

St. Peter's CE Primary, Farnworth



Curriculum Overview

Intent and Implementation

Diet and Delivery

Mathematics Sep 22

What is our vision?

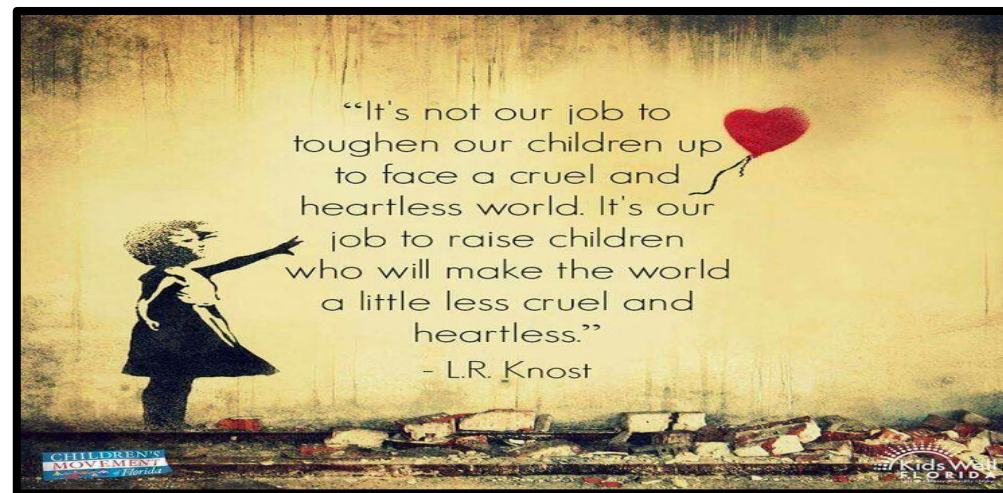
As teachers we are often charged with the task of preparing our children for their future. At St. Peter's we think a little differently, and rather than prepare our children for a future that is imposed upon them, we aim to give them the skills necessary to create the future that they perceive for themselves.

Today is the tomorrow of yesterday. By controlling today, we are creating the future of tomorrow.

Our vision is to develop our children to enable them to create the future they aspire for themselves.

Our children will contribute to and prosper in society.

Our school purpose is to signal a route to a life that many don't think possible! Our overall aim is to maximise social mobility!



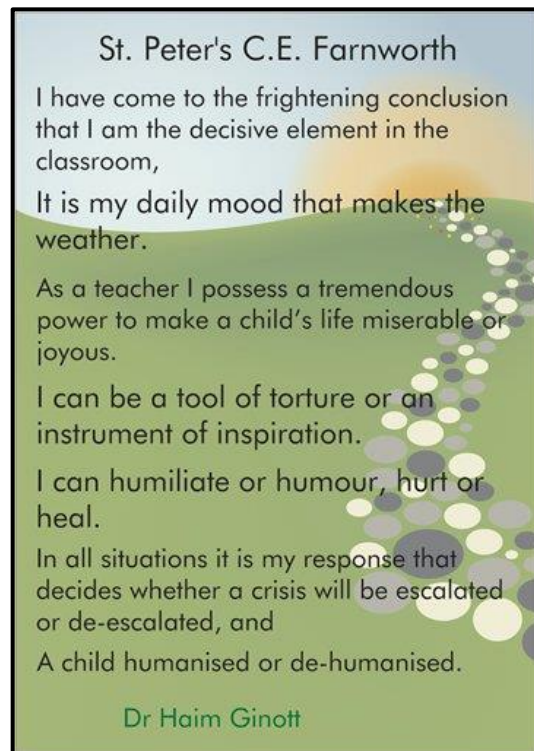
How will our vision be achieved?

We believe our vision will be achieved if we provide our children with an environment, underpinned by British and Christian values, in which they can

“Learn, Sparkle & Shine...”

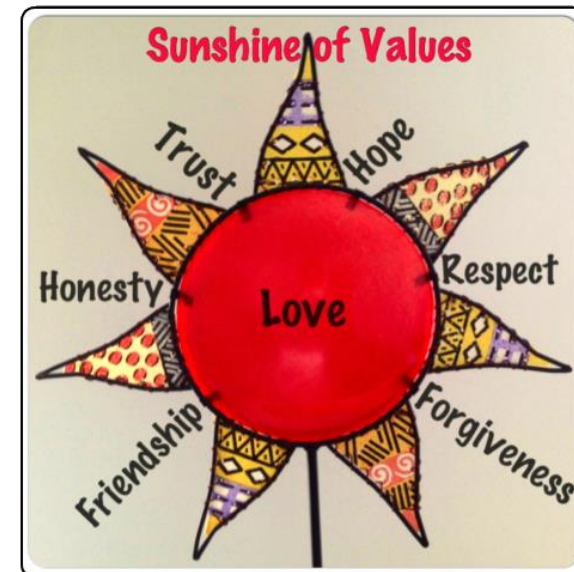
We **aim** to effect the environment to which the children are exposed, to maximise pupils' opportunity to

“Learn, Sparkle & Shine..”



We **aim** to ensure our environment is underpinned by Christian and British Values; to maximise pupils' opportunity to

“Learn, Sparkle & Shine...”



Our aim Our children will....	Our beliefs and values. Why?	Our strategy What will we do?	Our strategy What will you see?
Learn Allow for the development of wisdom, knowledge and skills.	We believe ability is a consequence of what happens in our classrooms not a cause! We believe inherited traits are only one part of the story of where we may end up. The environment created in our classrooms, the culture of hard work and determination that we encourage, the recognition that we are all able to increase our knowledge through learning, we believe, has an equally valid impact on our future success. (Learn)	Develop learners who recognise their own learning goals, aspirations and the role they play in determining their own destiny. (Learn) - Promote the incremental learning theory – growth mindset approach - Reward effort and attribute success to hard work and determination	Visible consistency- The aim of visible consistency is to ensure that all staff and pupils receive the same messages regarding expectation of conduct, behaviour and work ethic thus ensuring a safe environment in which effective teaching and learning can take place and risks can be taken.
Sparkle Allow for the development of individuality; character development, hope, aspiration, courageous advocacy.	We believe that engaging in a rich and varied curriculum will provide our children with an opportunity to develop a positive attitude to learning and an environment in which they can flourish and thrive. (Sparkle)	Provide a curriculum that allows for a wide range of opportunities to be promoted and excellent outcomes achieved, across a wide range of areas. (Sparkle)	Visible collaboration- The aim of visible collaboration is to ensure that children receive the same experiences across year groups and that staff are able to share their expertise and strengths so as to learn from each other.
Shine Allow for the development of community spirit – living well together.	We believe that by using Christian Values to underpin our work, children will be able to spread positive attitudes and shine as a beacon in society. (Shine)	Promote a community of kind, respectful Christian learners, with an underlying value of hope for their own future and that of the wider extended community; underpinned by Christian and British Values. (Shine)	Visible challenge- The aim of visible challenge is to support our growth mindset philosophy and recognises that learning occurs when staff and pupils are given the opportunity to go beyond their comfort zone. Visible creativity- The aim of visible creativity is to inspire a love of learning and deepen thinking.

“Where our children enter our classrooms neither impresses nor depresses us; we simply expect our children to know that they come to school to work hard and learn, growing to know and understand more through each day they spend walking down Progress Ave with us.”

Skills Progression Grids

Number, number systems and counting

Year 6 expectation	I can read, write, order and compare numbers to at least 10,000,000 I can use negative numbers in context and calculate intervals across 0		I can determine the value of each digit up to 10,000,000			I can round any whole number to a required degree of accuracy		I can use simple formulae I can express missing number problems algebraically I can find pairs of numbers that satisfy an equation with 2 unknowns I can enumerate possibilities of combinations of 2 variables I can generate and describe linear number sequences.
Year 5 expectation	I can read, write, order and compare numbers to at least 1,000,000 I can interpret negative numbers. Count forwards or backwards with positive and negative whole numbers through 0	I can read, write and order and compare numbers with up to 3 decimal places I can solve problems involving numbers up to 3 dp.	I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents I can determine the value of each digit up to 1,000,000	I can count forwards or backwards in steps or powers of 10 for any given number up to 1,000,000		I can round any number up to 1,000,000 to the nearest 10,100,1,000, 10,000 and 100,000 Round decimals with two decimal place to the nearest whole number	I can read Roman Numerals up to M, 1000 and recognise years written in Roman Numerals	
Year 4 expectation	I can count backwards through 0 using negative numbers	I can compare and order decimal numbers with	I can recognise the place value of each digit in	I can find 1000 more or less than a given number	I can count in multiples of 6,7,9 and 25 and 1000	I can round any number to the nearest 10,100 and 1000	I can read Roman Numerals to 100 and	I can identify and represent estimate number using

	I can compare and order numbers beyond 1000	up to 2 decimal places	a four digit number			Round decimals with one decimal place to the nearest whole number	I understand how numbers developed to include 0.	different representations
Year 3 expectation	I can read and write numbers up to, 1,000 in numerals and in words I can compare and order numbers up to 1,000		I can recognise the place value of each digit in a 3 digit number	I can identify 10 or 100 more or less than a given number	I can count from 0 in multiples of 4, 8, 50 and 100;			I can identify represent estimate number using different representations
Year 2 expectation	I can read and write numbers to at least 100 in numerals and words. I can compare and order numbers from 0 up to 100; use < > and + signs		I can recognise the place value of each digit in a 2 digit number (tens and ones)		I can count in steps of 2, 3 and 5 from 0 and in 10s from any number forward and backward			can identify represent estimate number using different representations inc a number line
Year 1 expectation	I can count to and across 100, forwards and backwards, beginning from any given number I can count, read and write numbers to 100 in numerals I can read and write numbers from 1 to 20 in numerals and words			When given a number I can identify one more and one less	I can count in multiples of 2s, 5s and 10s			
	Counting, reading, writing and ordering numbers	Decimal places	Place value	Working within the power of 10	Counting in multiples	Rounding	Roman Numerals	Estimating and representing

Number; Fractions and Decimals

Year 6 expectation	I can use common multiples to express fractions in the same denominator I can compare and order fractions, including fractions > 1	I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions I can multiply simple pairs of proper fractions, writing the answer in its simplest form e.g., $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ I can divide proper fractions by whole numbers e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$	I can use common factors to simplify fractions I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	I can identify the value of each digit in numbers given to 3 decimal places I can multiply and divide numbers by 10, 100 and 1000 giving answers to 3 decimal places	I can associate a fraction with a division and calculate decimal fraction equivalents e.g. $\frac{3}{8} = 3 \div 8 = 0.375$ I can recall and use equivalence between simple fractions, decimals and percentages including in different contexts. I can solve problems involving the calculation of %'s (eg 15% of 360) and use the %'s for comparison
Year 5 expectation	I can recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements e.g., $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1 \frac{1}{5}$ I can compare and order fractions, whose denominators are multiples of the same number	I can add and subtract fractions with the same denominator and multiples of the same number I can multiply proper fractions and mixed numbers by whole numbers supported by materials and diagrams	I can identify, name and write equivalent fractions of a given fraction, represented visually, inc tenths and hundredths	I can read and write decimal numbers as fractions	I can recognise the % symbol and understand % means number of parts per 100 and write %s as a fraction with a denominator 100 and as a decimal I can solve problems which require knowing % and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25
Year 4 expectation		I can solve problems involving increasingly harder fractions to calculate quantities including non unit fractions where the answer is a whole number.	I can recognise and show, using diagrams, families of common equivalent fractions	I can count up and down in hundredths; recognising that hundredths arise from dividing an object or quantities by 100 and by dividing tenths by 10.	I can recognise and write decimal equivalents of any number of tenths or hundredths. I can recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$

		I can add and subtract fractions with the same denominator			I can solve simple measure and money problems involving fractions and decimals to two d.p.
Year 3 expectation	I can recognise, find and write fractions of a discrete set of objects; unit and non unit with small denominators I can recognise and use fractions as numbers; unit and non unit with small denominators		I can recognise and show, using diagrams, equivalent fractions with small denominators	I can count up and down in tenths; recognising that tenths arise from dividing an object or quantities by 10.	
Year 2 expectation	I can recognise, find and name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.	I can write simple fraction sums e.g., $\frac{1}{2}$ of 6 = 3	I can recognise equivalence $\frac{2}{4}$ and $\frac{1}{2}$		
Year 1 expectation	I can recognise, find and name a half as one of two equal parts of an object, shape or quantity. I can recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.				
	Understanding fractions; Finding and writing fractions of objects, shapes or quantities Comparing and ordering fraction	Calculating with fractions	Equivalent fractions	Understanding decimal notation; tenths, hundredths and thousandths.	Decimals and percentages.

Calculating; addition and subtraction

Year 6 expectation			I can perform mental calculations inc mixed operations with large numbers	I can use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy. I can solve addition and subtraction multi step problems in contexts, deciding which operations to sue and why I can use my knowledge of the order of operations to carry out calculations involving the 4 operations
Year 5 expectation	I can add numbers with more than 4 digits using column methods	I can subtract numbers with more than 4 digits using column methods	I can add and subtract numbers mentally with increasingly large numbers	I can use rounding to check answers to calculations and determine in the context of a problem, levels of accuracy. I can solve addition and subtraction multi step problems in contexts, deciding which operations to sue and why
Year 4 expectation	I can add numbers up to 4 digits using column methods	I can subtract numbers up to 4 digits using column methods		I can estimate and use inverse operations to check answers to a calculation I can solve addition and subtraction two step problems in contexts, deciding which operations to sue and why
Year 3 expectation	I can add numbers up to 3 digits using formal written methods of column addition.	I can subtract numbers up to 3 digits using formal written methods of column subtraction	I can add and subtract numbers mentally	I can estimate the answer to a calculation and use inverse operations to check answers I can solve problems including missing number problems using number facts, place value and more complex addition and subtraction
Year 2 expectation	I can add numbers using concrete objects, pictorial representations and mentally including; 2 digit and ones 2 digit and tens Two 2 digits Three 1 digits	I can subtract numbers using concrete objects, pictorial representations and mentally including; 2 digit and ones 2 digit and tens Two 2 digits Three 1 digits	I can recall and use addition and subtraction facts to 20 fluently and derive and use related facts to 100	I can recognise and use the inverse relationship between addition and subtraction and use this to check calculations inc missing number problems. I can show that addition can be done in any order but subtraction cannot
Year 1 expectation	I can add 1 digit and 2 digit numbers to 20, including 0.	I can subtract 1 digit and 2 digit numbers to 20, including 0.	I can represent and use number bonds and related subtraction facts within 20	I can solve missing number problems e.g. $7 = ? - 9$

	I can read write and interpret mathematical statements involving (+), and (=) signs	I can read write and interpret mathematical statements involving (-) and (=) signs		
	Addition	Subtraction	Number bands and mental recall	Using and applying

Calculating; multiplication and division

Year 6 expectation	I can multiply multi digit numbers up to 4 digits by a 2 digit whole number using the formal written method of long multiplication. I can divide numbers up to 4 digits by a two digit whole number using the formal written method of long or short division and interpret remainders as whole numbers, fractions or by rounding as appropriate for the context. I can multiply one digit numbers with up to 2 decimal places by whole numbers I can use written division methods in cases where the answer has up to 2 decimal places.	I can perform mental calculations including mixed operations and large numbers	Solve problems which require answers to be rounded to specified degrees of accuracy. Use estimation to check answers to calculations and determine in the context of a problem an appropriate degree of accuracy. I can solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer $\times$ and $\div$, facts	I can identify common factors, common multiples and prime numbers
Year 5 expectation	I can divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately according to context	I can multiply and divide numbers mentally using known facts	I can solve problems using multiplication and division and a combination of these, including scaling by simple fractions and problems involving simple ratios	I can identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers I know and use the words prime numbers, prime factors composite numbers I can tell whether a number up to 100 is a prime number and recall prime numbers up to 19.

				I can recognise and use square numbers and cube numbers and their notation. I can solve problems using multiplication and division using my knowledge of factors and multiples, squares and cubes.
Year 4 expectation	I can multiply TU and HTU by U using a formal layout. I can find the effect of dividing a one or two digit number by 10 and 100, identifying the value of the digits in the answer as units,, tenths and hundredths.	I can recall $\times$ and $\div$ facts up to 12×12 I can use place value, known and derived facts to multiply and divide mentally, $\times$ and $\div$ by 0 and 1, dividing by 1; multiplying 3 numbers	I can solve problems involving $\times$ and $\div$, inc interger scaling problems and harder correspondence problems in which n objects are connected to m objects	I can recognise and use factor pairs and commutatively in mental calculations
Year 3 expectation	I can write and calculate mathematical statements for $\times$ and $\div$ using the facts that I know including TU $\times$ U, using mental and progressing to formal written methods	I can recall and use multiplication and division facts for 3,4 and 8 times table	I can solve problems including missing number problems, involving $\times$ and $\div$, inc interger scaling problems and correspondence problems in which n objects are connected to m objects	
Year 2 expectation	I can use $\times$, $\div$ and $=$ signs for mathematical statement s	I can recall and use the multiplication and division facts for the 2,5 and 10 tables including recognising odd and even numbers.	. I can show that multiplication can be done in any order but division cannot.	
Year 1 expectation	I can 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			
	Formal methods	Mental recall of facts	Solve problems	Factors, prime numbers, square numbers

Geometry

Year 6 expectation	I can draw 2 d shapes using given dimensions and angles I can illustrate and name parts of a circle inc radius, diameter and circumference and know the diameter is twice the radius I can solve problems involving similar shapes where the scale factor is known or can be found	I can recognise, describe and build simple 3 d shapes including making nets	I can compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangle, quadrilateral and regular polygon I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing angles	I can describe position on the full coordinate grid (all 4 quadrants)	I can draw and translate simple shapes on the coordinate plane and reflect the in the axes.
Year 5 expectation	I can use the properties of rectangles to deduce related facts and find missing lengths and angles I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles	I can identify 3 d shapes including cubes and cuboids form 2 d representations	I know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles I can draw given angles adn measure them in degrees I can identify; Angles at a point and on whole turn Angles at a point on a $\frac{1}{2}$ turn Other multiples of 90 deg.		I can identify, describe and represent the position of a shape following a reflection or translation, inc the appropriate language and know that the shape has not changed.
Year 4 expectation	I can identify lines of symmetry in 2d shapes presented in different orientations I can complete a simple symmetric figure with respect to a specific line of symmetry		I can identify acute and obtuse angles and compare and order angles up to 180 degrees by size.	I can describe positions on a 2d grid as coordinates in the first quadrant I can plot specified points and draw sides to complete a given polygon	I can describe movements between positions as translations of a given unit to the left/right and dup/down.

	I can compare and classify geometric shapes including quadrilaterals and triangles based on their properties and sizes				
Year 3 expectation	I can draw 2 d shapes I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines	I can make 3d shapes using modelling materials; recognise 3 d shapes in different orientations and describe them	I can recognise angles as a property of a shape I can recognise angles as a description of a turn Identify right angles, recognise that 2 right angles make a half turn, 3 make three quarters and 4 a complete turn Identify whether angles are greater than or less than a right angle		
Year 2 expectation	I can recognise and describe the properties of 2 d shapes inc the number of sides and symmetry in a vertical line I can compare and sort common 2d shapes and everyday objects I can identify 2 d shapes on the surface of 3 d shapes eg, a circle on a cylinder, a triangle on a pyramid	I can recognise and describe the properties of 3d shapes inc the number of edges, vertices and faces. I can compare and sort common 3d shapes and everyday objects	I can use mathematical vocab to describe position, direction and movement inc distinguishing between rotation as a turn and in terms of right angles for quarter, half and three quarter turns (clockwise and anti clockwise) and movement in a straight line.		I can order and arrange combinations of mathematical objects in patterns
Year 1 expectation	I can recognise and name common 2 d shapes	I can recognise and name common 3 shapes	I can describe position, directions and movements inc, half, quarter and three quarter turns		
	2d shape	3 d shape	Turns and angles	Coordinates	Movement of shape reflection and translation

Measurement

Year 6 expectation				I can recognise that shapes with the same areas can have different perimeters and vice versa I can recognise when it is possible to use formulae for area and volume of shapes I can calculate the area of parallelograms and triangles I can calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]	I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate I can use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places I can convert between miles and kilometres
Year 5 expectation	I can use all four operations to solve problems including measure (e.g. length, mass, volume, money) using decimal notation including scaling	I can solve problems involving converting between units of time		I can measure and calculate the perimeter of composite rectilinear shapes in cm and m I can calculate and compare the area of squares and rectangles including using standard units cm^2 and m^2 and estimate the area of irregular shapes I can estimate volume (e.g. using 1 cm^3 blocks to build cubes and cuboids) and capacity (e.g. using water)	I can convert between different units of metric measure (e.g. km and m; cm and m; cm and mm; g and kg; l and ml) I can understand and use equivalences between metric units and common imperial units such as inches, pounds and pints (5b)
Year 4 expectation		I can read, write and convert time between analogue and digital 12 and 24hr clocks (4c) I can solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days	I can estimate, compare and calculate different measures, including money in pounds and pence	I can measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres (5a) I can find the area of rectilinear shapes by counting squares (5a)	I can convert between different units of measure (e.g. km to m; hr to min)

Year 3 expecta tion	I can measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	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; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight I know the number of seconds in a minute and the number of days in each I can compare durations of events [for example, to calculate the time taken by particular events or tasks]	I can add and subtract amounts of money to give change, using both £ and p in practical contexts	I can measure the perimeter of simple 2-D shapes	
Year 2 expecta tion	I can choose and use appropriate standard units to estimate and measure length/ height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels I can compare and order lengths, mass, volume/capacity and record the results using <, > and	I can compare and sequence intervals of time I can tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. I know the number of minutes in an hour and the	I can recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value I can find different combinations of coins that equal the same amounts of money I can solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change		
Year 1 expecta tion	I can compare, describe and solve practical problems for: o Lengths and heights (e.g. long/short, longer/ shorter, tall/ short, double/half)	I can recognise and use language relating to dates, including days of the week, weeks, months and years I can tell the time to the hour and half past the hour and draw	I can recognise and know the value of different denominations of coins and notes		

	- o Mass or weight (e.g. heavy/light, heavier than, lighter than) - o Capacity/ volume (full/empty, more than, less than, quarter) - o Time (quicker, slower, earlier, later) □ I can measure and record the following: - o Lengths and heights - o Mass/weight - o Capacity and volume	the hands on a clock face to show these times o Time (hours, minutes, seconds) notes I can sequence events in a chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening			
	Length, mass, weight, capacity	Time	Money	Perimeter, area and volume	Converting between measures

Statistics

Year 6 expectation	I can interpret and construct pie charts and line graphs and use these to solve problems		I can calculate and interpret the mean as an average
Year 5 expectation	I can complete read and interpret information in tables including time tables	I can solve comparison, sum and difference problems using information presented in line graphs.	
Year 4 expectation	I can interpret and present discrete and continuous data using appropriate graphical methods including bar charts and line graphs	I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs,	
Year 3 expectation	I can interpret and present data using bar charts, pictograms and tables	I can solve one step and two step questions (e.g, how many more?, how many fewer? Using information presented in scaled bar charts , pictograms and tables	
Year 2 expectation	I can interpret and construct simple pictograms, tally charts, block diagrams and simple tables	I can ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity I can ask and answer questions about totalling and comparing categorical data	
Year 1 expectation			
Year R ELG			
	Construct and interpret	Solve problems	Average

Mathematics in EYFS:

Maths from September 2021

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. The aim of this document is to help subject leaders to understand how the skills taught across EYFS feed into national curriculum subjects.

This document demonstrates which statements from the 2020 Development Matters are prerequisite skills for mathematics within the national curriculum. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception to match the programme of study for mathematics.

The most relevant statements for mathematics are taken from the following areas of learning:

- Communication and Language
- Mathematics

Mathematical Vocabulary			
Three and Four-Year-Olds	Communication and Language		• Use a wider range of vocabulary. • Understand ‘why’ questions, like: “why do you think the caterpillar is so fat?”
Reception	Communication and Language		• Learn new vocabulary. • Use new vocabulary throughout the day.
ELG	Communication and Language	Speaking	• Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.
Number and Place Value			
Counting			
Three and Four-Year-Olds	Mathematics		• Recite numbers past 5. • Say one number name for each item in order: 1, 2, 3, 4, 5. • Know that the last number reached when counting a small set of objects tells you how many there are in total (‘cardinal principle’).
Reception	Mathematics		• Count objects, actions and sounds. • Count beyond ten.
ELG	Mathematics	Numerical Patterns	• Verbally count beyond 20, recognising the pattern of the counting system.
Identifying, Representing and Estimating Numbers			
Three and Four-Year-Olds	Mathematics		• Fast recognition of up to 3 objects, without having to count them individually (‘subitising’). • Show ‘finger numbers’ up to 5. • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals.

Reception	Mathematics		• Subitise. • Link the number symbol (numeral) with its cardinal number value.
ELG	Mathematics	Number	• Subitise (recognising quantities without counting) up to 5.
Reading and Writing Numbers			
Three and Four-Year-Olds	Mathematics		• Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals.
Reception	Mathematics		• Link the number symbol (numeral) with its cardinal number value.
Compare and Order Numbers			
Three and Four-Year-Olds	Mathematics		• Compare quantities using language: ‘more than’, ‘fewer than’.
Reception	Mathematics		• Compare numbers.
ELG	Mathematics	Numerical Patterns	• Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
Understanding Place Value			
Reception	Mathematics		• Understand the ‘one more than/one less than’ relationship between consecutive numbers. • Explore the composition of numbers to 10.
ELG	Mathematics	Number	• Have a deep understanding of numbers to 10, including the composition of each number.
Solve Problems			
Three and Four-Year-Olds	Mathematics		• Solve real world mathematical problems with numbers up to 5.
Addition and Subtraction			
Mental Calculations			
Reception	Mathematics		• Automatically recall number bonds for numbers 0-10.
ELG	Mathematics	Number	• 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.
Solve Problems			
ELG	Mathematics	Numerical Patterns	• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.
Reception	Mathematics		• Subitise. • Link the number symbol (numeral) with its cardinal number value.
Measurement			
Describe, Measure, Compare and Solve (All Strands)			
Three and Four-Year-Olds	Mathematics		• Make comparisons between objects relating to size, length, weight and capacity.

Reception	Mathematics	Compare length, weight and capacity.
Telling the Time		
Three and Four-Year-Olds	Mathematics	Begin to describe a sequence of events, real or fictional, using words, such as ‘first’, ‘then...’
Properties of Shapes		
Recognise 2D and 3D Shapes and their Properties		
Three and Four-Year-Olds	Mathematics	- Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: ‘sides’, ‘corners’, ‘straight’, ‘flat’, ‘round’. - Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc. - Combine shapes to make new ones – an arch, a bigger triangle, etc.
Reception	Mathematics	Select, rotate and manipulate shapes in order to develop spatial reasoning skills.
Compare and Classify Shapes		
Reception	Mathematics	Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.
Position and Direction		
Position, Direction and Movement		
Three and Four-Year-Olds	Mathematics	- Understand position through words alone – for example, “The bag is under the table,” – with no pointing. - Describe a familiar route. - Discuss routes and locations, using words like ‘in front of’ and ‘behind’.
Reception	Understanding the World	Draw information from a simple map.
Patterns		
Three and Four-Year-Olds	Mathematics	- Talk about and identify the patterns around them. For example, stripes on clothes, designs on rugs and wallpaper. Use informal language like ‘pointy’, ‘spotty’, ‘blobs’, etc. - Extend and create ABAB patterns – stick, leaf, stick, leaf. - Notice and correct an error in a repeating pattern.
Reception	Mathematics	Continue, copy and create repeating patterns.
Statistics		
Record, Present and Interpret Data		
Three and Four-Year-Olds	Mathematics	Experiment with their own symbols and marks, as well as numerals.

My Maths Targets



Compare, describe and solve problems for length and heights, mass/weights, capacity and volume and time.

I can tell the time to the hour and half past hour.

I am beginning to measure and record time.

I am beginning to measure and record capacity and volume.

I can recognise, find and name a half of an amount.

I am beginning to measure and record lengths, heights and mass/weights.

I can recognise, find and name a quarter of an amount.

I can recognise and name 3-D shapes.

I know and use words relating to dates such as weeks and months.

I can recognise, find and name a quarter of a shape.

I can recognise and name 2-D shapes.

I know the value of different coins and notes.

I can recognise, find and name a quarter of an object.

I can describe movement.

I can sequence events in order.

I can recognise, find and name a half of a shape.

I can describe position.

I know and use words relating to days.

I can recognise, find and name a half of an object.

I can describe direction.

I can solve one step problems using subtraction.

I can count in multiples of 2, 5 and 10.

I can solve one step problems using addition.

I can say if a number is equal to, more than, less than, most or least.

I can show and use Number bonds to 20.

I can solve one-step division problems.

I can count to and across 100, forwards and backwards.

I can add and subtract 2 digit numbers to 20.

I can solve one-step multiplication problems.

I can count, read and write numbers to 100.

I can show and use subtraction facts within 20.

I can use arrays to multiply.

I can find one more and one less than a given number.

I can add and subtract one digit numbers to 20.

I can double single digit numbers.

I can read and write numbers from 1 to 20 in digits and words

I can read, write and understand calculations with +, - and = signs.

I can share and group small amounts.

Number and Place Value

Addition and Subtraction

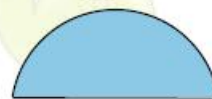
Multiplication and Division

Measurements

Fractions

Geometry

My Maths Targets



I can use place value and number facts to solve problems.

I can read and write numbers to 100 in numerals and in words.

I can use $<$, $>$ and $=$ signs.

I can compare and order numbers from 0 to 100.

I can identify, represent and estimate numbers.

I can recognise the place value of each digit in a two-digit number.

I can count in tens from any number, forward and backward

I can count in steps of 2, 3 and 5

I can recognise and use the inverse relationship between addition and subtraction.

I know addition can be done in any order, but subtraction can't.

I can add three one-digit numbers.

I can add and subtract two 2-digit numbers and ones.

I can add and subtract 2 digit numbers and tens.

I can add and subtract 2 digit numbers and ones.

I can derive and use related facts to 100.

I can recall and use addition and subtraction facts to 20.

I can solve one-step addition and subtraction problems.

I can solve one-step problems involving $\times$ and $\div$.

I know that division of one number by another cannot be done in any order,

I know that multiplication of two numbers can be done in any order.

I calculate division statements.

I can calculate multiplication statements.

I can recognise odd and even numbers.

I can recall and use $\times$ and $\div$ facts for 2, 5 and 10 times table.

I know the number of minutes in an hour and the number of hours in a day.

I can tell and write time to 5 minutes, including $\frac{1}{4}$ past/to the hour and draw hands on a clock.

I can compare sequence intervals of time.

I can find different ways of putting coins together that make the same amount.

I can recognize and use symbols for pound (£) and pence (p).

I can compare and order lengths, mass, volume/capacity.

I can measure to the nearest unit using rulers, scales, thermometers and measuring vessels.

I can choose and use appropriate standard units to estimate and measure.

I can write simple fractions and recognise equivalence.

I can recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a set of objects.

I can recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a quantity.

I can recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a shape.

I can recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length.

I can use mathematical vocabulary to describe position, direction and movement.

I can order and arrange combinations of objects in patterns and sequences.

I can compare and sort common 2-D and 3-D shapes.

I can identify 2-D shapes on the surface of 3-D shape.

I can identify and describe the properties of 3-D shapes.

I can identify lines of symmetry in 2-D shapes.

I can identify and describe the properties of 2-D shapes.

I can ask and answer questions when comparing categorical data.

I can answer questions about totalling.

I can ask and answer simple questions by sorting categories by quantity.

I can interpret and construct simple tables.

I can interpret and construct simple block diagram.

I can interpret and construct simple tally charts.

I can interpret and construct simple pictograms.

Number and Place Value

Addition and Subtraction

Multiplication and Division

Measurements

Fractions

Geometry

Statistics

My Maths Targets



I can compare and order numbers up to 1000.

I can count from 0 in multiples of 4, 8, 50 and 100.

I can identify, represent and estimate numbers in different contexts.

I can find 10 or 100 more or less than a given number.

I can recognise the place value of each digit in a three-digit number.

I can solve number problems and practical problems.

I can read and write numbers to 100 in numerals and in words.

I can solve missing number problems.

I can estimate the answer to a calculation and use inverse operations to check.

I can solve addition and subtraction problems.

I can subtract numbers up to three digits using an efficient written method.

I can add numbers up to three digits using an efficient written method.

I can add and subtract a *three-digit number* and *hundreds* mentally.

I can add and subtract a *three-digit number* and *tens* mentally.

I can add and subtract a *three-digit number* and *ones* mentally.

I can solve multiplication and division problems.

I can recall and use multiplication and division facts for the 8 times table.

I can use mental strategies to multiply a 2-digit number by a 1 digit.

I can write and calculate statements for $\times$ and $\div$ using the multiplication tables that I know.

I can recall and use multiplication and division facts for the 3 times table.

I can recall and use multiplication and division facts for the 4 times table.

I can use efficient written methods to multiply a 2 digit and a 1-digit number.

I can compare the durations of events.

I know the number of seconds in a minute and the number of days in each month, year and leap year.

I can estimate and read time with increasing accuracy and compare times using appropriate vocabulary.

I can tell the time using Roman numerals from I to XII.

I can tell and write the time from an analogue clock in 12 and 24-hour clocks.

I can add and subtract amounts of money to give change using £ and p.

I can measure the perimeter of a 2D shape.

I can measure, compare, add and subtract volume/capacity (l/ml).

I can measure, compare, add and subtract mass (kg/g).

I can measure, compare, add and subtract lengths (m/cm/mm).

I can solve problems involving fractions.

I can compare and order fractions, and fractions with the same denominators.

I can add and subtract fractions with the same denominator within one whole [$\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]

I can recognise and show, using diagrams, equivalent fractions.

I can recognise and use fractions as numbers.

I can find and write fractions for a set of objects.

I can recognise that tenths arise from dividing an object into 10 equal parts.

I can count up and down in tenths.

I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

I identify whether angles are greater than or less than a right angle.

I can recognise that two right angles make a half-turn. 3 make $\frac{3}{4}$ of a turn and 4 make a complete turn.

I can identify right angles.

I can recognise angles as a property of shape or a description of a turn.

I can recognise 3-D shapes in different orientations.

I can make 3-D shapes using modeling materials.

I can draw 2-D shapes.

I solve two-step problems using presented data.

I solve one-step problems using presented data.

I interpret and present data using tables.

I interpret and present data using pictograms.

I interpret and present data using bar charts.

Number and Place Value

Addition and Subtraction

Multiplication and Division

Measurements

Fractions

Geometry

Statistics

My Maths Targets



I can read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.

I can solve number and practical problems that involve all of the below.

I can round any number to the nearest 10, 100 or 1000.

I can identify, represent and estimate numbers.

I can compare and order numbers beyond 1000.

I can recognise the place value of each digit in a four - digit number.

I can count backwards through zero to include negative numbers.

I can find 1000 more or less than a given number.

I can count in multiples of 6, 7, 9, 25 and 1000.

I can solve subtraction two-step problems deciding which operations and methods to use and why.

I can solve addition two-step problems deciding which operations and methods to use and why.

I can use inverse operations check answers to a calculation.

I can estimate to check answers to a calculation.

I can subtract numbers with up to 4 digits using efficient methods.

I can add numbers with up to 4 digits using efficient methods.

I can solve multiplication and division problems.

I can multiply three-digit numbers by one-digit number.

I can multiply two-digit numbers by one-digit number.

I can recognise and use factor pairs in mental calculations.

I can multiply together three numbers.

I can use place value and known derived facts to divide mentally.

I can use place value and known derived facts to multiply mentally.

I can recall multiplication and division facts for $\times$ times up to 12×12 .

I can solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.

I can read, write and convert time between analogue and digital 12- and 24-hour clocks

I can estimate, compare and calculate different measures, including money in pounds and pence.

I can find the area of rectilinear shapes by counting squares.

I can measure and calculate the perimeter of a rectilinear figure in cm and m.

I can convert between different units of measure.

I can solve simple measure and money problems involving fractions and decimals.

I can compare numbers with the same number of decimal places.

I can round decimals with one decimal place to the nearest whole number.

I can find the effect of $\div$ a number by 10 and 100 and identify the value of the digits in the answer.

I can recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.

I can recognise and write decimal equivalents of any number of tenths or hundredths.

I can add and subtract fractions with the same denominator.

I can count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.

I can recognise and show, using diagrams, families of common equivalent fractions.

I can plot specified points and draw sides to complete a given polygon.

I describe movements between positions as translations of a given unit to the left/right and up/down.

I can describe positions on a 2-D grid as coordinates in the first quadrant.

I can complete a simple symmetric figure with respect to a specific line of symmetry.

I can identify lines of symmetry in 2-D shapes presented in different orientations.

I can identify acute and obtuse angles and compare and order angles up to two right angles by size.

I can compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes

I can solve 'difference' problems using information presented in bar charts, pictograms, tables and other graphs.

I can solve 'sum' problems using information presented in bar charts, pictograms, tables and other graphs.

I can solve 'comparison' problems using information presented in bar charts, pictograms, tables and other graphs.

I can interpret and present data using time graphs.

I can interpret and present data using bar charts.

Number and Place Value

Addition and Subtraction

Multiplication and Division

Measurements

Fractions and Decimals

Geometry

Statistics



My Maths Targets



I can read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

I can solve number problems and practical problems that involve all of the below.

I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000

I can use negative numbers in context; count forwards and backwards with positive and negative whole numbers through zero.

I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.

I know what each digit represents in numbers to 1 000 000.

I can read, write, order and compare numbers to at least 1 000 000.

I can use addition and subtraction to solve multi-step problems.

I can use rounding to check answers to calculations.

I can subtract mentally using increasingly large numbers.

I can add mentally using increasingly large numbers.

I can subtract and whole numbers with more than 4 digits.

I can add and whole numbers with more than 4 digits.

I can solve problems involving $\times$ and $\div$ including scaling by simple fractions and problems involving simple rates.

I can solve problems involving $\times$ and $\div$ including using factors and multiples, squares and cubes.

I can recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)

I can $\times$ and $\div$ whole numbers and those involving decimals by 10, 100 and 1000.

I can multiply and divide numbers mentally.

I can divide numbers up to 4 digits by a one-digit number.

I can multiply numbers up to 4 digits by a one- or two-digit number

I can establish whether a number up to 100 is prime and recall prime numbers up to 19.

I know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers

I can identify multiples and factors, including finding all factor pairs.

I can use all four operations to solve problems involving measure using decimal notation, including scaling.

I can solve problems involving converting between units of time

I can estimate volume and capacity.

I can estimate the area of irregular shapes.

I can calculate and compare the area of rectangles (including squares)

I can measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.

I understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints

I can convert between different units of metric measure.

I can write % as a fraction.

I can recognise the % symbol and understand what it means.

I can solve problems involving number up to 3d.p

I can read, write, order and compare numbers with up to 3 decimal places.

I can round decimals with 2 decimal places to the nearest whole number and to one decimal place.

I can recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.

I can read, write decimal numbers as fractions.

I can multiply proper fractions and mixed numbers by whole numbers.

I can $+$ and $-$ fractions with the same denominator and denominators that are multiples of the same number.

I can recognise mixed numbers and improper fractions and convert from one form to the other

I can identify, name and write equivalent fractions of a given fraction.

I can compare and order fractions whose denominators are all multiples of the same number

I can identify, describe and represent the position of a shape following a reflection or translation.

I can distinguish between regular and irregular polygons.

I can use the properties of rectangles to deduce related facts and find missing lengths and angles

I can identify other multiples of 90°

I can identify angles at a point on a straight line and $\frac{1}{2}$ a turn

I can identify angles at a point and one whole turn.

I can draw given angles, and measure them in degrees ($^\circ$).

I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles

I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations.

I can complete, read and interpret information in tables, including timetables.

I can solve 'difference' problems using information presented in a line graph.

I can solve 'sum' problems using information presented in a line graph.

I can solve 'comparison' problems using information presented in a line graph.

Number and Place Value

Addition and Subtraction

Multiplication and Division

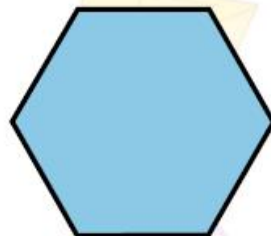
Measurements

Fractions and Decimals

Geometry

Statistics

My Maths Targets



I can enumerate possibilities of combinations of two variables.

I can find pairs of numbers that satisfy an equation with two unknowns.

I can express missing number problems algebraically.

I can generate and describe linear number sequences.

I can use simple formulae.

I can solve number and practical problems that involve all the below.

I can use negative numbers in context and calculate intervals across zero.

I can round any whole number.

I can read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.

Number, Place Value and algebra

I can use estimation to check answers to calculations.

I can solve problems involving addition, subtraction, multiplication and division.

I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

I can use the knowledge of the order of operations to carry out calculations involving the four operations.

I can identify common factors, common multiples and prime numbers

I can perform mental calculations, including with mixed operations and large numbers.

I can interpret remainders as whole number remainders, fractions, or by rounding.

I can divide numbers up to 4 digits by a 2-digit whole number.

I can multiply multi-digit numbers up to 4 digits by a two-digit whole number.

$+$, $-$, $\times$ and $\div$

I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

I can solve problems involving similar shapes where the scale factor is known or can be found.

I can solve problems involving the calculation of percentages.

I can solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts

Ratio and Proportion

I can calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3].

I can calculate the area of parallelograms and triangles.

I can recognise when it is possible to use formulae for area and volume of shapes.

I can recognise that shapes with the same areas can have different perimeters and vice versa.

I can convert between miles and kilometers.

I can use, read, write and convert between standard units.

I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.

Measurements

I can use estimation to check answers to calculations.

I can solve problems involving $+$, $-$, $\times$ and $\div$

I can use written division methods in cases where the answer has up to 2.d.p

I can multiply 1-digit numbers with up to 2 d.p by whole numbers.

I can identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places

I can associate a fraction with division and calculate decimal fraction equivalents.

I can divide proper fractions by whole numbers.

I can multiply simple pairs of proper fractions, writing the answer in its simplest form.

I can $+$ and $-$ fractions with different denominators and mixed numbers, using the concept of equivalent fractions.

I can compare and order fractions, including fractions > 1 .

I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination.

Fractions, Decimals and percentages.

I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

I can describe positions on the full coordinate grid.

I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

I can illustrate and name parts of circles, including radius, diameter and circumference.

I can find unknown angles in any triangles, quadrilaterals, and regular polygons.

I can compare and classify geometric shapes based on their properties and sizes.

I can recognise, describe and build simple 3-D shapes, including making nets.

I can draw 2-D shapes using given dimensions and angles

Geometry

I can calculate and interpret the mean as an average.

I can construct line graphs.

I can interpret line graphs.

I can construct pie charts.

I can interpret pie charts.

Statistics