

**Perryfields Infant School**

**KS1 MATHS Coverage**

**Year 1**

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| Half term + block | Key knowledge | Key skills |
| **Autumn 1**  Place value | * Which signs represent equal, more than, less than. * Understand more, most, less, least, fewer, fewest, forwards, backwards in relation to numbers 0-10. | * Count forward **and back** in 1s to 10. * Read and write numbers to 10. * Identify one more or less within 10. * Count a given number of objects within 10. * Place numbers 0-10 on a number line. |
| Addition | * Number bonds to 10 – focus on addition. * How to read an addition number sentence in words. | * Read, write and solve number problems involving + and = * Add single digit numbers. * Solve one step addition and missing number problems within 10. |
| **Autumn 2**  Subtraction | * Number bonds to 10 - focus on subtraction. * How to read a subtraction number sentence in words. | * Read, write and solve number problems involving - and = * Subtract single digit numbers. * Solve one step subtraction and missing number problems. |
| Shape | * Names of common 2D shapes: rectangle, square, circle, triangle. * Names of common 3D shapes: cube, cuboid, sphere, pyramid. | * Recognise and name common 2D shapes. * Recognise and name common 3D shapes. |
| Place value | * Which way round the numbers in a two digit (teen) number are placed. * Understand more, most, less, least, fewer, fewest, forwards, backwards in relation to numbers 0-20 * *Odd and even numbers (relate to Numicon pieces)* | * Count forward and back in 1s to 20. * Read and write numbers to 20. * Identify one more or less within 20. * Count a given number of objects within 20. * Place numbers 0-20 on a number line. |
| **Spring 1**  Addition and subtraction | * Number bonds to 20 (and how they relate to number bonds to 10) * How to read a number sentence where the answer is written at the start of the sentence. | * Read, write and solve number problems involving + - and = including where the answer is written first. * Add and subtract one and two digit numbers within 20. * Solve one step addition, subtraction and missing number problems. |
| Place value | * Begin to understand that the two digits represent tens and ones and that more tens means the number is bigger. * The fact that the tens digits increase in ones in just the same as the ones digits do. * Difference between teen and –ty numbers. * Understand more, most, less, least, fewer, fewest, forward, backwards in relation to numbers 0-50. | * Count forward and back in 1s to 50. * Read and write numbers to 50. * Identify one more or less within 50. * Represent numbers to 50 using objects. * Place numbers 0-50 on a number line. |
| **Spring 2**  Place value and calculation | * The patterns of the ones digit when counting in 2s, 5s and 10s. | * Maintain understanding of counting and ordering numbers to 50. * Count in 2s, 5s and 10s. |
| Length | * Meaning of words related to length – long/ short, longer/ shorter, taller/ shorter. * How to measure accurately. | * Measure and record lengths. * Compare and describe lengths. |
| Multiplication and division | * Multiplication means lots of or groups of. * Division means shared between or split into groups of. * Arrays can represent multiplying or dividing. | * Count in 2s. 5s and 10s. * Solve one step problems involving multiplication. * Solve one step problems involving division. |
| **Summer 1**  Fractions | * That halves and quarters are equal parts of a whole. * How ½ and ¼ are written. | * Recognise half as one of two equal parts. * Recognise a quarter as one of four equal parts. |
| Weight | * Meaning of words related to weight – heavy/ light, heavier/ lighter, balanced. | * Measure and record mass. * Compare and describe masses. |
| Capacity (could be covered after fractions) | * Meaning of words related to capacity and volume – full/ empty, more than/ less than, half full. | * Measure and record capacity. * Compare and describe capacity. |
| Position and direction | * Right and left. * Need to count from the NEXT square/ count the steps. * Concept of a quarter/ right angle turn. | * Describe direction (right, left) and movement (forward, backwards, turn). * Describe size of turn (whole, half quarter, three quarters). |
| **Summer 2**  Place value | * The order of the numbers 50-100. * With bigger numbers, you can represent tens with one shape and ones with another. | * Count to and across 100, forwards and backwards, starting from different places. * Count, read and write numbers to 100. * Identify one more or one less within 100. * Represent numbers to 100. * Place numbers to 100 on a number line. |
| Money | * The fact that not all values can be made with one coin – know which exist. * Relative values of different coins (order). * The fact that adding coins is like adding numbers. * Notation for pounds and pence/ pennies. | * Recognise different denominations of coins and notes. * Make exact sums of money using coins. |
| Time | * Vocabulary related to passage of time – earlier, later, before, after, longer, shorter. * Names of days and months, in order. * Which hand points to the hour and which to the minutes. * Where the long hand is at o’clock and half past. * Where the short hand is at half past. * There are 60 minutes in an hour and 60 seconds in a minute. | * Sequence events in chronological order. * Use language relating to dates, including days, months and years. * Read the time to the hour and half hour. * Draw the time to the hour and half hour. * Compare and describe times. * Begin to measure and record time. |

**Year 2**

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| Half term + block | Key knowledge | Key skills |
| **Autumn 1**  Place value | * Place value is the value given to a digit depending on which column it is in. * When comparing two digit numbers, one looks at the number of tens first. * Partitioning means chopping numbers into parts. * Number bonds are pairs of numbers making a total. | * Recognise the place value of each digit in a 2 digit number. * Compare and order numbers. * Partition numbers into tens and ones. * Partition numbers into different combinations of tens and ones. * Recall all number bonds to and within 10. * Calculate number bonds to and within 20, using knowledge of bonds to and within 10. |
| Addition | * Methods – use fingers and count on for single digits, only change the tens when adding a multiple of ten, sticks and dots to add two digits. * = means “is the same as” and shows balance. It can have calculations on both sides. * When adding positive numbers, the answer will be the biggest number. | * Add one digit to two digits - revision. * Add multiple of 10 to two digits - revision. * Add any two digit numbers, explaining/ showing method. * Use reasoning about addition to solve more complex problems and explain reasoning (eg. what happens when you add two odd numbers; balancing equations) (GD) |
| **Autumn 2**  Subtraction | * Methods – count back if subtracting a single digit, only change the tens when subtracting a multiple of 10, blank number line to subtract 2 two digit numbers. * When subtracting positive numbers, the starting number must be the biggest. * Subtraction can be solved by counting forward. * Subtraction is the inverse of addition – same numbers appear in a different order. | * Subtract one digit from 2 digits – revision * Subtract multiple of 10 from two digits – revision * Subtract any two digit numbers, explaining/ showing method. * Solve unfamiliar word problems with addition and/or subtraction, involving 2 steps (GD). |
| Money | * Equivalence of coins eg. 50p = 5 x 10p * £1 = 100p * To give change, count on to the next 10, then on in 10s. * Giving change is recorded as subtraction. * £ go before the number, p goes after. * If there is £ sign, there must be 2 digits after the decimal point and no p. | * Make sums of money using coins – revision. * Use different coins to make the same amounts. * Begin to find change. |
| Multiplication | * X can be read as lots of or show how many times a group of a given size is made. * Multiplication is the same as repeated addition of the same number. * The ones number can indicate which times table is being used. * The answer must be the biggest number. | * Recall multiplication facts for 2s, 5s and 10s. * Use multiplication facts for 2s, 5s and 10s to solve simple problems. * Make deductions outside known facts (GD). |
| **Spring 1**  Division | * ÷ can be read as shared between or made into groups of. * The answer is either the number of groups or the number in a group. * Division is the inverse of multiplication. * The answer must be smaller than the start number. | * Recall division facts for 2s, 5s and 10s. * Use division facts from 2s, 5s and 10s to solve problems. |
| Statistics | * The scale is like counting in 1s, 2s, 5s or 10s. * If any of the numbers on the scale are 5s, the scale is in 1s or 5s. If any are 4/6/8, the scale is probably 2s. * If not all the numbers appear, count on in steps of a given size until you land on a number and see if it is the same as the one you have said. * How many more/ find the difference means count on or take away. | * Read scales in divisions of 1s and 10s. * Read scales in divisions of 2s and 5s. * Read scales where not all numbers are marked and estimate points between (GD). * Solve word problems using statistics. |
| **Spring 2**  Shape | * Meaning of sides, symmetry (2d) * Meaning of faces, edges, vertices/ vertex, apex (3d) * Additional 2D shapes: quadrilateral, pentagon, hexagon, octagon. Teach that a square is a type of rectangle. * Additional 3D shapes: prism, hemisphere. * Not all shapes have to be regular. * May need to use the words opposite and parallel. | * Name 2D shapes - revision. * Describe number of sides of 2D shapes. * Describe lines of symmetry of 2D shapes. * Name 3D shapes - revision. * Describe number of vertices of 3D shapes. * Describe number of edges of 3D shapes. * Describe number and shape of faces of 3D shapes. * Compare properties of shapes (GD). |
| Fractions | * Meaning of fractions – equal parts of a whole. * Meaning of numerator and denominator and what they show. * The line can be read as “parts out of every” or just “out of” (1/2 means one out of two and ¾ means 3 parts out of every four). This way, children will be able to find fractions where there are more pieces than the denominator. * Half of all even numbers 20 and below and half of all multiples of 10. * How to find half of other numbers by splitting numbers eg. ½ of 38 = ½ of 30 + ½ of 8. | * Identify 1/2 of a number or shape and know that parts must be equal. * Identify 1/3 of a number or shape and know that parts must be equal. * Identify ¼ of a number or shape and know that parts must be equal. * Identify 2/4 of a number or shape and know that parts must be equal. * Identify 3/4 of a number or shape and know that parts must be equal. |
| Length and height | * 1m = 100cm * Measuring skills – which end of the ruler to start etc. * Suitable units to measure different size objects. * How to estimate based on something they know. | * Estimate, measure and record lengths to nearest cm or m. * Compare and order lengths. |
| **Summer 1**  Time | * How to compare lengths of time where some are given in hours and some in minutes. * That in digital time the hours go first but in spoken times they go after the minutes. * That spoken times are “to” the next hour if the long hand is more than half way round. Digital times are always past the hour. * Equate quarter hours to quarter cakes etc. | * Read the time to the nearest 15 minutes. * Draw the time to the nearest 15 minutes. * Read and draw times to 5 minutes (GD). * Compare times using correct vocabulary – longer/ shorter, earlier/ later. |
| Weight | * 1kg = 1000g * That half of 100g = 50g, half of 500g = 250g * Suitable units to measure different size objects. * How to estimate based on something they know. | * Estimate, measure and record mass to the nearest 100g/kg * Compare and order masses. |
| Position and direction | * Meaning of clockwise (right) and anti-clockwise (left). * Revise Y1 learning on right/left, where to count from, size of turn, combining movement and turn. | * Describe position, direction and movement of a single object. * Describe position, direction and movement of shapes in a pattern. |
| **Summer 2**  Capacity | * 1litre = 1000ml * That half of 100ml = 50ml and half of 500ml = 250ml * How to estimate capacity based on something they know. | * Estimate, measure and compare capacity/ volume to the nearest 100ml/ litre. * Compare and order capacity. |
| Temperature | * That temperature is measured in degrees. * *Look at outdoor thermometers and discuss negative numbers.* | * Read a temperature scale. * Use terms hotter/ colder correctly. |
| Investigations and problems | * That ideas should be tested with different numbers. * How to develop a system to find all solutions. * How to test using the inverse and knowledge about the size and relative position of numbers. * Which words indicate which operations. | * Find more than one solutions to a problem. * Choose the appropriate strategy and operation to solve a word problem. * Use the inverse. * Generalise beyond known facts (GD). |