

## Year 1 Learning and Progression Steps for Mathematics

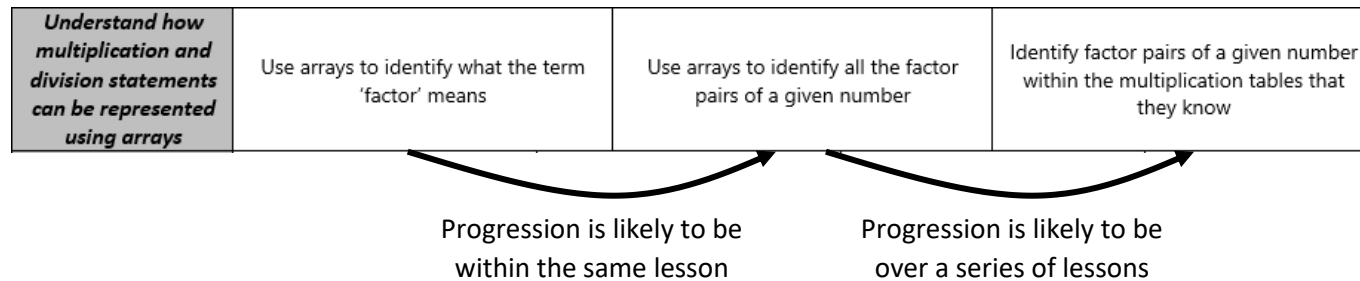
### What are Learning and Progression Steps (LAPS)?

The Learning and Progression Steps are designed to scaffold the learning required in order to meet the expectations of the National Curriculum. Statements in the Lancashire Key Learning for Mathematics document have been broken down into smaller steps to support teachers in planning appropriate learning opportunities. These key pieces of learning will support pupils in becoming fluent in the knowledge and skills of the curriculum and ensure that the learning is effective and sustained.

The number of steps is dependent on the learning and do **not** constitute expectations for the end of each term.

The final step in the progression for each strand of learning is the end of year expectation.

The steps are **not** of equal size and different amounts of time may be required for children to move between individual steps. For example,



Some learning within the same end of year expectation has been split and designed to run concurrently alongside each other. For example,

<b>Read and write numbers up to 1000 in numerals and in words</b>	Read multiples of 1000 to 10 000 in numerals and in words	Read multiples of 100 to 10 000 in numerals and in words	Read numbers to 10 000 where 0 is not used as a place holder	Read numbers to 10 000 where 0 is used as a place holder	<b>Read and write numbers to at least 10 000</b>
	Write multiples of 1000 to 10 000 in numerals and in words	Write multiples of 100 to 10 000 in numerals and in words	Write numbers to 10 000 where 0 is not used as a place holder	Write numbers to 10 000 where 0 is used as a place holder	

Some LAPS may need to be completed before another can be started.

### Where have they come from?

The Learning and Progression Steps (LAPS) have been derived from the Lancashire Key Learning in Mathematics statements, identified primarily from the National Curriculum 2014 programmes of study.

### How are they different from the Key Learning Statements?

The Learning and Progression Steps (LAPS) are smaller, progressive steps which support learning towards the Key Learning in Mathematics expectations.

### **How are they different from the Key Learning Indicators of Performance (KLIPs)?**

The Key Learning Indicators of Performance (KLIPs) document is an assessment tool. The Learning and Progression Steps (LAPS) document is a planning tool and is not intended to be used for summative assessment purposes. However, they may support teachers in judging whether children are on track to meet the end of year expectations at different points throughout the year.

The terms 'entering', 'developing' and 'secure' are used in Lancashire's assessment approach, KLIPs, as summative judgements in relation to age related expectations. Definitions for these terms can be found in the introduction to the KLIPs document.

### **How might Learning and Progression Steps (LAPS) in Mathematics be useful?**

Learning and Progression Steps (LAPS) may be used in a number of ways. For whole class teaching, LAPS may be used to support differentiation. When planning, it may be appropriate to use LAPS statements to inform learning objectives for a session or number of sessions. Learning and Progression Steps (LAPS) in Mathematics should be selected according to the learning needs of the individual or group. Emphasis however, should always be on developing breadth and depth of learning to ensure skills, knowledge and understanding are sufficiently embedded before moving on.

The LAPS should **not** be used as an assessment tool, but they can inform teachers about children's progress towards the end of year expectations at the end of each term.

### **Are LAPS consistent with the other resources from the Lancashire Mathematics Team?**

Yes, the LAPS are related to the content of the Mathematics Planning Support Disc and also the Progression Towards Written Calculation Policies and the Progression in Mental Calculation Strategies.

These can be found on the website:

[www.lancsngfl.ac.uk/curriculum/primarymaths](http://www.lancsngfl.ac.uk/curriculum/primarymaths)


These Learning and Progression Steps (LAPS) are designed to show the necessary steps in learning to make effective and sustainable progress within a single year. They begin with the 'end of year' expectation from the previous year and build up to the 'end of year expectation' of the current year.

The number of steps is dependent on the learning and do **not** constitute expectations for the end of each term.

The steps are **not** of equal size and different amounts of time may be required for children to move between individual steps.

		Learning and Progression Statements						End of Year 1 expectation
		End of EYFS expectation						
<b>Number and Place Value</b>	<b>Count reliably with numbers from 1 to 20</b>	Count within 0 to 20 forwards and backwards from any number - understanding that 0 represents the value of an empty set and the number that is before one in the counting sequence	Count to at least 50 from 1 or 0 forwards and backwards (ensure that there is increased emphasis on the ability to count backwards)	Count to 100 from 1 or 0 forwards and backwards (ensure that there is increased emphasis on the ability to count backwards)	Count to 100 from any number forwards and backwards (ensure that there is increased emphasis on the ability to count backwards)	Count across 100 forwards and backwards to develop familiarity with the patterning of the number system (there is no need to go beyond 130 as this exemplifies the pattern adequately)	<b>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</b>	
	<b>Count reliably with numbers from 1 to 20</b>	Recite and know the sequence of counting in tens from zero paying particular attention to twenty, thirty and fifty whose names do not follow the root number	Recite and know the sequence of counting in fives from zero	Recite and know the sequence of counting in twos from zero	Count objects in twos (these will be more familiar numbers)	Count objects in fives	Count objects in tens	<b>Count in multiples of twos, fives and tens</b>
	<b>Recognise numbers from 1-20</b>	Read numbers to 20		Read 'tens' numbers to 100 and understand the difference between 'teens' numbers and multiples of tens, e.g. 18 and 80		Read numbers to 100		<b>Read and write numbers to 100 in numerals</b>
	<b>Read numbers from 1-20 in numerals</b>	Write numbers to 20		Write 'tens' numbers to 100 and understand the difference between 'teens' numbers and multiples of tens		Write numbers to 100		
	<b>Recognise numbers from 1-20</b>	Read numbers from 1 to 20 in numerals (as above)			Read number in words from 1 to 20			<b>Read and write numbers from 1 to 20 in numerals and words</b>
	<b>Read numbers from 1-20 in numerals</b>	Write numbers from 1 to 20 in numerals (as above)			Write number in words from 1 to 20			
NB (Number words are in the following phonics phases: <u>phase 2</u> : ten; <u>phase 3</u> : six; <u>phase 4</u> : three, seven, one; <u>phase 5</u> : five, nine, four, eight; <u>phase 6</u> : two. Numbers beyond 10, as polysyllabic words, come next)								

<b>No equivalent objective in EYFS</b>	Identify the value of ones in a two-digit number			Identify the value of tens in a two-digit number (e.g. three tens is thirty)			<b>Begin to recognise the place value of numbers beyond 20 (tens and ones)</b>
<b>No equivalent objective in EYFS</b>	Represent two-digit numbers using Unifix / bundles of straws by creating bundles of ten and ones	Represent two-digit numbers using base 10 equipment Use jottings to represent two-digit numbers	Correctly place a number from 1 to 20 on the number line with all numbers demarcated	Correctly place a number from 1 to 20 on the number line with partial demarcation (0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20)	Correctly place a number from 1 to 20 on the number line with partial demarcation (0, 5, 10, 15, 20)	Correctly place a number from 1 to 20 on the number line with start and end demarcation only (0, 20)	<b>Identify and represent numbers using objects and pictorial representations including the number line</b>
<b>Place the numbers 1 to 20 in order</b>	<i>Compare two groups of objects identifying which group has more, which has fewer, or if they are the same (equal to)</i>			<i>Compare three or more groups of objects identifying which group has most, which has least, or if they are the same (equal to)</i>			<b>Use the language of: equal to, more than, less than (fewer), most, least</b>
<b>Say the number which is one more or one less than a given number (within 20)</b>	<i>Using concrete materials, add one to the group to identify one more</i>		<i>Using concrete materials, remove one from the group to identify one fewer</i>		<i>Identify the number on a number track and identify that the one after is one more and the one before is one less</i>		<b>Given a number, identify one more and one less</b>
<b>Recognise, create and describe patterns</b>	<i>Recognise and create a repeating pattern using two numbers</i>		<i>Recognise and create a repeating pattern using three numbers</i>		<i>Recognise and create a repeating pattern using more than three numbers</i>		<b>Recognise and create repeating patterns with numbers</b>
<b>No equivalent objective in EYFS</b>	Using concrete materials, arrange an even amount into groups of two	Using concrete materials, arrange any amount into groups of two, sorting them into those that can be grouped exactly and those that have one left over	Identify that the numbers that are even are those used when counting in twos from zero and the rest are odd		Use counting in twos to identify which numbers are odd and which are even		<b>Identify odd and even numbers linked to counting in twos from 0 and 1</b>
<b>Solve problems</b>	<b><i>Children need frequent access to a range of contexts using the content from all of the above. See Using and Applying, Contextual Learning and Assessment sections from the Lancashire Mathematics Planning Disc.</i></b>						<b><i>Solve problems and practical problems involving all of the above</i></b>

	End of EYFS expectation	Learning and Progression Statements					End of Year 1 expectation	
Number – Addition and Subtraction	<i>These steps fit the Lancashire Progression Towards Written Calculation Policies and Progression in Mental Calculations Policies</i>							
	<p><b>Understand addition as combining two or more groups to make a larger group</b></p> <p><b>Understand subtraction as take away</b></p> <p><b>Begin to record number stories using number sentences</b></p>	<p>Use pictures and symbols to write mathematical statements involving addition (+), subtraction (-) and equals (=) signs when representing a simple problem, e.g.</p> <p></p>	<p>Read mathematical statements involving addition (+), subtraction (-) and equals (=) signs, including where the = sign is at the start of the calculation, e.g. <math>7 = 3 + 4</math></p>	<p>Interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs and model them using pictures or practical equipment, including where the = sign is at the start of the calculation, e.g. <math>7 = 3 + 4</math></p>	<p>Write mathematical statements involving addition (+), subtraction (-) and equals (=) signs when representing a simple problem, e.g. <math>5 + 4 = 9</math>, including where the = sign is at the start of the calculation, e.g. <math>7 = 3 + 4</math></p>	<p><b>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</b></p>		
	<p><b>Know number bonds to 10</b></p>	<p>Use concrete materials, such as ten frames, to represent addition facts for ten</p>	<p>Use concrete materials, e.g. multilink to explore the relationship between addition and subtraction number sentences</p>	<p>Use concrete materials, such as ten frames, to represent subtraction facts from ten</p>	<p>Use concrete materials, such as ten frames, to represent addition facts for twenty</p>	<p>Use concrete materials, e.g. multilink to explore the relationship between addition and subtraction number sentences for 20</p>	<p>Use concrete materials, such as ten frames, to represent subtraction facts from twenty</p>	<p><b>Represent and use number bonds and related subtraction facts within 20</b></p>
	<p><b>Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer</b></p>	<p>Add two single digit numbers using concrete materials or pictures and a counting all method</p>		<p>Add two single digit numbers using concrete materials or pictures and a counting on method</p>		<p>Add a one- and two-digit number using an appropriate strategy</p>		<p><b>Add and subtract one-digit and two-digit numbers to 20, including zero (using concrete objects and pictorial representations)</b></p>
<p>Subtract a one-digit number from another using concrete materials or pictures and a taking away method</p>			<p>Subtract a one-digit from a two-digit number using an appropriate strategy</p>					
<p><b>Solve problems</b></p>	<p>Solve one-step problems involving addition</p>	<p>Solve one-step problems involving subtraction</p>	<p>Identify whether one-step problems are addition or subtraction and solve accordingly</p>	<p>Use concrete materials to create linked calculations, e.g.</p> <p><math>3 + 4 = 7</math>, <math>4 + 3 = 7</math>,  <math>7 = 3 + 4</math>, <math>7 = 4 + 3</math>  <math>7 - 3 = 4</math>, <math>7 - 4 = 3</math>  <math>4 = 7 - 3</math>, <math>3 = 7 - 4</math></p>	<p>Use concrete materials to solve a missing number problem where a digit is given first, e.g.</p> <p><math>3 + \square = 7</math> (and <math>7 = 3 + \square</math>),  <math>7 - \square = 3</math> (and <math>3 = 7 - \square</math>)</p>	<p>Use concrete materials to solve a missing number where a digit may not be given first, e.g.</p> <p><math>\square + 3 = 7</math> (and <math>7 = \square + 3</math>),  <math>\square - 4 = 3</math> (and <math>3 = \square - 4</math>)</p>	<p><b>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 = \square - 9</math></b></p>	

Number – Multiplication and Division	End of EYFS expectation	Learning and Progression Statements					End of Year 1 expectation
	<p><i>Understand that doubling is adding the same number to itself and that it is multiplying by 2</i></p> <p><i>Understand that halving is sharing into two equal portions and that this is dividing by 2</i></p>	Use concrete materials to model doubles as adding the same number to itself	Recall doubles for one to five	Recall doubles for six to ten	Use concrete materials to model halves as splitting a group into two equal parts	Recall halves for even numbers to ten using finger patterns to support if required	Recall halves for even numbers from 12 to 20
Solve problems involving doubling, halving and sharing	<p><i>Children need frequent access to a range of contexts using the content from all of the above.</i></p> <p><i>See Using and Applying, Contextual Learning and Assessment sections from the Lancashire Mathematics Planning Disc.</i></p>					Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	

Number – Fractions	End of EYFS expectation	Learning and Progression Statements				End of Year 1 expectation	
	<b>No equivalent objective in EYFS</b>	Use concrete materials e.g. chocolate bars or fruit to split the whole into different parts and recognise that each part is a fraction of the whole	Split 2-D shapes into different parts and recognise that each part is a fraction of the whole shape		Split quantities into different parts and recognise that each part is a fraction of the whole quantity		<b><i>Understand that a fraction can describe part of a whole</i></b>
	<b>No equivalent objective in EYFS</b>	Use concrete materials e.g. chocolate bars or fruit to split the whole into equal parts and recognise that each part is a unit fraction of the whole e.g. when a chocolate bar is split into three equal parts each part is one third of the whole bar	Split 2-D shapes into equal parts and recognise that each part is a unit fraction of the whole shape		Split quantities into equal parts and recognise that each part is a unit fraction of the whole quantity		<b><i>Understand that a unit fraction represents one equal part of a whole</i></b>
	<b><i>Understand that halving is sharing into two equal portions and that this is dividing by 2</i></b>	Recognise and name a half as one of two equal parts of a shape	Recognise and name a half as one of two equal parts of an object (using objects that can be accurately halved e.g. a KitKat)	Recognise and name a half as one of two equal parts of an even quantity	Recognise and name a half as one of two equal parts of an odd quantity		<b>Recognise, find and name a half as one of two equal parts of an object, shape or quantity (<i>including measure</i>)</b>
		Find a half of a shape	Find a half of an object (using objects that can be accurately halved e.g. a KitKat)	Find a half of an even quantity	Find half of an odd quantity using materials that can be cut e.g. grapes or buns		
<b>No equivalent objective in EYFS</b>	Recognise and name a quarter as one of four equal parts of a shape	Recognise and name a quarter as one of four equal parts of an object (using objects that can be accurately quartered e.g. a KitKat)		Recognise and name a quarter as one of four equal parts of a quantity (which is a multiple of 4)		<b>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (<i>including measure</i>)</b>	
	Find a quarter of a shape	Find a quarter of an object (using objects that can be accurately quartered e.g. a KitKat)		Find a quarter of a quantity (which is a multiple of 4)			

Geometry – Properties of Shapes	End of EYFS expectation	Learning and Progression Statements		End of Year 1 expectation
	Begin to use mathematical names for 'flat' 2-D shapes, and mathematical terms to describe shapes  Select a particular named 2-D shape	Name common 2-D shapes including when presented in different orientations	Identify common 2-D shapes from within a wider selection that includes a full range of shapes e.g. finding all the squares within a selection of quadrilaterals	
Begin to use mathematical names for 'solid' 3-D shapes, and mathematical terms to describe shapes  Select a particular named 3-D shape	Name common 3-D shapes including when presented in different orientations	Identify common 3-D shapes from within a wider selection that includes a full range of shapes e.g. finding all the cuboids within a selection of 3-D shapes		Recognise and name common 3-D shapes, including cuboids (including cubes), pyramids and spheres

Geometry – Position and Direction	End of EYFS expectation	Learning and Progression Statements			End of Year 1 expectation	
	No equivalent objective in EYFS	Describe turning movements for whole and half turns	Describe turning movements using left and right	Describe turning movements for quarter turns including using left and right	Describe turning movements for three-quarter turns including using left and right	Describe movement, including whole, half, quarter and three-quarter turns
	No equivalent objective in EYFS	Describe position using the terms top, middle and bottom	Describe position using the terms on top of, in front of, above, below, between, around, inside and outside	Describe position using the terms near, close and far	Describe position using the terms before, after and the ordinal numbers e.g. first, second, third...	Describe position and direction
		Describe direction using forwards and backwards	Describe direction using up and down	Describe direction using sideways, left and right		
Recognise, create and describe patterns	<i>Recognise and create a repeating pattern using two objects and shapes</i>	<i>Recognise and create a repeating pattern using three objects and shapes</i>	<i>Recognise and create a repeating pattern using more than three objects and shapes</i>	<i>Recognise and create repeating patterns with objects and shapes</i>		

End of EYFS expectation		Learning and Progression Statements				End of Year 1 expectation	
<b>Statistics</b>	<b>No equivalent objective in EYFS</b>	Identify criteria that different objects have in common e.g. these cars are all pink		Sort objects to a given criterion		Sort objects using their own criterion	
		Identify criteria that different shapes have in common e.g. these shapes all have three sides so are triangles		Sort shapes to a given criterion		Sort shapes using their own criterion	
		Identify criteria that different numbers have in common e.g. these numbers are all greater than 8		Sort numbers to a given criterion		Sort numbers using their own criterion	
	<b>No equivalent objective in EYFS</b>	Present data in block diagrams using concrete materials			Interpret data in block diagrams presented using concrete materials		<b><i>Present and interpret data in block diagrams using concrete materials</i></b>
	<b>No equivalent objective in EYFS</b>	Answer questions which ask 'How many...?' in a given data category	Ask questions such as 'How many...?' in a given data category		Answer questions which ask 'How many...?' in two given data categories	Ask questions such as 'How many...?' in two given data categories	<b><i>Ask and answer simple questions by counting the number of objects in each category</i></b>
<b>No equivalent objective in EYFS</b>	Use language of comparison to compare data categories e.g. more children have a pet cat than a pet dog		Answer questions which ask 'How many more...?' or 'How many fewer...?' when comparing two categories in a block diagram using concrete materials		Ask questions such as 'How many more...?' and 'How many fewer...?' when comparing two categories in a block diagram		<b><i>Ask and answer questions by comparing categorical data</i></b>

End of EYFS expectation		Learning and Progression Statements				End of Year 1 expectation
Use everyday language to talk about size, distance, weight, capacity and time	Measure and record lengths and heights using uniform non-standard units within children's range of counting competence		Measure and record lengths and heights using rulers and metre rules with manageable standard units (m/cm) within children's range of counting competence			<b>Measure and begin to record:</b> - lengths and heights, <i>using non-standard and then manageable standard units (m/cm)</i> - mass/weight, <i>using non-standard and then manageable standard units (kg/g)</i> - capacity and volume <i>using non-standard and then manageable standard units (litres/ml)</i> - time (hours/minutes/seconds) <i>within children's range of counting competence</i>
	Measure and record mass/weight using uniform non-standard units within children's range of counting competence	Measure and record mass/weight using balance scales with manageable standard units (kg/g) within children's range of counting competence		Measure and record mass/weight using weighing scales with a simple scale and manageable standard units (kg/g) within children's range of counting competence		
	Measure and record capacity and volume using uniform non-standard units within children's range of counting competence		Measure and record capacity and volume using measuring vessels with manageable standard units (litres/ml) within children's range of counting competence			
	Measure and record time using seconds	Measure and record time using minutes		Measure and record time using hours		
Use everyday language to compare quantities and objects	Describe a length using the language of long and short and a height using tall and short		Compare two lengths using the language of longer and shorter and a height using taller and shorter		Solve practical problems for length and height e.g. Which of these bags would I use to fit the cricket bat in?	
	Describe a mass/weight using the language of heavy and light		Compare two masses/weights using the language of heavier and lighter		Solve practical problems for mass/weight e.g. use the balance scales to find two boxes that will balance this one box	
	Describe a capacity or volume using the language of full, empty, half full, nearly full, nearly empty	Compare two capacities or volumes using the language of more and less including when different containers are used		Describe a capacity or volume using the language of more than half full, less than half full, a quarter full	Solve practical problems for capacity and volume e.g. which of these vessels would hold about two of these others?	
	Compare the duration of two events using the language of quicker and slower		Compare two events using the language of earlier and later		Solve practical problems for time e.g. describe a task that would take you about 1 minute to complete	
Use everyday language to talk about time	Know and use the days of the week and how many days there are in one week	Know and use the months of the year and how many months are in one year	Recognise and use the language related to dates e.g. today is Thursday 10 <sup>th</sup> September 2016		Know that two weeks is called a fortnight	
<b>Recognise and use language relating to dates, including days of the week, weeks, months and years</b>						

	<b>Use everyday language to talk about time</b>	Use language of before, after, next and first	Use language of morning, afternoon and evening	Use language of today, yesterday and tomorrow	<b>Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)</b>	
	<b>Use everyday language to talk about time</b>	Tell the time to the hour	Tell the time to the half hour recognising that the hour hand will not be exactly on the hour ( <i>NB – it will be exactly half way between the hour numbers</i> )	Draw the hands on a clock to show times to the hour	Draw the hands on a clock to show times to half past the hour recognising that the hour hand is between the hour numbers	<b>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times</b>
	<b>Use everyday language to talk about money</b>	Recognise 1p, 2p, 5p, 10p and 20p coins by colour, shape, size and/or numerals/words	Exchange a 2p, 5p, 10p and 20p coin for the correct number of 1p coins	Recognise and know the value of 50p, £1 and £2 coins by colour, shape, size and/or numerals/words	Recognise and know the value of £5, £10 and £20 notes	<b>Recognise and know the value of different denominations of coins and notes</b>