Fladbury
Church of England First School

Maths Curriculum

Happy Hearts, Open Minds, Bright Futures

Jesus promised: “I came that you may have life and have it to the full.”
- John 10:10

Our Vision

Every child at Fladbury will know they are loved by God, have a **happy heart** and be part of a flourishing, well-led school. When they leave Fladbury, they will be well-prepared to meet challenges, confident in their abilities and look forward to their **bright future** with an **open mind**.

Our Mathematic Aims

The overarching aims of our Mathematics Curriculum are to support our children to have a rich and enjoyable experience in Maths, by providing the knowledge, skills and understanding that enable all our children to flourish in society and be fully prepared for the next stage in their learning. Our children will develop positive and confident attitudes towards Mathematics and be able to use and apply their knowledge to real life contexts.

To be able to follow lines of enquiry, reason mathematically and solve problems with increasing sophistication is another important aim at Fladbury.

Happy Hearts	Open Minds	Bright Futures
		
Through our Mathematics Curriculum, the lens of our Christian value of 'joy' and our vision statement 'happy heart', the children of Fladbury appreciate and understand that Maths is a powerful tool for global understanding and communication. Using it, they can make sense of the world and solve complex and real life problems and in doing so provide them with a sense of happiness and satisfaction. The feeling they get when they solve a problem or learn something new is overwhelmingly positive and joyful; and we actively look for that response when we teach at Fladbury.	Children with open minds understand sometimes there are no right or wrong answers. They analyse, hypothesise and experiment and their own thinking is supported, nurtured and developed. This open culture supports a spirit of freedom where children feel free to cross out (for example) their mathematical jottings, change their minds and develop their own strategies. Having an open mind in Mathematics is not always neat and tidy but it involves deep-level learning and sometimes the chaos of thinking, refining and finding new mathematical ideas.	Mathematics is constantly part of everyday life. In the future our children will make educated decisions about interest rates, budgeting, finding the best discounts when they shop, adjusting a recipe to feed more people, figuring out how much they will need for home improvement - all of these involve mathematics. Ultimately, at Fladbury we encourage our children to embrace and explore mathematics, as it will bring immense benefit to them that extends far beyond the classroom. Mathematics is a critical foundation that will leave our children to be well-poised to grow into global citizens equipped to tackle life's challenges, master the mundane and chase their dreams.

Spirituality in Mathematics

Fladbury's definition of Spirituality is: Spirituality is about understanding that we are part of something bigger than ourselves. It's the connections and relationships we have with God, with others, with ourselves and with nature. It brings about a sense of awe and wonder and can lead to asking big questions about who we are and our place in God's world.

The study of mathematics enables children to make sense of the world around them and at Fladbury we strive to enable our children to explore the connections between their Maths skills and every-day life. Developing deep thinking and an ability to question the way in which the world works promotes the spiritual growth of children. Our children are encouraged to see the sequences, patterns, symmetry and scale both in the man-made and the natural world and to use maths as a tool to explore it more fully.

Intent

"Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject". (National Curriculum)

The 2014 National Curriculum for Maths aims to ensure that all children:

- Become fluent in the fundamentals of Mathematics
- Are able to reason mathematically
- Can solve problems by applying their Mathematics

At Fladbury, these skills are embedded within Maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

Mathematics is the only way we have of expressing the fundamental principles of the universe; it is logic, it is rationality, it is using your mind to solve the biggest mysteries we know. Yet, we use maths every day in the most mundane ways, to handle money, predict weather or tell the time. At Fladbury First School, we want our children to experience the beauty and grandeur of maths alongside having a firm grasp of the fundamentals. We want them to enjoy mathematics and explore mathematical concepts so that they leave us just as confident tackling large problems as they are using their fundamentals.

We believe that all children should be fluent in the fundamentals of mathematics. By exposing them to a variety of different core concepts that are frequently practised, we hope to develop foundations in their understanding on which the children can build. From this, more instrumental/procedural approach, the children can then build a conceptual understanding allowing them to draw rich links between these core concepts.

To further reinforce these core concepts all children are exposed to problem solving. This daily problem solving is designed to encourage perseverance with mathematical problems as well as foster core aspects of logic and reasoning that the children will be able to apply more widely to their learning and life. Alongside the core concepts and problem solving, the children's ability to reason mathematically is fostered, with a particular emphasis on the use of mathematical vocabulary. This is done so that, children are able to express their thought process fully and allows them to develop arguments, justifications and proof. The use of mathematical language and core concepts is particularly relevant given the effect that COVID lockdowns have had on some of our children's attainment. Subject specific language has been linked to closing the gap with disadvantaged and advantaged children (Purves 2019) as well as the implementation of individualised technology to support those core concepts (Outhwaite et. Al. 2017).

Impact

Fladbury First School has a supportive ethos and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others.

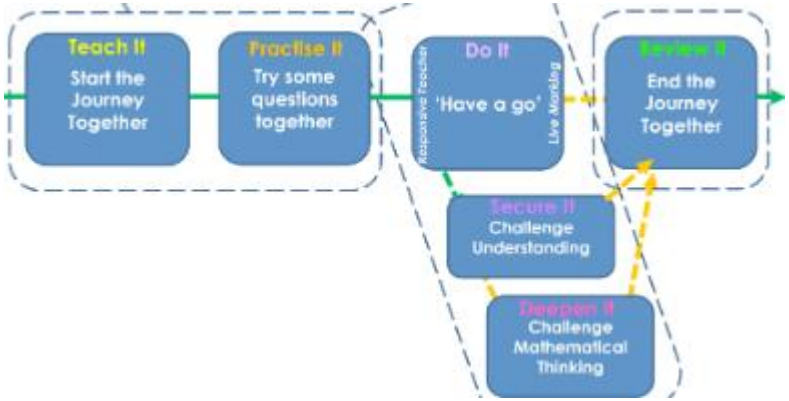
Children can underperform in Mathematics because they think they cannot do it or are not naturally good at it. The school's use of White Rose Maths addresses these preconceptions by ensuring that all children experience challenge and success in Mathematics by developing a growth mind set. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child.

By the time the children leave Fladbury First School we aim for each of them to be confident in the application of their fundamental maths skills in a variety of situations. They should be able to leverage this understanding to solve problems both mathematical and logical and use this to reason effectively. They will be able to then present a justification, argument or proof using mathematical language. We also want our children to have an appreciation for Maths more widely and how it is applied to a variety of real life contexts both mundane and wondrous. With this, they can discover, nurture and share their gifts wherever they take them.

Implementation

At Fladbury First School, we structure our Mathematics around the White Rose curriculum from EYFS to Year 4. This is to ensure that the distinct domains of mathematics are covered in sufficient depth and clarity. The White Rose curriculum structures the learning within these domains so that knowledge, concepts and procedures are carefully sequenced over time to build skills and knowledge systematically. We also ensure that we use the most up to date White Rose curriculum, which is revised each year based on research and teacher feedback. However, we do not use the White Rose resources exclusively as we want to ensure that teachers remain able to adapt and alter the learning to fit the needs of their pupils. This allows teachers to draw on Nrich, NCETM, I See Reasoning/Problem Solving, Maths No Problem! resources, and others, in order to ensure that the needs of the children in their class are being met.

We use a three-step approach to teaching mathematics, based on the ideas of Steve Lomax and the Glow MATHSHUBS. At Fladbury First School this takes the form of Teach it, Practise it, Do it, Secure it, Challenge it, Review it. (Lomax 2020) This approach allows children rich opportunities to develop their fundamental knowledge while still providing variation in which they can build their fluency, reasoning and problem solving.



We take our exploration of mathematics further during our Maths on Track Meetings (MOTs). One of the aims of this is to ensure that those children who may have not moved through the Secure it and Challenge it during the week are still given the chance to reason and problem solve using the knowledge they do have. Additionally, this gives all of our learners the opportunity to generalise from their understandings of the core concepts taught that week, something that is vital to their understanding of mathematics more widely (Mason and Johnston-Wilder 2004). Teachers reinforce an expectation that all children are capable of achieving high standards in Mathematics. The large majority of children progress through the curriculum content at the same pace; significant time is spent developing deep knowledge of the key ideas that are needed to underpin future learning. This ensures that all can master concepts before moving to the next part of the curriculum sequence, allowing no pupil to be left behind. If a pupil fails to grasp a concept or procedure, this is identified quickly and early intervention ensures the pupil is ready to move forward with the whole class in the next lesson.

The structure and connections within the mathematics are emphasised, so that pupils develop deep learning that can be sustained. Lesson design identifies the new mathematics that is to be taught, the key points, the difficult points and a carefully sequenced journey through the learning. Teachers use precise questioning in class to test conceptual and procedural knowledge and assess children regularly to identify those requiring intervention, so that all children keep up. Children's explanations and their proficiency in articulating mathematical reasoning, with the precise use of mathematical vocabulary, are supported through the use of stem sentences provided by the teacher. Key facts such as multiplication tables and addition facts within 10 are learnt to automaticity to avoid cognitive overload in the working memory and enable pupils to focus on new concepts.

The curriculum is designed to have an emphasis on number, with a large proportion of time spent reinforcing number to build competency. Lessons are planned to provide plenty of opportunities to build reasoning and problem solving elements into the curriculum. When introduced to a new concept, children have the opportunity to use concrete objects and manipulatives to help them understand what they are doing. Alongside this, children are encouraged to use pictorial representations. These representations can then be used to help reason and solve problems. Both concrete and pictorial representations support children's understanding of abstract methods.

Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time. These teaching blocks are broken down into smaller steps, to help children understand concepts better. This approach means that children do not cover too many concepts at once which can lead to cognitive overload. Each lesson phase provides the means for children to achieve greater depth, with children who are quick to grasp new content, being offered rich and sophisticated problems, within the lesson as appropriate.

Age Related Coverage

Pre School

- Develop fast recognition of up to 3 objects, without
- having to count them individually (‘subitising’).
- Recite numbers past 5.
- Say one number 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’).
- 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. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: ‘more than’, ‘fewer than’.
- 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’.
- 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’
- Make comparisons between objects relating to size, length, weight and capacity.
- Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. Combine shapes to make new ones – an arch, a bigger triangle, etc.
- 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. Begin to describe a sequence of events, real or fictional, using words such as ‘first’, ‘then...’

Reception

- Count objects, actions and sounds.
- Subitise.
- Link the number symbol (numeral) with its cardinal number value.
- Count beyond ten.
- Compare numbers
- Understand the ‘one more than/one less than’ relationship between consecutive numbers.
- Explore the composition of numbers to 10.
- Automatically recall number bonds for numbers 0–5 and some to 10.
- Select, rotate and manipulate shapes to develop spatial reasoning skills.
- Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.
- Continue, copy and create repeating patterns.
- Compare length, weight and capacity.

Place Value

	Year 1	Year 2	Year 3	Year 4
Autumn	I can sort objects. I can count objects. I can represent objects. I can count, read and write forwards from any number 0 to 10. I can count, read and write backwards from any number 0 to 10. I can count one more and less. I can show One-to-one correspondence to start to compare groups. I can compare groups using language such as equal, more/greater, less/fewer. I can use the <, > and = symbols. I can compare & order numbers and groups of objects.	I can count to 20. I can count objects to 100 by making 10s. I can recognise tens and ones. I can use a place value chart. I can write numbers to 100 in words. I can flexibly partition numbers to 100. I can write numbers to 100 in expanded from. I can count in tens on a number line to 100. I can count in tens and ones on a number line to 100.	I can represent numbers to 100. I can partition numbers to 100. I can represent numbers to 1,000. I can partition numbers to 1,000.	I can represent numbers to 1,000. I can partition numbers to 1,000. I can use number lines to 1,000. I can represent numbers to 10,000. I can partition numbers to 10,000.
Spring	I can use Ordinal numbers (1st, 2nd, 3rd…). I can count forwards and backwards and write numbers to 20 in numerals and words. I can say how many Tens and Ones. I can count one more and one less. I can compare groups of objects. I can compare and order numbers within 20. I can say the numbers to 50. I can represent numbers to 50. I can say one more and one less than a given number. I can compare objects & numbers within 50. I can order numbers within 50. I can count in 2s & 5s.	I can estimate numbers on a number line. I can compare objects. I can compare numbers. I can order objects and numbers. I can count in 2s, 5s and 10s. I can count in 3s.	I can plot numbers on number line to 1000. I can estimate on a number line to 1000. I can compare numbers to 1000. I can order numbers to 1000.	I can use flexible partitioning of numbers to 10,000. I can find 1, 10, 100, 1,000 more or less. I can use a number line to 10,000. I can estimate on a number line to 10,000. I can compare numbers to 10,000. I can order numbers to 10,000.
Summer	I can count to 100. I can partition numbers. I can compare numbers. I can order numbers. I can say one more, one less than a given number.	Recap on above small steps.	I can flexibly partition of numbers to 1,000 I can find 1, 10 or 100 more or less. I can count in 50s.	I can read and write Roman numerals. I can round to the nearest 10. I can round to the nearest 100. I can round to the nearest 1,000. I can round to the nearest 10, 100 or 1,000.

Addition and Subtraction

	Year 1	Year 2	Year 3	Year 4
Autumn	I can use the Part-Whole model. I can recognise and use the addition symbol. I can find the fact families – addition facts. I can find number bonds for numbers within 10. I can find systematic methods for number bonds within 10. I can find a part. I can use subtraction – taking away, how many left? using the crossing out method. I can Subtract by taking away, and say how many left? I recognise and use the subtraction symbol	I can complete fact families, both addition and subtraction, for bonds to and within 20. I can derive related facts from a known fact. I can complete number bonds to 100 (in tens). I can add in 1's. I can add by making 10. I can add 3 1-digit numbers. I can add to the next 10. I can add across a 10.	I can add and subtract 1s. I can add and subtract 10s. I can add and subtract 100s. I can add two numbers (no exchange). I can add two numbers – across 10 & 100. I can add 2-digit and 3-digit numbers.	I can add up to two 4-digit numbers – no exchange. I can add two 4-digit numbers – one exchange. I can subtract two 4-digit numbers – no exchange. I can subtract two 4-digit numbers – one exchange.
Spring	I can recite my number bonds to 10. I can compare number bonds. I can solve addition by adding together. I can solve addition sentences by adding more. I can solve subtraction by finding a part, breaking apart I can fact families – the 4 facts. I can solve Subtraction by counting back. I can solve Subtraction by finding the difference. I can Subtract – not crossing 10.	I can subtract 1's. I can subtract across a 10. I can subtract from a 10. I can subtract a 1-digit number from a 2-digit number (across a 10). I can find 10 more and/or 10 less than a 2-digit number. I can add and subtract 10 from and to a 2-digit number.	I can subtract two numbers (no exchange). I can add two numbers – across 10/100. I can subtract two numbers (across a 10). I can subtract two numbers (across a 100). I can add 2-digit and 3-digit numbers. I can subtract a 2-digit number from a 3-digit number	I can add two 4-digit numbers – more than one exchange. I can subtract two 4-digit numbers – more than one exchange.
Summer	I can fact families – the 8 facts. I can compare addition and subtraction statements a + b > c. I can compare addition and subtraction statements a + b > c + d. I can add by counting on. I can find and make number bonds. I can add by making 10. I can subtract by crossing 10. I can use related facts. I can compare number sentences.	I can add 2 2-digit numbers (not across a ten). I can add 2 2-digit numbers (across a ten). I can subtract 2 2-digit numbers (not across a ten). I can subtract 2 2-digit numbers (across a ten). I can complete addition and subtraction sentences, choosing the appropriate method. I can solve missing number problems.	I can calculate complements to 100. I can sensibly estimate answers. I can use inverse operations.	I can use efficient subtraction methods. I can estimate answers I can check strategies.

Multiplication and Division

	Year 1	Year 2	Year 3	Year 4
Autumn	I can count in 2's 5's and 10s. I can make equal groups. I can add equal groups. I can make arrays.	I can recognise equal groups. I can make equal groups. I can add equal groups. I can make multiplication sentences using the x symbol. I can make multiplication sentences from pictures. I can use arrays. I can apply the 2-times table. I can apply the 5 times table. I can apply the 10 times table.	I can multiply using arrays. I can multiply using bar models. I can multiply as repeated addition. I can divide TU by U with sharing. I can divide TU by U with grouping.	I can multiply by 10. I can multiply by 100 I can divide by 10. I can divide by 100. I can multiply by 1 and 0. I can divide by 1 and itself. I can multiply and divide by 9. I can recall 9 times table and division facts.
Spring	I can find and make doubles. I can make equal groups – grouping. I can make equal groups - sharing	I can make equal groups by sharing. I can make equal group by grouping. I can divide by 2. I can identify odd and even numbers. I can divide by 5. I can divide by 10.	I can multiply by 3 – grid method. I can multiply by - grid method. I can multiply by 8 – grid method. I can multiply TU x U grid method multiples of 10.	I can multiply and divide by 6. I can recall 6 times table and division facts. I can multiply and divide by 7. I can recall 7 times table and division facts. I can recall 11 and 12 times-table. I can multiply 2-digits by 1-digit. I can divide 2-digits by 1-digit.
Summer	I can use multiplication and division as the inverse to each other. I can solve one step problems for multiplication and division	Recap on above small steps.	I can multiply TU x U using the grid method. I can compare statements to check accuracy.	I can multiply 3 numbers. I can recall factor pairs. I can use efficient multiplication. I can use written methods for multiplication and division. I can multiply 3-digits by 1-digit. I can divide 2-digits by 1-digit. I can divide 3-digits by 1-digit. I can complete correspondence problems.

Shape

	Year 1	Year 2	Year 3	Year 4
Autumn	I can recognise and name 3D shapes. I can sort 3D shapes.	I can recognise 2D shapes. I can count the sides on a 2D shape. I can count the vertices on a 2D shape. I can draw 2D shapes. I can identify and draw lines of symmetry.	I can use turns and identify angles – quarter, full, half. I can find right angles in shapes. I can compare angles – acute, right, obtuse.	Not taught
Spring	I can recognise and name 2D shapes. I can sort 2D shapes	I can recognise 3D shapes. I can count faces on 3D shapes. I can count edges on 3D shapes. I can count vertices on 3D shapes.	Not taught	I can Identify angles. I can compare and order angles. I can compare and classify. triangles, based on their properties and sizes.
Summer	I can use 2D and 3D shapes and describe them. I can make patterns using 3D and 2D shapes.	I can sort 2D shapes. I can make patterns with 2D shapes. I can sort 3D shapes. I can make patterns with 3D shapes.	I can draw shapes accurately. I can explain the meaning of horizontal and vertical. I can understand the difference between parallel and perpendicular.	I can compare and classify quadrilaterals based on their properties and sizes. I can identify lines of symmetry in 2-D shapes. I can complete a symmetric figure.

Position

	Year 1	Year 2	Year 3	Year 4
Autumn	I can describe whole and half turns. I can describe position using left right, forwards and backwards up and down.	I can describe movement. I can describe turns. I can describe movement and turns.	Not taught	Not taught
Spring	I can describe turns, including quarter and three quarter. I can describe position of objects within mazes and on grids.	Not taught	Not taught	I can describe positions on a 2-D grid as coordinates in the first quadrant. I can plot specified points and draw sides to complete a given polygon.
Summer	Not taught	I can describe movement and turns. I can make patterns with shapes.	Not taught	I can move position on a grid. I can describe movements between positions as translations of a given unit to the left/right and up/down on a grid.

Measure

	Year 1	Year 2	Year 3	Year 4
Autumn	I can compare lengths and heights. I can measure length. I can use the language long/short, longer/shorter, tall/short.	I can measure length in cm. I can measure length in m. I can compare lengths. I can order lengths.	I can measure length using cm and mm. I can find equivalent lengths cm and m. I can find equivalent lengths cm and mm. I can compare lengths by converting to same unit.	I can explain what area is. I can calculate area by counting squares.
Spring	I am Introduced to weight and mass. I can measure mass. I can compare mass. I can use the language heavy/light, heavier than, lighter than.	I can complete the four operations with lengths.	I can add lengths cm and m. I can subtract lengths cm and mm. I can measure perimeter. I can calculate perimeter.	I can make shapes with a given area. I can compare areas of shapes.
Summer	I am Introduced to capacity and volume. I can measure capacity. I can compare capacity. I can use the language of full/empty, more than, less than, half, half full, quarter.	I can compare mass. I can measure mass in grams. I can measure mass in kilograms. I can compare capacity. I can measure in millilitres. I can measure in litres. I can measure temperature (Celsius).	I can measure mass. I can compare mass. I can add and subtract mass. I can measure capacity. I can compare capacity. I can add and subtract capacity.	I can convert KM to M and M to KM. I can measure and calculate the perimeter of a rectilinear figure including squares in cm and m. I can find the area of rectilinear shapes by counting squares.

Fractions

	Year 1	Year 2	Year 3	Year 4
Autumn	Not taught	I can make equal parts. I can recognise half. I can find half. I can recognise a quarter. I can find a quarter. I can recognise a third. I can find a third.	I can identify unit and non-unit fractions. I can make a whole using fractions. I can count in tenths and understand value & decimal representation. I can find fractions of a set of objects.	I can recognise and show, using diagrams, what a fraction is. I can count in fractions. I can recognise and write fractions greater than 1.
Spring	I can recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity.	I can identify a unit-fraction. I can identify a non-unit fraction.	I can add fractions with the same denominator. I can subtract fractions with the same denominator. I can compare fractions. I can order fractions.	I can recognise and find equivalent fractions. I can add 2 or more fractions. I can subtract 2 fractions.
Summer	I can recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity.	I can identify the equivalent fractions half and quarter. I can find three quarters. I can count in fractions.	I can place fractions on a number line. I can find equivalent fractions.	I can subtract from whole amounts. I can calculate fractions of a quantity. I can complete problem solving questions and calculate quantities.

Time

	Year 1	Year 2	Year 3	Year 4
Autumn	Not taught	Not taught	I can solve problems on months and years. I can order events based on the hours in a day. I can tell the time to 5 minutes.	I can read and write time to hours, minutes and seconds.
Spring	I can say which day/ month comes before and after. I can identify what date it is. I can read and record time to the hour.	I can tell the time to the o'clock and half past. I can tell the time to the quarter past and quarter to. I can tell the time to 5 minutes.	I can tell the time to the nearest minute. I can use a.m. and p.m. I can 24-hour clock – what is it and how to use.	I can solve problems involving Years, months, weeks and days. I can convert between units of measurement hour to minute, minutes to seconds.
Summer	I can sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]. I can read and record time to the half hour. I can write times. I can compare time.	I can identify the minutes in a hour and the hours in a day. I can find and use durations of time. I can compare durations of time.	I can calculate the duration of something. I can compare durations. I can calculate start and end times. I can measure time in seconds.	I can read, write and convert time between analogue and digital 12- and 24-hour clocks. I can problem solve with 12 and 24 hour clocks.

Money

	Year 1	Year 2	Year 3	Year 4
Autumn	Not taught	Not taught	I can add and subtract using pounds and pence. I can convert between pounds and pence.	I can estimate amounts of money. I can count, and compare money in pounds and pence. I can order money and different amounts.
Spring	I can recognise coins and notes and know their value.	I can count money in pence. I can count money in pounds (using notes and coins). I can count money in notes and coins. I can select the correct money needed. I can make the same amount.	I can add money – pounds and pence. I can subtract money -pounds and pence.	Not taught
Summer	I can use coins to make amounts.	I can compare money. I can find the total. I can find the difference. I can find change. I can complete two-step problems.	I can give change accurately I can solve problems relating to money.	I can use the four operations.

Statistics

	Year 1	Year 2	Year 3	Year 4
Autumn	Not taught	Not taught	Not taught	Not taught
Spring	Not taught	I can make tally chart.. I can draw a pictogram (1-1). I can interpret a pictogram (1-1) I can draw pictograms (2, 5, and 10). I can interpret pictograms (2, 5 and 10). I can make and interpret block diagrams.	I can interpret pictograms I can create my own pictograms.	Not taught
Summer	Not taught	Not taught	I can interpret tables and answer questions. I can research and find own data. I can present data in a table.	I can interpret charts. I can solve comparison, sum & difference problems. I can read and interpret line graphs and plot my own graph using given data. I can compare and problem solve the data from line graphs.

Decimals and Percentages

	Year 4
Autumn	Not taught
Spring	Not taught
Summer	I can recognise and write decimal equivalents of any number of tenths or hundredths. I can recognise and write decimal equivalents to ½, ½, ¾. I can find the effect of dividing of one or two digit numbers by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. I can round decimals with 1 decimal place to the nearest whole number. I can compare numbers with the same number of decimal places up to 2 decimal places. I can solve simple measure and money problems involving decimals to 2 decimal places.

Pre School Vocabulary

Place Value and Number	Addition and Subtraction	Multiplication and Division	Measure	Geometry (Position and direction)	Geometry (Properties of Shape)	Fractions	General/Problem Solving
Number Zero, one, two, three…to ten Count Largest/smallest	More Less Altogether	Groups Share	Full Empty Heavy Light Time Days of the week Day Month Seasons: Spring, Summer, Autumn, Winter	Over Under Underneath Above Below Top Bottom Side On In Outside Inside Around In front Behind Front Back Before After Next to	Shape Cube Pyramid Cone Circle Triangle Square Flat Curved Straight Round Corner	Whole	Listen Join in Say Think, Show me Look at Point to Find Choose Collect Use Make Build Colour/shade Draw Ring Count Counters Cubes Blocks Dice Dominoes Peg board

Reception Vocabulary

Place Value and Number	Addition and Subtraction	Multiplication and Division	Measure	Geometry (Position and direction)	Geometry (Properties of Shape)	Fractions	General/Problem Solving
Number Zero, one, two three…to twenty Count Before/After More, Less, Many Largest, Smallest Equal Count forwards Count backwards	Number bonds Number line Add/addition More Plus Total Altogether Take away Equals Is the same as	Double Half/halve Groups share	Full, Half full, Empty Holds container Balances Heavy, Heavier Light, Lighter, Lightest Time, Days of the week, Day, Month Birthday, Holiday Seasons: Spring, Summer, Autumn, Winter Morning, Afternoon, Evening, Night, Bedtime Lunchtime, Dinnertime, Playtime Today, Yesterday, Tomorrow First, second, third etc Long, longer, longest Short, shorter, shortest Tall, taller, tallest High, higher, highest Thick, thin, low, wide, narrow, deep, shallow Money, coin, pence, penny, pound, price, cost, buy, sell, spend, how much>	Over Under Underneath Above Below Top Bottom Side On In Outside Inside Around In front Behind Front Back Before After Beside Next to Opposite Between Up down Forwards Backwards To From Stretch Bend	Group Sort Shape Cube Cuboid Pyramid Sphere Cone Cylinder Circle Circular Triangle Square Flat Curved Straight Round Corner Face Side Edge	Whole Half Halve	Listen Join in Say Think, Show me Start from Look at Point to What comes next? Find Choose Collect Make Build Colour/shade Draw Ring Count Counters Cubes Blocks Dice Dominoes Peg board In order

Year 1 Vocabulary

Place Value and Number	Addition and Subtraction	Multiplication and Division	Measure	Geometry (Position and direction)	Geometry (Properties of Shape)	Fractions	General/Problem Solving
Numbers to twenty and beyond None Count on, count up, count from, count down Few, fewer, fewest Greater than, less than Odd, even Pair Units, ones, tens Ten more/less Digit, numeral, figures Compare Order, in order, a different order Size, value, between, halfway between	Sum Near double Difference between How many more to make? How many more is …than? How much more is..? Subtract Minus How many fewer is…than? How much less is…?	Odd, even Count in twos/fives Count in tens (forwards from/backwards from) How many times? Lots of Groups of Once, twice, Share equally Group in pairs Equal groups of	Weigh, weighs Scales Week Year Weekend Before, after Next, last Now, soon, early, late Quick, quicker, quickest, quickly, Fast, faster fastest Slow, slower, slowest, slowly Old, older, oldest New, newer, newest Takes longer, takes less time Hour, o'clock, half past Analogue, digital watch, hands, How long ago? How long will it be? How long will it take? How often? Always, never, often, sometimes, usually Fair, near, close Metre, ruler, metre stick spent, change Dear, cheap(er), costs more, costs less, costs the same Total	Position Apart Middle, edge, centre, corner, Direction Journey Left, right Sideways Across Close, far, near Along, through Towards, away from Movement Slide, roll, turn, whole turn, half turn	Hollow, solid Point, pointed Size – bigger, larger, smaller	Equal parts, four equal parts One half, two halves A quarter two quarters	Imagine, remember Start with, start at Put, place, fit Arrange, rearrange Change, change over Split, separate Carry on, continue, repeat What comes next? Tell me, describe, pick out, talk about, explain, show me, Read, write, record, trace, copy, complete, finish, end Tick, cross, draw a line between, join, arrow Count, workout, answer, check, missing number Number facts, number line, number track, number square, number cards, Abacus Same way, different way, best way, another way In order, in a different order Not all, every, each

Year 2 Vocabulary

Place Value and Number	Addition and Subtraction	Multiplication and Division	Measure	Geometry (Position and direction)	Fractions	Data/Statistics	General/Problem Solving
Numbers to one hundred Hundreds Partition Recombine Hundred More/less	Sum Commutative Inverse Near double	Three times, five times Multiple of Times Multiply Multiply by Repeated addition Array, row, column, Divide Divide by Left Left over	Quarter past/to Capacity m/km, g/kg, ml/l temperature (degrees)	Rotate Rotation Clockwise Anti-clockwise Straight line Ninety degree Turn Right angle **Geometry (Properties of Shape)** Symmetry, Symmetrical Line of symmetry Fold Match Mirror line Reflection Pattern Repeating pattern Octagon Kite Pentagon Prism	Three quarters, one third, a third Equivalence, equivalent	Count, tally, sort Vote Graph, block graph, pictogram Represent Group, set, list, table Label, title Most popular, most common, least popular, least common	Predict Describe the pattern, describe the rule Find, find all, find different Investigate

Year 3 Vocabulary

Place Value and Number	Addition and Subtraction	Multiplication and Division	Measure	Geometry (Position and direction)	Geometry (Properties of Shape)	Fractions	Data/Statistics
Numbers to one thousand Integer Intervals Column Place value Digit Value Worth Place value holder Roman numerals I to XIII	Column addition Column subtraction Formal written method Exchange	Product Multiples of 4, eight, fifty and one hundred Scale up Divisibility Divisible by Exchange Remainder	Leap year Twelve-hour/twenty- four hour clock	Greater than/less than ninety degrees Orientation (same and different orientation)	Horizontal Vertical Diagonal, Perpendicular Parallel lines Heptagon Hexagon Parallelogram Rhombus Trapezium	Numerator Denominator Unit fraction Non-unit fraction Compare and order Tenths	Chart Bar chart Frequency table Tally Carroll diagram Venn diagram Axis Axes Diagram Label

Year 4 Vocabulary

Place Value and Number	Addition and Subtraction	Multiplication and Division	Measure	Geometry (Position and direction)	Geometry (Properties of Shape)	Fractions	Data/Statistics
Tenths Hundredths Decimal (places) Round (to nearest) Thousand more/thousand less Negative Integers Count through zero		Multiplication facts (up to 12X12) Division facts (associated facts) Inverse Inverse operation Derive	Convert	Co-ordinates Translation First quadrant X-axis Y-axis Perimeter Area	Quadrilaterals Triangles – right angle, scalene, equilateral Right angle Acute and obtuse angles	Equivalent decimals and fractions	Continuous data Line graph