

# Maths

at Norton CP School

Developed directly from the national curriculum for mathematics, our school curriculum ensures that all pupils become fluent in the fundamentals of mathematics.

We include varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

We develop the skill of mathematical reasoning by teaching the concepts and mathematical language that are required.

We encourage children to solve problems by applying their mathematics to problems of increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions:

## Contents

Place Value.....	2
Number Facts.....	4
Addition/Subtraction .....	7
Multiplication/Division .....	9
Fractions.....	11
Measurement .....	14
Geometry – properties of shape.....	15
Geometry – position and direction.....	17
Statistics .....	18
Ratio and Proportion .....	19
Algebra .....	19

**Bold = New ready to progress criteria**

## Place Value

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
<p>Counting beyond 20- including multiples of 10.</p> <p><b>Verbally count beyond 20.</b></p> <p><b>Recognise quantities without counting – up to 5.</b></p> <p>Understand 1 more/ 1 less.</p> <p><b>Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.</b></p>	<p>Count to 100 Count in multiples of 2s, 5s and 10s</p> <p>Recognise place value, read, write and compare numbers to 20</p> <p>Find 1 more/ less</p> <p><b>Count within 100, forwards and backwards, starting with any number.</b></p>	<p>Count in 2, 3, 5, 10s</p> <p>Recognise place value, read, write and compare numbers to 100</p> <p>10 more/ less</p>	<p>Count in 4, 8, 50, 100</p> <p>Recognise place value, read, write and compare numbers to 1000</p> <p>100 more/ less</p> <p><b>Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work</b></p>	<p>Count in 6, 7, 9, 25, 1000</p> <p>Recognise place value, read, write and compare numbers beyond 1000</p> <p>1000 more/ less</p> <p>Round any number to the nearest 10, 100 or 1000.</p> <p>Roman numerals to 100.</p> <p><b>Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work</b></p>	<p>Powers of 10 for any number up to 1,000,000</p> <p>Recognise place value, read, write and compare numbers to 1,000,000</p> <p>Count forwards and backwards with positive and negative numbers.</p> <p>Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000, 100,000.</p> <p>Read Roman numerals to 1000 and recognise Roman numeral years.</p> <p><b>Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one,</b></p>	<p>Use the whole number system</p> <p>Recognise place value, read, write and compare numbers to 10,000,000</p> <p>Use negative numbers to calculate negative numbers across zero.</p> <p>Round any whole number to a required degree of accuracy.</p> <p><b>Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1</b></p>

Bold = New ready to progress criteria

			<p>out how many 10s there are in other three-digit multiples of 10. →</p> <p>Recognise the place value of each digit in three-digit numbers and compose and decompose three-digit numbers using standard and non-standard partitioning. →</p> <p>Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. →</p>	<p>out how many 100s there are in other four-digit multiples of 100. →</p> <p>Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning →</p> <p>Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to</p>	<p>and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. →</p> <p>Recognise the place value of each digit in numbers with up to 2 decimal places and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning. →</p> <p>Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1</p>	<p>hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).</p> <p>Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and nonstandard partitioning.</p> <p>Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.</p>
--	--	--	---	---	--	---

Bold = New ready to progress criteria

	→		<p>Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.</p> <p style="text-align: center;">→</p>	<p>the nearest of each.</p> <p style="text-align: center;">→</p> <p>Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.</p> <p style="text-align: center;">→</p>	<p>and rounding to the nearest of each. →</p> <p>Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. →</p> <p>Convert between units of measure, including using common decimals and fractions</p>	<p>Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.</p>
--	---	--	--	---	--	--

## Number Facts

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
------	----------	----------	------------	-----------	-----------	----------

Bold = New ready to progress criteria

<p>Automatically recall number bonds to 5 including subtraction facts.</p> <p><b>Automatically recall number bonds 0 – 10 including subtraction and doubles.</b></p>	<p><b>Develop fluency in addition and subtraction facts within 10</b> →</p> <p>Count forwards and backwards in multiples of 2, 5 and 10 up to 10 multiples, beginning with any multiple and forwards/backwards through odd numbers. →</p>	<p><b>Secure fluency in addition and subtraction facts within 10, through continued practice</b> →</p>	<p><b>Secure fluency in addition and subtraction facts that bridge 10, through continued practice.</b></p> <p>Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number →</p> <p><b>Apply place-value knowledge to known</b></p>	<p>Recall multiplication and division facts up to 12 x 12 and recognise products in multiplication tables as multiples of the corresponding number. →</p> <p>Solve division problems, with two-digit dividends and one-digit divisors that involve remainders and interpret remainders appropriately according to the context.</p> <p><b>Apply place-value knowledge to known</b></p>	<p><b>Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.</b></p> <p><b>Apply place-value knowledge to known</b></p>	
--	---	--	--	---	--	--

Bold = New ready to progress criteria

			<b>additive and multiplicative number facts (scaling facts by 10). →</b>	<b>additive and multiplicative number facts (scaling facts by 100) →</b>	<b>additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).</b>	
--	--	--	--	--	--	--

Bold = New ready to progress criteria

## Addition/Subtraction

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
------	----------	----------	------------	-----------	-----------	----------

Bold = New ready to progress criteria

<p>Composition of all numbers to 10 / subitising, partitioning and recombining.</p> <p><b>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</b></p>	<p>Solve one step problems.</p> <p>Interpret statements involving +, -, =</p> <p>Represent number bonds to 20.</p> <p>Add and subtract 1 digit/ 2-digit numbers to 20</p> <p><b>Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.</b></p> <p><b>Read, write and</b></p>	<p>Solve addition and subtraction problems.</p> <p>Show addition can be done in any order.</p> <p>Check using inverse.</p> <p>Know number bonds to 20 and subtraction facts. (apply to facts to 100)</p> <p>Mentally +/-</p> <p>2-digit numbers + ones.</p> <p>2-digit numbers + tens.</p> <p>Two 2-digit numbers</p> <p>Three 1-digit numbers.</p> <p><b>Add and subtract across 10</b></p> <p><b>Recognise the subtraction structure</b></p>	<p>Solve problems including missing number problems.</p> <p>Use formal methods to + - up to 3 digits.</p> <p>Check using inverse.</p> <p>Know pairs of multiples of 10 that = 100</p> <p>Mentally +/-</p> <p>3-digit numbers + ones.</p> <p>3-digit numbers + tens.</p> <p>3-digit numbers + hundreds.</p> <p><b>Calculate complements to 100</b></p>	<p>Solve two step problems.</p> <p>Use formal methods to + - up to 4 digits.</p> <p>Check using inverse.</p> <p>Know pairs of multiples of 100 = 1000</p> <p>Mentally +/-</p> <p>4-digit numbers + ones.</p> <p>4-digit numbers + tens.</p> <p>4-digit numbers + hundreds.</p>	<p>Solve multi- step problems.</p> <p>Use formal methods to + - whole numbers with more than 4 digits.</p> <p>Check using rounding.</p> <p>Know pairs of multiples of <math>10 + 5 = 100</math></p> <p>Mentally +/- increasingly large numbers.</p>	<p>Solve multi- step problems in context.</p> <p>Use knowledge of order of operations to carry out calculations.</p> <p>Know how to check using inverse + rounding.</p> <p>Know all 2-digit parts= 100</p> <p>Perform mental calculations including mixed operations and large numbers.</p> <p><b>Understand that 2 numbers can be related additively or multiplicatively and quantify additive and multiplicative relationships (multiplicative relationships)</b></p>
---	---	--	---	--	---	---

Bold = New ready to progress criteria

	interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.	<p>of 'difference' and answer questions of the form, "How many more...?"</p> <p>Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number.</p> <p>Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.</p>	<p>Add and subtract up to three-digit numbers using columnar methods.</p> <p>Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure.</p> <p>Understand and use the commutative property of addition and understand the related property for subtraction.</p>			<p>restricted to multiplication by a whole number).</p> <p>Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. Solve problems involving ratio relationships.</p> <p>Solve problems with 2 unknowns.</p>
--	---	--	--	--	--	--

## Multiplication/Division

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
	<p>Solve 1 step problems using objects/ arrays.</p> <p>Count forwards/ backwards in 10s</p>	<p>Solve problems using arrays, repeated addition, and mental methods.</p> <p><math>X \div</math> facts 2, 5, 10</p>	<p>Solve problems including missing numbers, positive integer scaling problems and correspondence.</p> <p><math>X \div</math> facts 3, 4, 8</p>	<p>Solve problems <math>x</math> and <math>+</math> including distributive law to <math>x</math> 2-digit numbers by 1 digit integer scaling and harder correspondence.</p> <p><math>X \div</math> up to <math>12 \times 12</math></p>	<p>Solve problems <math>x</math>, <math>\div</math>, <math>+</math>, <math>-</math> including scaling fractions + simple rates, factors, multiples, squares and cubes.</p>	<p>Solve problems <math>x</math>, <math>\div</math>, <math>+</math>, <math>-</math></p> <p>Use knowledge of order of operations to carry out calculations and estimation to check accuracy.</p>

Bold = New ready to progress criteria

		<p>Calculate mathematical statements using <math>x \div =</math> and know the order for <math>\div x</math>.</p> <p><b>Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.</b></p> <p>Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division)</p>	<p>Write and calculate 2 digits by 1 digit moving to formal method.</p> <p><b>Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.</b></p>	<p>Use formal method 2 digit/ 3 digit by 1 digit.</p> <p>Use place value to <math>x, \div</math> mentally by 0, 1 using factor pairs and commutativity.</p> <p><b>Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. →</b></p> <p><b>Manipulate multiplication and division equations and understand and apply the commutative property of multiplication.</b></p>	<p>Identify multiples/factors of a number and prime numbers to 19.</p> <p>Use formal method 4 digit by 1 digit including remainders.</p> <p>Mentally solve <math>x</math> and <math>\div</math> problems using known facts including by 10, 100, 1000.</p> <p><b>Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.</b></p> <p><b>Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.</b></p>	<p>Common factors, multiples and prime numbers.</p> <p>Long multiplication and division interpreting remainders.</p> <p>Perform mental calculations including mixed operations and large numbers</p> <p><b>Understand that 2 numbers can be related additively or multiplicatively and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).</b></p> <p>Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and</p>
--	--	---	---	---	--	---

Bold = New ready to progress criteria

				<p><b>Understand and apply the distributive property of multiplication →</b></p>	<p><b>Multiply any whole number with up to 4 digits by any one-digit number using a formal method</b></p> <p><b>Divide a number with up to 4 digits by a one-digit number using a formal written method and interpret remainders appropriately for the context.</b></p>	<p><b>place-value understanding.</b></p> <p><b>Solve problems involving ratio relationships.</b></p> <p><b>Solve problems with 2 unknowns.</b></p>
--	--	--	--	--	---	--

## Fractions

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
	<p>Recognise and name <math>\frac{1}{2}</math> of shapes and quantities.</p> <p>Recognise and name <math>\frac{1}{4}</math> of shapes and quantities.</p>	<p>Recognise and name <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math>, <math>\frac{3}{4}</math> of shapes and quantities.</p> <p>Write simple fractions.</p>	<p>Recognise and use fractions of a discrete set of objects.</p> <p>Write fractions of a discrete set of objects. (unit and non-unit)</p>	<p>(Including decimals) Recognise and write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math></p> <p>Recognise and write the decimal equivalent of any number of tenths or hundredths.</p>	<p>(Including decimals and %)</p> <p>Recognise mixed and improper fractions, convert one to another.</p> <p>Compare and order fractions whose denominators are</p>	<p>(Including decimals and %)</p> <p>Use common factors to simplify fractions.</p> <p>Compare and order fractions including fractions <math>&gt;1</math>.</p>

Bold = New ready to progress criteria

		Recognise equivalence $2/4 = 1/2$	<p>Using diagrams recognise equivalent fractions.</p> <p>Add and subtract fractions within a whole.</p> <p>Count in tenths.</p> <p>Solve problems including all of the above.</p> <p>Compare and order fractions.</p> <p><b>Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.</b></p>	<p>Using diagrams show families of common equivalent fractions.</p> <p>Add and subtract with the same denominator.</p> <p>Count in hundredths.</p> <p>Solve problems including fractions, measure and money</p> <p>Compare numbers with the same number of decimal places.</p> <p>Round decimals with one decimal place to the nearest whole number.</p>	<p>multiples of the same number.</p> <p>Identify, name and write equivalent fractions of a given number. Include tenths and hundredths.</p> <p>Add and subtract with the same denominator and multiples of the same denominator.</p> <p>Recognise thousandths and relate to hundredths and tenths.</p> <p>Solve problems with up to three decimal places.</p> <p>Read, write, order and compare numbers with up to three decimal places.</p> <p>Round decimals with two decimal places to the nearest whole numbers and to one decimal place.</p>	<p>Associate a fraction with <math>\div</math> and calculate decimal fraction equivalents.</p> <p>Add and subtract with different denominators and mixed numbers.</p> <p>Identify value of each digit to three decimal places.</p> <p>Solve problems which require rounding to specified degrees of accuracy.</p> <p>Divide proper fractions by whole numbers.</p> <p>Multiply one-digit numbers with up to two decimal places by whole numbers and use <math>\div</math> methods where</p>
--	--	-----------------------------------	---	--	---	---

Bold = New ready to progress criteria

			<p><b>Find unit fractions of quantities using known division facts (multiplication tables fluency) →</b></p> <p><b>Reason about the location of any fraction within 1 in the linear number system. →</b></p> <p><b>Add and subtract fractions with the same denominator, within 1.</b></p>	<p><b>Reason about the location of mixed numbers in the linear number system</b></p> <p><b>Convert mixed numbers to improper Fractions and vice versa</b></p> <p><b>Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.</b></p>	<p><b>Find non-unit fractions of quantities</b></p> <p><b>Find equivalent fractions and understand that they have the same value and the same position in the linear number system.</b></p> <p><b>Recall decimal fraction equivalents for <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math> and <math>\frac{1}{10}</math>, and for multiples of these proper fractions.</b></p>	<p>answers have up to two decimal places.</p> <p><b>Recognise when fractions can be simplified and use common factors to simplify fractions.</b></p> <p><b>Express fractions in a common denomination and use this to compare fractions that are similar in value.</b></p> <p><b>Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.</b></p>
--	--	--	--	--	--	---

Bold = New ready to progress criteria

## Measurement

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
<p>Compare length, weight and capacity.</p> <p>Continue and copy/create patterns.</p>	<p>Compare, describe and solve practical problems.</p> <ul style="list-style-type: none"> <li>-Length/height</li> <li>-Mass/ weight</li> <li>-Capacity/ volume</li> <li>-Time</li> </ul> <p>Measure/ Record:</p> <ul style="list-style-type: none"> <li>-Lengths</li> <li>-Mass</li> <li>-Capacity</li> <li>-Time</li> </ul> <p>Recognise and know value of different denominations coins/ notes</p> <p>Sequence events chronologically using relevant language.</p> <p>Recognise and use language relating to date.</p>	<p>Choose and use appropriate standard units to estimate and measure:</p> <ul style="list-style-type: none"> <li>-Length/ height (m, cm)</li> <li>-Mass (kg, g)</li> <li>- Temperature(°C)</li> <li>- Capacity (L, ml)</li> </ul> <p>Compare and order:</p> <ul style="list-style-type: none"> <li>-Lengths</li> <li>-Mass</li> <li>-Volume/ Capacity</li> </ul> <p>Using &gt; &lt; =</p> <p>Recognise and use £, p.</p> <p>Find different combination of coins to = same amount</p> <p>Compare and sequence intervals of time.</p> <p>Know number of minutes in 1 hour and hours in a day.</p>	<p>Measure, compare, +, -: </p> <ul style="list-style-type: none"> <li>-Lengths (m, cm, mm)</li> <li>- Mass</li> <li>- Volume/ Capacity (L, ml)</li> </ul> <p>Measure perimeter of 2D shapes</p> <p>+ and – amounts of money to give change (practical contexts)</p> <p>Complete duration of events</p> <p>Know the number of seconds in a minute, number of days in a</p>	<p>Convert between different metric measures:</p> <p>Km → m</p> <p>Hr →minutes</p> <p>Measure and calculate perimeter of rectilinear shapes in cm and m.</p> <p>Find the area of rectilinear shapes by counting squares.</p> <p>Read, write and convert time:</p>	<p>Convert between different metric measures:</p> <p>Km + m</p> <p>Cm +m</p> <p>Cm +mm</p> <p>g + kg</p> <p>L +ml</p> <p>Understand and use appropriate equivalences metric and imperial:</p> <p>Inches, pounds and pints.</p> <p>Measure and calculate perimeter of composite rectilinear shapes- cm and m.</p> <p>Calculate and compare area of rectangles using standard units, cm<sup>2</sup>, m<sup>2</sup>.</p> <p>Estimate volume and capacity.</p>	<p>Use, read, write, convert btw standard units:</p> <p>Length, mass, volume and time. (Using decimal notation up to 3 decimal places)</p> <p>Convert btw miles and km.</p> <p>Recognise shapes with the same area can have different perimeters (vice versa)</p> <p>Recognise when can use formulae for area and volume of shapes.</p>

Bold = New ready to progress criteria

	<p>Tell the time and draw hands:</p> <p>'o' clock</p> <p>½ past</p>	<p>Tell, write and draw hands for</p> <p>¼ to</p> <p>½ past</p> <p>5-minute intervals</p> <p>Solve problems practically including +, - of money including giving change.</p>	<p>month, year and leap year.</p> <p>Tell, write time:</p> <p>-From analogue clock (including Roman numerals I – XII)</p> <p>-12 hour</p> <p>-24-hour clocks</p> <p>Estimate and read time with increasing accuracy to the nearest minute record and compare.</p>	<p>Analogue/ digital 12/24 hr clocks.</p> <p>Sole problems converting:</p> <p>Hrs→ mins</p> <p>Mins→ secs</p> <p>yrs→ months and weeks</p>	<p>Solve problems involving converting btw units of time.</p> <p>Use all 4 operations to solve problems involving measure. Using decimal notation and scaling.</p>	<p>Calculate area of parallelograms and triangles.</p> <p>Calculate, estimate and compare volume of cubes/ cuboids using standard units, cm<sup>2</sup>, m<sup>3</sup>, extending to mm<sup>3</sup> and km<sup>3</sup>.</p> <p>Solve problems involving calculation and conversion of measures using decimal notation (up to 3 decimal places)</p>
--	---	--	---	--	--	--

## Geometry – properties of shape

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
<p>Talk about and explore 2D and 3D shapes.</p> <p>Select a shape- copy 2D to 3D.</p> <p>Select and rotate shapes.</p> <p>Compose and</p>	<p>Recognise and name common 2D/3D shapes.</p> <p>2D-square, rectangle, triangle, circle.</p>	<p>Identify and describe properties of 2D/3D shapes.</p> <p>2D-no. of sides, line of symmetry.</p> <p>3D-edges, vertices, faces.</p>	<p>Draw 2D shapes and make 3D shapes recognising them in different orientations</p> <p>Recognise angles as a property of a shape</p>	<p>Compare and classify geometric shapes based on properties and size.</p> <p>Identify acute and obtuse angles- compare and order.</p>	<p>Identify 3D shapes from 2D representations.</p> <p>Know angles are measured in degrees- compare and order.</p>	<p>Draw 2D shapes using given dimensions and angles.</p> <p>Recognise and build simple 3D shapes including nets.</p>

**Bold = New ready to progress criteria**

<p>decompose shapes.</p>	<p>3D-cuboids, pyramids, spheres.</p> <p><b>Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another. →</b></p> <p><b>Compose 2D and 3D shapes from smaller</b></p>	<p>Identify 2D shapes on surface of a 3D shape.</p> <p>Compare and sort 2D/3D shapes.</p> <p><b>Use precise language to describe the properties of 2D and 3D shapes and compare shapes by reasoning about similarities and differences in properties. →</b></p>	<p>Identify a right angle &gt; &lt; than a right angle.</p> <p>Identify horizontal, vertical, pairs of perpendicular and parallel lines.</p> <p><b>Recognise right angles as a property of shape or a description of a turn and identify right angles in 2D shapes presented in different orientations.</b></p> <p><b>Draw polygons by joining marked points and identify</b></p>	<p>Identify lines of symmetry in 2D shapes in different orientations.</p> <p>Complete simple symmetric figure with specific line of symmetry.</p> <p><b>Draw polygons, specified by</b></p>	<p>Draw given angles and measure in degrees.</p> <p>Identify angles on point:  1 turn 360°  ½ turn 180°  Other multiples of 90°</p> <p>Use properties of rectangles to deduce missing lengths/angles.</p> <p>Distinguish between regular and irregular polygons</p> <p><b>Compare angles, estimate and measure angles in degrees and draw angles of a given size.</b></p> <p><b>Compare areas and calculate the area of rectangles (including squares) using standard units</b></p>	<p>Compare and classify geometric shapes based on properties, sizes and find unknown angles.</p> <p>Recognise angles meet at a point on a straight line or vertically opposite and find missing angles.</p> <p>Illustrate/name parts of a circle-radius, diameter and circumference.</p> <p><b>Draw, compose, and decompose shapes according to given</b></p>
--------------------------	---	---	---	---	---	---

Bold = New ready to progress criteria

	<p>shapes to match an example, including manipulating shapes to place them in particular orientations.</p> <p>→</p>		<p>parallel and perpendicular sides.</p> <p>→</p>	<p>coordinates in the first quadrant, and translate within the first quadrant. →</p> <p>Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.</p> <p>Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.</p>		<p>properties, including dimensions, angles and area, and solve related problems.</p>
--	---	--	---	--	--	---

## Geometry – position and direction

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
------	----------	----------	------------	-----------	-----------	----------

Bold = New ready to progress criteria

	Describe position, direction and movement Whole $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{3}{4}$ turns	Use mathematical vocabulary to describe position, direction and movement -Straight line -Rotation -Clockwise/ anti-clockwise. Order and arrange patterns and sequences.		Describe positions on 2D grid as co-ordinates in 1 <sup>st</sup> quad  Describe movements as translations of a given unit. Plot specified points to complete a polygon.	Identify, describe, and represent position of shapes after reflection / translation. (In lines parallel to axis)	Describe positions in all four quadrants.  Draw and translate on co- ordinate plane -Reflect in axes.
--	---	---	--	--	--	--

## Statistics

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
		Interpret and construct: -Pictograms -Tally charts -Block diagrams -Simple tables Ask and answer questions.	Interpret and present data: -Bar charts -Pictograms -Tables  Solve 1 step and 2 step questions using information in scaled	Interpret and present: -Discrete -Continuous data  Solve comparison, sum and difference problems using information	Complete, read and interpret information in tables and timetables.  Solve comparison, sum and difference problems for	Interpret and construct: -Pie charts -Line graphs  Solve problems using the above.

Bold = New ready to progress criteria

		-Counting objects, sorting categories by quantity. Ask and answer questions about totaling/ comparing data.	charts.	presented.	information in a line graph.	Calculate and interpret the mean as an average.
--	--	--	---------	------------	------------------------------	---

## Ratio and Proportion

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
						Solve problems involving: -Relative size of 2 quantities -Calculation of % (15% of 360%) -Similar shapes where scale factor is known. -Unequal sharing/ grouping.

## Algebra

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
						Use simple formulae. Describe linear number sequences.

Bold = New ready to progress criteria

						<p>Express missing number problems algebraically.</p> <p>Find pairs of numbers to satisfy equation with 2 unknowns.</p> <p>Establish possibilities of combinations of 2 variables.</p>
--	--	--	--	--	--	--

## Document Control

September 2021 – Reviewed

December 2021 – Added EYFS column

January 2022 – Saved to PDF and uploaded to website

Bold = New ready to progress criteria