

| Lower Key Stage Two                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Year Three                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Year Four                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Flashback Four daily session: the children in these year groups tale part in a short, targeted return to learning from previous units, including those in previous years.                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Autumn Term                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p><b>Place Value (3 weeks)</b></p> <p>Represent, partition, compare, order and use number lines to represent numbers up to 1,000, beginning with numbers up to 100. Investigate the structure of a number considering the hundreds, tens and ones using concrete resources such as place value counters, base 10 and place value charts. These can be used to find 1, 10 or 100 more or less than a given number or representation. Children build upon their knowledge of number lines up to 1,000 reading, estimating and interpreting exact values. Children will apply their knowledge of the 5 times-tables to count in 50s from zero both forwards and backwards without going beyond 1,000. In the maths story ‘One Hundred Hungry Ants’, children investigate the different ways to make one hundred and clearly visualise division and how this knowledge can help them to meaningfully solve problems.</p> <p><b>Addition and subtraction (5 weeks)</b></p> <p>Children will recap number bonds to 10 and apply this knowledge when adding and subtracting 1s, 10s and 100s. Develop number sense through explicitly exploring calculations and making links. Add and subtract a 2-digit and 3-digit number with exchanges (across 10 and 100). To ensure accuracy, children will estimate and use inverse operations. Make decisions on the appropriate operation to use for word problems using bar models to support understanding.</p> <p><b>Multiplication and division A (4 weeks)</b></p> <p>Arrays are used to enhance the link between repeated addition and multiplication to refer to the times-table facts learnt in Year Two. Multiples of 2, 5 and 10 are revisited. Children are introduced to multiples of 3, 4 and 8 using their knowledge of equal groups and a range of concrete manipulatives and pictorial representations. Explore dividing by 3, 4 and 8 by sharing into equal groups. Explicit opportunities to make connections between the 2, 4 and 8 times-tables. Continue to develop fluency of times-table facts.</p>                                                                                                                                                                                                         | <p><b>Place value (4 weeks)</b></p> <p>Represent, partition, compare and order numbers up to ten thousand beginning with investigating numbers to one thousand. Children’s knowledge of place value is consolidated through the story ‘Earth Day Hoorah!’ which investigates groups of 10s, 100s and 1000s.</p> <p>Use number lines to estimate and consolidate learning. Round numbers to the nearest 10, 100 or 1,000; this is introduced through the story ‘Sir Cumference and the roundabout battle.’ Find 1, 10, 100, and 1,000 more or less than a given number. Explore the similarities and differences between the Roman number system and our number system; learn that L represents 50 and C represents 100.</p> <p><b>Addition and subtraction (3 weeks)</b></p> <p>Add and subtract 1s, 10s, 100s and 1,000s to any 4-digit number. Add and subtract two 4-digit numbers with more than one exchange. Investigate efficient subtraction strategies such as mental methods and choose the most appropriate. Estimate answers and develop further checking strategies to ensure accuracy.</p> <p><b>Area (1 week)</b></p> <p>Investigate different methods to find an area of a two-dimensional shape or surface including counting squares and half squares. Make rectilinear shapes to further investigate area. Use greater than, less than and equal symbol to compare areas.</p> <p><b>Multiplication and division A (3 weeks)</b></p> <p>Use facts they already know to find unknown facts. Children bring together their knowledge of multiplying and dividing by 3, 6, 9, 7, 11 and 12 to become more fluent in these multiplication and division facts. Explore multiplying by 1 and 0 and dividing a number by 1 and itself. Multiply three numbers.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p><b>Multiplication and division B (3 weeks)</b></p> <p>Look at multiples of 10 beyond the times tables and explore related calculations using known facts. Children reason about multiplication in abstract representations. Multiply a 1-digit by a 2-digit number with exchanges using partitioning and concrete and pictorial representations. Develop understanding of related facts by linking multiplication and division facts. Divide a 2-digit number by a 1-digit number with exchanges and remainders using partitioning and concrete and pictorial representations. Children focus on scaling and correspondence problems.</p> <p><b>Length and perimeter (3 weeks)</b></p> <p>Measure in metres, centimetres and millimetres and understand the appropriateness of when to use different units. Children convert between metres, centimetres and millimetres using their knowledge of equivalent lengths. Compare and order lengths using comparison language and inequality symbols. Add and subtract lengths with different units. Introduce to perimeter for the first time. Measure and calculate perimeter.</p> <p><b>Fractions A (3 weeks)</b></p> <p>Explore denominators of unit fractions and compare and order these. Understand numerators and compare and order non-unit fractions. Investigate the whole in relation to fractions. Examine real-life contexts of measure by interpreting scales focusing on quarters, halves and thirds. Represent fractions on a number line counting forwards and backwards. Compare number lines and use bar models to find equivalent fractions.</p> <p><b>Mass and capacity (3 weeks)</b></p> <p>Use scales to read measurements by dividing 100 into 2, 4, 5 and 10 equal parts. Measure mass in grams and kilograms. Investigate equivalent masses. Measure capacity and volume in millilitres and litres. Compare, add and subtract mass, capacity and volume.</p>                                                                                                                                                                                                                                                                                                                                 | <p><b>Multiplication and division B (3 weeks)</b></p> <p>Children are introduced to factor pairs, using arrays to consolidate understanding. Multiply and divide integers by 10 and 100. Explore related facts within multiplication and division. Explore informal methods to multiply a 2-digit and 1-digit number using concrete and pictorial representations. Use formal written methods to multiply a 3-digit by a 1-digit number. Learn to divide a 3-digit number by a 1-digit number with remainders using concrete and pictorial representations. Use a range of representations and contexts and solve correspondence problems. Explore and make decisions about the most efficient multiplication method to use in a range of contexts.</p> <p><b>Length and perimeter (2 weeks)</b></p> <p>Measure in and convert kilometres and metres. Calculate the perimeter of rectilinear shapes on a grid and using side lengths. Problem solve to find the missing lengths in rectilinear shapes to calculate perimeter. Find perimeters of regular and irregular polygons.</p> <p><b>Fractions (4 weeks)</b></p> <p>Recap the part-whole relationship of fractions and explore fractions greater than 1. Partition a mixed number fraction. Compare and order mixed numbers and represent them on number lines. Convert between mixed number fractions and improper fractions. Investigate equivalent fractions on a number line and equivalent families. Add and subtract fractions including mixed number fractions. Sir Cumference and the Fraction Faire maths story is used to aid children in their understanding fractions of an amount and equivalent fractions.</p> <p><b>Decimals A (3 weeks)</b></p> <p>Explore tenths and hundredths as fractions and decimals. Represent tenths and hundredths on a place value chart and number line. Divide a 1– or 2-digit number by 10 and 100.</p>                                                                                                                                                                                                                                                                                                                                                                          |
| Spring Term                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p><b>Fractions B (2 weeks)</b></p> <p>Explore and represent a tenth in different ways including as decimals and count in tenths. Represent fractions beyond one whole on a number line. Find a fraction of an amount by dividing into equal groups and solve problems in various contexts. Compare and order fractions. Add and subtract fractions with the same denominator within one whole.</p> <p><b>Money (2 weeks)</b></p> <p>Understand the value of coins and notes and represent amounts in different ways. Convert between pounds and pence. Add and subtract two amounts of money using pictorial representations to support them. Use number lines and part-whole models to subtract to find change.</p> <p><b>Time (3 weeks)</b></p> <p>Look at months, years and leap years. Discuss hours in a day and introduce children to language such as ‘noon’, ‘midday’ and ‘midnight’ ‘a.m.’ and ‘p.m.’ to describe the time of day. Tell the time to the nearest minute on an analogue clock and recognise and use Roman numerals on a clock face. Introduce to telling the time on a 24–hour digital clock. Find and compare the duration of events using digital and analogue clocks. Find the start and end times of events. Measure and compare durations of time in seconds.</p> <p><b>Shape (2 weeks)</b></p> <p>Recognise angles as a measure of a turn understanding clockwise and anti-clockwise. Investigate angles in shapes. Introduce to the words ‘acute’ and ‘obtuse’ as a way of describing angles. Measure and draw straight lines accurately in centimetres and millimetres. Practice rounding measurements to the nearest centimetre. Identify and find horizontal lines, vertical lines and lines of symmetry in a range of contexts. Find parallel and perpendicular lines. Recognise, describe properties and draw 2-D shapes accurately. Recognise, describe and construct 3-D shapes.</p> <p><b>Statistics (2 weeks)</b></p> <p>Build on understanding of pictograms from Year 2 continuing to read and interpret information in order to answer questions about the data. Interpret information in pictograms and tally charts in order to construct bar charts. Interpret data from tables to answer one and two-step problems.</p> | <p><b>Decimals B (2 weeks)</b></p> <p>Through the story ‘Sir Cumference gets Decima's point’ children look at the place value of decimal numbers and counting in decimals. Explore making a whole from any number of tenths and hundredths. Compare and order decimals up to 2 decimal places. Round numbers with 1 decimal place to the nearest whole. Write one half, one quarter and three quarters as decimals.</p> <p><b>Money (2 weeks)</b></p> <p>Recap converting between pounds and pence and adding and subtracting with money. Partition pounds and pence and children are introduced to decimal notation. Compare amounts using the knowledge that £1 = 100p. Estimate with money by rounding to the nearest pound. Solve simple problems with money involving all four operations exploring methods such as partitioning to and recombining to add money.</p> <p><b>Time (2 weeks)</b></p> <p>Recap telling the time to the nearest minute and the 12– and 24-hour clock. Using knowledge of the four operations, convert between different units of time (hours, minutes, seconds, years, months, weeks and days). Convert between analogue and digital times using the 12– and 24– hour clocks.</p> <p><b>Shape (2 weeks)</b></p> <p>Identify obtuse, acute and right angles. Compare and order angles is ascending and descending order. Classify triangles for the first time using the names ‘isosceles’, ‘scalene’ and ‘equilateral’ using rulers to measure sides. Name and draw quadrilaterals and describe their properties. Find and identify lines of symmetry within 2-D shapes.</p> <p><b>Statistics (1 week)</b></p> <p>Decide which scale is most appropriate when drawing bar charts from information gathered. Answer and ask questions about data in pictograms, bar charts and tables. Children are introduced to line graphs in the context of time and create graphs to represent continuous data. Solve comparison, sum and difference problems using discrete and continuous data with a range of scales.</p> <p><b>Position and direction (2 weeks)</b></p> <p>Children are introduced to coordinates for the first time and they describe positions and plot points in the first quadrant. Move shapes and points in specific directions.</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p><b>Fractions B (2 weeks)</b></p> <p>Explore and represent a tenth in different ways including as decimals and count in tenths. Represent fractions beyond one whole on a number line. Find a fraction of an amount by dividing into equal groups and solve problems in various contexts. Compare and order fractions. Add and subtract fractions with the same denominator within one whole.</p> <p><b>Money (2 weeks)</b></p> <p>Understand the value of coins and notes and represent amounts in different ways. Convert between pounds and pence. Add and subtract two amounts of money using pictorial representations to support them. Use number lines and part-whole models to subtract to find change.</p> <p><b>Time (3 weeks)</b></p> <p>Look at months, years and leap years. Discuss hours in a day and introduce children to language such as ‘noon’, ‘midday’ and ‘midnight’ ‘a.m.’ and ‘p.m.’ to describe the time of day. Tell the time to the nearest minute on an analogue clock and recognise and use Roman numerals on a clock face. Introduce to telling the time on a 24–hour digital clock. Find and compare the duration of events using digital and analogue clocks. Find the start and end times of events. Measure and compare durations of time in seconds.</p> <p><b>Shape (2 weeks)</b></p> <p>Recognise angles as a measure of a turn understanding clockwise and anti-clockwise. Investigate angles in shapes. Introduce to the words ‘acute’ and ‘obtuse’ as a way of describing angles. Measure and draw straight lines accurately in centimetres and millimetres. Practice rounding measurements to the nearest centimetre. Identify and find horizontal lines, vertical lines and lines of symmetry in a range of contexts. Find parallel and perpendicular lines. Recognise, describe properties and draw 2-D shapes accurately. Recognise, describe and construct 3-D shapes.</p> <p><b>Statistics (2 weeks)</b></p> <p>Build on understanding of pictograms from Year 2 continuing to read and interpret information in order to answer questions about the data. Interpret information in pictograms and tally charts in order to construct bar charts. Interpret data from tables to answer one and two-step problems.</p> | <p><b>Decimals B (2 weeks)</b></p> <p>Through the story ‘Sir Cumference gets Decima's point’ children look at the place value of decimal numbers and counting in decimals. Explore making a whole from any number of tenths and hundredths. Compare and order decimals up to 2 decimal places. Round numbers with 1 decimal place to the nearest whole. Write one half, one quarter and three quarters as decimals.</p> <p><b>Money (2 weeks)</b></p> <p>Recap converting between pounds and pence and adding and subtracting with money. Partition pounds and pence and children are introduced to decimal notation. Compare amounts using the knowledge that £1 = 100p. Estimate with money by rounding to the nearest pound. Solve simple problems with money involving all four operations exploring methods such as partitioning to and recombining to add money.</p> <p><b>Time (2 weeks)</b></p> <p>Recap telling the time to the nearest minute and the 12– and 24-hour clock. Using knowledge of the four operations, convert between different units of time (hours, minutes, seconds, years, months, weeks and days). Convert between analogue and digital times using the 12– and 24– hour clocks.</p> <p><b>Shape (2 weeks)</b></p> <p>Identify obtuse, acute and right angles. Compare and order angles is ascending and descending order. Classify triangles for the first time using the names ‘isosceles’, ‘scalene’ and ‘equilateral’ using rulers to measure sides. Name and draw quadrilaterals and describe their properties. Find and identify lines of symmetry within 2-D shapes.</p> <p><b>Statistics (1 week)</b></p> <p>Decide which scale is most appropriate when drawing bar charts from information gathered. Answer and ask questions about data in pictograms, bar charts and tables. Children are introduced to line graphs in the context of time and create graphs to represent continuous data. Solve comparison, sum and difference problems using discrete and continuous data with a range of scales.</p> <p><b>Position and direction (2 weeks)</b></p> <p>Children are introduced to coordinates for the first time and they describe positions and plot points in the first quadrant. Move shapes and points in specific directions.</p> |
| <p>Rich problem solving and reasoning activities for all year groups and abilities are embedded in each unit to support the mastery approach. Toolkits allow children to make meaningful connections to prior learning enabling them to competently solve challenging problems. Mathematical dialogue and question stems ensure that mathematical vocabulary is developed and consistent across the curriculum and children can justify their reasoning with confidence. Purposeful interleaving of content ensures pupils can consolidate taught content at regular intervals.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |