



Alumwell Infant School Maths Whole-School Curriculum Progression Map

EYFS National Curriculum Maths Goals

- Subitise (recognise quantities without counting) up to 5 Have a deep understanding of number to 10, including the composition of each number;
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity
- Verbally count beyond 20, recognising the pattern of the counting system Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

KS1 National Curriculum Maths Expectations

Working towards the expected standard

The pupil can:

- read and write numbers in numerals up to 100 • partition a two-digit number into tens and ones to demonstrate an understanding of place value, though they may use structured resources¹ to support them • add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required, explaining their method verbally, in pictures or using apparatus (e.g. $23 + 5$; $46 + 20$; $16 - 5$; $88 - 30$)
- recall at least four of the six² number bonds for 10 and reason about associated facts (e.g. $6 + 4 = 10$, therefore $4 + 6 = 10$ and $10 - 6 = 4$)
- count in twos, fives and tens from 0 and use this to solve problems
- know the value of different coins
- name some common 2-D and 3-D shapes from a group of shapes or from pictures of the shapes and describe some of their properties (e.g. triangles, rectangles, squares, circles, cuboids, cubes, pyramids and spheres). ¹ For example, base 10 apparatus. ² Key number

bonds to 10 are: $0+10$, $1+9$, $2+8$, $3+7$, $4+6$, $5+5$.

The Expected standards

The Pupils can:

The pupil can:

- read scales* in divisions of ones, twos, fives and tens
- partition any two-digit number into different combinations of tens and ones, explaining their thinking verbally, in pictures or using apparatus
- add and subtract any 2 two-digit numbers using an efficient strategy, explaining their method verbally, in pictures or using apparatus (e.g. $48 + 35$; $72 - 17$)
- recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships (e.g. If $7 + 3 = 10$ then $17 + 3 = 20$; if $7 - 3 = 4$ then $17 - 3 = 14$; leading to if $14 + 3 = 17$, then $3 + 14 = 17$, $17 - 14 = 3$ and $17 - 3 = 14$)
- recall multiplication and division facts for 2, 5 and 10 and use them to solve simple problems, demonstrating an understanding of commutativity as necessary
- identify $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{4}$, of a number or shape, and know that all parts must be equal parts of the whole
- use different coins to make the same amount
- read the time on a clock to the nearest 15 minutes
- name and describe properties of 2-D and 3-D shapes, including number of sides, vertices, edges, faces and lines of symmetry.

Working at greater depth

The pupil can:

- read scales* where not all numbers on the scale are given and estimate points in between
- recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts
- use reasoning about numbers and relationships to solve more complex problems and explain their thinking (e.g. $29 + 17 = 15 + 4 + \dots$; 'together Jack and Sam have £14. Jack has £2 more than Sam. How much money does Sam have?' etc)
- solve unfamiliar word problems that involve more than one step (e.g. 'which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?')

- read the time on a clock to the nearest 5 minutes
- describe similarities and differences of 2-D and 3-D shapes, using their properties (e.g. that two different 2-D shapes both have only one line of symmetry; that a cube and a cuboid have the same number of edges, faces and vertices, but different dimensions).

KS2

Year three programme of study

Number - number and place value

Pupils should be taught to: count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number recognise the place value of each digit in a 3-digit number (100s, 10s, 1s) compare and order numbers up to 1,000 identify, represent and estimate numbers using different representations read and write numbers up to 1,000 in numerals and in words solve number problems and practical problems involving these ideas

Number - addition and subtraction

Pupils should be taught to: add and subtract numbers mentally, including: a three-digit number and 1s a three-digit number and 10s a three-digit number and 100s add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

Number - multiplication and division

Pupils should be taught to: recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables 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 and progressing to formal written methods 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

Number - fractions

Pupils should be taught to: count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators recognise and show, using diagrams, equivalent fractions with small denominators add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] compare and order unit fractions, and fractions with the same denominators solve problems that involve all of the above

Measurement

Pupils should be taught to: measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) measure the perimeter of simple 2-D shapes add and subtract amounts of money to give change, using both £ and p in practical contexts tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks 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, am/pm, morning, afternoon, noon and midnight know the number of seconds in a minute and the number of days in each month, year and leap year compare durations of events [for example, to calculate the time taken by particular events or tasks]

Geometry - properties of shapes

Pupils should be taught to: draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them recognise angles as a property of shape or a description of a turn identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle identify horizontal and vertical lines and pairs of perpendicular and parallel lines

Statistics

Pupils should be taught to: interpret and present data using bar charts, pictograms and tables 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

Intent /Aim

At Alumwell Infant School we provide children with the foundations to become **fluent** in the fundamentals of mathematics using quality and consistency so that children make good progression across EYFS and key stage 1 building upon prior knowledge. We develop a positive attitude towards mathematics by creating an exciting and stimulating maths environment to learn concepts, knowledge and skills. We learn mathematical **vocabulary** and practice skills to discuss and explain thinking in maths so we can apply learning and challenge children through **reasoning** and **problem solving**.

Implementation

We begin learning concepts in Reception and build upon them in Year One and Two. We provide opportunity for children to become **fluent** through varied and frequent practice using a range of manipulative learning through a concrete, pictorial and abstract approach. We provide frequent opportunity to **reasoning** by challenging children's knowledge and understanding through questioning to provide opportunity to discuss, justify and prove and identify patterns and relationships. We also challenge children to **problems solve** by applying their mathematics to problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Impact

By providing a well organised and sequenced Curriculum children have consistent teaching and learning. Children are happy and engaged learners who can talk enthusiastically about their maths and welcome challenges. The emphasis on using the correct Mathematical **vocabulary** is encouraged and is evident when answering questions and discussing when **reasoning**. Children become **fluent** in Mathematical concepts and are able to apply their subject knowledge with increasing confidence and independency to problem **solving**.

	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance Non-Statutory Curriculum Guidance Teacher Assessment Framework		KS2 Statutory Curriculum Guidance Non-Statutory Curriculum Guidance
	Early Years	Year 1	Year 2	Year 3
Mathematical Vocabulary	To build up vocabulary that reflects the breadth of their experiences. To extend vocabulary, especially by grouping and naming, exploring the meaning and sounds of new words.	To read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at year 1.	To read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.	To read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

Number and Place Value Counting	To recite numbers in order to 10. To realise not only objects, but anything can be counted including steps, claps or jumps and sounds. To count up to three or four objects by saying one number name for each item. To count out up to six objects from a larger group. To count actions or objects which cannot be moved. To count objects to 10 and beginning to count beyond 10. To count an irregular arrangement of up to ten objects. To estimate how many objects they can see and check by counting them. To verbally count reliably with numbers from one to 20 and beyond. Recognise the pattern of the counting system.	To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. To identify one more and one less than a given number. <i>To count in multiples of twos, fives and tens from different multiples to develop their recognition of patterns in the number system, including varied and frequent practice through increasingly complex questions.</i> <i>To recognise and create repeating patterns with objects and with shapes.</i>	To count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.	<i>To continue to count in ones, tens and hundreds, so that pupils become fluent in the order and place value of numbers to 1000.</i> To count from 0 in multiples of 4, 8, 50 and 100.
--	--	---	--	---

Number and Place Value Identifying, Representing and Estimating Numbers	To say the number that is one more than a given number. To find one more or one less from a group of up to five objects, then ten objects. To say which number is one more or one less than a given number from one to 20.			
--	---	--	--	--

Reading and Writing Numbers	To show an interest in numerals in the environment. To use some number names accurately in play. To recognise some numerals of personal significance. To recognise numerals 1 to 5.	To read and write numbers from 1 to 20 in numerals and words. To count, read and write numbers to 100 in numerals.	To read and write numbers to at least 100 in numerals and in words.	To read and write numbers up to 1000 in numerals and in words.
-----------------------------	---	--	--	---

Compare and Order Numbers	To compare two groups of objects, saying when they have the same number. To use the language of 'more' and 'fewer' to compare two sets of objects to understand 'greater than' and 'less than' and 'same as' vocabulary To place numbers one to 20 in order.	To compare and order numbers from 0 up to 20 and beyond; use $<$, $>$ and $=$ signs.	To compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs.	To compare and order numbers up to 1000.
----------------------------------	---	--	--	---

Understanding Place Value	Have a deeper understanding of numbers within 10 by showing curiosity about numbers and offering comments or asking questions.	To recognise the place value of each digit in a two-digit number (tens, ones)	To recognise the place value of each digit in a two-digit number (tens, ones) to <i>become fluent and apply their knowledge of numbers to reason with, discuss and solve problems.</i> <i>To begin to understand zero as a place holder.</i>	To recognise the place value of each digit in a three-digit number (hundreds, tens, ones) and apply partitioning related to place value using varied and increasingly complex problems, building on work in year 2 (for example, $146 = 100 + 40$ and $6, 146 = 130 + 16$).
Solve Problems	To show an interest in number problems. To begin to identify own mathematical problems based on own interests and fascinations.	To practise ordinal numbers and solve simple concrete problems.	To use place value and number facts to solve related problems to develop fluency.	To solve number problems and practical problems involving these ideas.

Mental Calculations	To find the total of items in two groups by counting all of them. To begin to use the vocabulary involved in adding and subtracting in practical activities and discussion. To add and subtract two single-digit numbers and count on and back to find the answer using quantities and objects.	To add and subtract one-digit and two-digit numbers to 20, including zero. <i>To realise the effect of adding or subtracting zero.</i>	<i>To extend the language of addition and subtraction to include sum and difference.</i> To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. To add and subtract numbers using an efficient strategy, explaining their method verbally using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, add three one-digit numbers.	To add and subtract numbers mentally, including: two-digit numbers, where the answers could exceed 100, a three-digit number and ones, a three-digit number and tens and a three-digit number and hundreds.
---------------------	--	--	--	--

Number Bonds	Subitise (recognise quantities without counting) up to 5 Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10.	To <i>memorise</i>, represent and use number bonds and related subtraction facts within 20.	To recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships. To recall and use addition and subtraction facts to 20 <i>to become fluent in deriving associative facts</i> (e.g. $10 - 7 = 3$, $100 - 70 = 30$) and derive and use related facts up to 100.	
--------------	---	--	---	--

Written Calculations	To begin to understand vocabulary can be used as a symbol, takeaway, leaves (-) add and makes (+) and equal (=)	To read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	To begin to record addition and subtraction in columns to support place value and prepare for formal written methods with larger numbers.	To use the understanding of place value and partitioning to enable adding and subtracting numbers with up to three digits, using formal written methods of columnar addition and subtraction to become fluent.
Operations, Estimating, Mental Calculation			To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	To estimate the answer to a calculation and use inverse operations to check answers.
Solve Problems	To solve problems, including doubling, halving and sharing.	To discuss and solve one-step problems (in familiar practical contexts) that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems. Problems include the terms: put together, add, altogether, total, take away, distance between, difference between, more than and less than, so that pupils develop the concept of addition and subtraction and are enable to use these operations flexibly.	To solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods.	

Mental Calculations			<i>To begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations.</i> <i>To begin to relate multiplication and division facts to fractions and measures (e.g., $40 \div 2 = 20$, 20 is a half of 40).</i> <i>To show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot, to develop multiplicative reasoning.</i>	<i>To 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 efficient mental methods, for example, using commutativity and associativity, and progressing to formal reliable written methods of short multiplication and division.</i>
Multiplication and Division Facts	<i>Explore and represent patterns within numbers up to 10, including evens and odds, double facts</i>	<i>To make connections between arrays, number patterns, and counting in twos, fives and tens.</i> <i>Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities.</i>	<i>To use a variety of language to describe multiplication and division.</i> <i>To count from 0 in multiples of 4, 8, 50 and 100.</i> <i>To recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers and use them to solve simple problems, demonstrating an understanding of commutativity as necessary.</i> <i>To connect the 10 multiplication table to place value, and the 5 multiplication table to the divisions on the clock face.</i>	<i>To recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables when they are calculating mathematical statements in order to improve fluency.</i> <i>To connect the 2, 4 and 8 multiplication tables through doubling.</i>

Written Calculation			To calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals ($=$) signs. <i>To begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations.</i>	To 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 <i>efficient mental methods, for example, using commutativity and associativity</i>, and progressing to formal <i>reliable</i> written methods of <i>short multiplication and division</i>. (included in mental calculation section)
Solve Problems		To 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.	To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	To solve <i>simple</i> problems in contexts, deciding which of the four operations to use and why. These include missing number problems, involving multiplication and division, including <i>measuring</i> and positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Counting	Explore and represent patterns within numbers up to 10, and learn how quantities can be distributed equally.		<i>To count in fractions up to 10, starting from any number and using the $\frac{1}{2}$ and $\frac{2}{4}$ equivalence on the number line.</i>	To count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by ten.
----------	--	--	---	---

Recognising, Finding and Naming Fractions		To recognise, find and name a half as one of two equal parts of an object, shape or quantity <i>by solving problems.</i> To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity <i>by solving problems.</i> <i>To connect halves and quarters to the equal sharing and grouping of sets of objects and to measures, as well as recognising and combining halves and quarters as parts of a whole.</i>	To recognise, find, name, identify and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ of a length, number, shape, set of objects or quantity and know that all parts must be equal parts of the whole. <i>To connect unit fractions to equal sharing and grouping, to numbers when they can be calculated, and to measures, finding fractions of lengths, quantities, sets of objects or shapes. They meet $\frac{3}{4}$ as the first example of a non-unit fraction.</i>	<i>To understand the relation between unit fractions as operators (fractions of), and division by integers.</i> To recognise, <i>understand</i> and use fractions as numbers: unit fractions and non-unit fractions with small denominators as numbers on the number line (going beyond 0 -1 and relating this to measure), and deduce relations between them, such as size and equivalence. To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
Equivalence			To write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence $\frac{2}{4}$ and $\frac{1}{2}$.	To recognise and show, using diagrams, equivalent fractions with small denominators.

Describe, Measure, Compare and Solve (All Strands)	To order two or three items by length or height. To order two items by weight or capacity. To use everyday languages to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and solve problems.	To compare, describe and solve practical problems for: lengths and heights, mass/weight, capacity and volume, time. To measure and begin to record the following: lengths and heights, mass/weight, capacity and volume, time. To move from using and comparing different types of quantities and measures using non-standard units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units using measuring tools, such as a ruler, weighing scales and containers.	To choose and use appropriate standard units with increasing accuracy using their knowledge of the number system to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}\text{C}$); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. To use the appropriate language and record using standard abbreviations. To compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$. To compare measures including simple multiples such as 'half as high'; 'twice as wide'.	To measure using the appropriate tools and units, compare (including simple scaling by integers) add and subtract using mixed units: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).
--	--	--	--	---

Telling the Time	To use everyday language related to time. To order and sequence familiar events. To measure short periods of time in simple ways.	To sequence events in chronological order using language. To recognise and use language relating to dates, including days of the week, weeks, months and years. To tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	To <i>read</i>, tell and write the time to five minutes, including <i>quarter past/to the hour/half hour</i> and draw the hands on a clock face to show these times. <i>To become fluent in telling the time on analogue clocks and recording it.</i> To know the number of minutes in an hour and the number of hours in a day. To compare and sequence intervals of time.	To 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>To begin to use digital 12-hour clocks and record their times in preparation for using digital 24-hour clocks in year 4.</i> To estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours. To use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. To know the number of seconds in a minute and the number of days in each month, year and leap year. To compare durations of events.
-------------------------	--	--	---	---

Money	To begin to use everyday language related to money.	To recognise and know the value of different denominations of coins and notes.	To become fluent in counting and recognising coins. To recognise and use symbols for pounds (£) and pence (p) accurately, recording pounds and pence separately; combine amounts to make a particular value. To find and use different combinations of coins that equal the same amounts of money. To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	To become fluent in recognising the value of coins. To add and subtract manageable amounts of money, including mixed units, to give change, using both £ and p in practical contexts.
-------	---	--	---	---

Recognise 2D and 3D Shapes and Their Properties	To show an interest in shape and space by playing with shapes or making arrangements with objects. To show interest in shape by sustained construction activity or by talking about shapes or arrangements. To show interest in shapes in the environment. To use shapes appropriately for tasks. To begin to talk about shapes in everyday objects, e.g. 'round' and 'tall'. To begin to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical	To recognise, handle and name common 2D and 3D shapes in different orientations/sizes and relate everyday objects fluently. <i>To recognise that rectangles, triangles, cuboids and pyramids are not always similar to each other.</i>	<i>Pupils read and write names for shapes that are appropriate for their word reading and spelling.</i> To handle, identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line. To handle, identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. To identify 2D shapes on the surface of 3D shapes.	To describe the properties of 2D and 3D shapes using accurate language. To extend knowledge of the properties of shapes is extended at this stage to symmetrical and non-symmetrical polygon and polyhedron. To recognise 3D shapes in different orientations and describe them.
---	---	--	---	---

Compare and Classify Shapes	To show awareness of similarities of shapes in the environment.		To <i>identify</i> , compare and sort common 2D and 3D shapes and everyday objects <i>on the basis of their properties</i> and use vocabulary <i>precisely</i> .	
Drawing 2D Shapes and Constructing 3D Shapes			Pupils draw lines and shapes using a straight edge.	To connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts. To identify horizontal and vertical lines and pairs of perpendicular and parallel lines. To draw 2D shapes and make 3D shapes using modelling materials.

Position, Direction and Movement	To use positional language. To describe their relative position such as 'behind' or 'next to'.	To describe position, direction and movement, including whole, half, quarter and three-quarter turns <i>in both directions and connect clockwise with the movement on a clock face.</i> To use the language of position, direction and motion, including: <i>left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside.</i>	To use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise).	
Patterns	To use familiar objects and common shapes to create and recreate patterns and build models. To recognise, create and describe patterns.		To order and arrange combinations of mathematical objects and <i>shapes</i>, including those in different orientations, in patterns and sequences.	

Record, Present and Interpret Data	To record, using marks that they can interpret and explain.		To record, interpret, collate, organise and compare information. To interpret and construct simple pictograms, tally charts, block diagrams and simple tables (e.g. many-to-one correspondence in pictograms with simple ratios 2, 5, 10 scales). To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. To ask and answer questions about totalling and comparing categorical data.	To interpret and present data using bar charts, pictograms and tables and use simple scales with increasing accuracy.
------------------------------------	---	--	---	---