data is counted; continuous data is measured</i>) I can accurately present and interpret discrete and continuous

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				data	data using appropriate graphical methods I can independently choose the most appropriate graphical methods
		I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	Generally, I can ask questions about information gathered for other children to answer	Generally, I can present and interpret discrete and continuous data using appropriate graphical methods	I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
To use algebra		I can solve addition and subtraction, multiplication and division problems that involve missing numbers	With the support of a teacher and by using concrete objects and pictorial representations, I can solve simple addition, subtraction, multiplication and division problems When support is provided, I can access problems involving missing numbers	Generally, I can correctly solve multiplication and division problems, including missing number problems, by applying an understanding to a variety of routine and non-routine problems When solving problems I look for patterns in results	I can solve multiplication and division problems, including missing number problems, by applying my understanding to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions