

The Links Primary School Mathematics Curriculum – EYFS to Y6

Mathematical Vocabulary - EYFS

Number zero, number one, two, three...to twenty and beyond teens numbers, eleven, twelve...twenty, none, how many...? **count**, count (up) to, count on (from, to), count back (from, to) is the same as, more, less, the same number as, as many as, **more**, larger, bigger, greater, **fewer**, smaller, less, fewest, smallest, least, most, biggest, largest, greatest, one more, one less, order, size, first, second, third... twentieth, last, before, after, next, between, estimate, guess, How many...? Nearly, close to, about the same as, just over, just under, too many, too few, enough, not enough, addition and subtraction, **add**, adding, more, and make, total, altogether, double, how many more to make..? How many altogether? One more, two more, how many more is.... than....? How many more is....? **Take away**, how many are left/ left over? How many have gone? One less, two less how many fewer is... than..? How much less is...? Difference between, **subtract**, sharing, halving, doubling, compare, enough, not enough, too much, too little, too many, too few, nearly, close to, about the same as, just over/under, length/ height/ distance, long, **short, tall**, high, low, wide, narrow, thick, thin, longer, shorter, taller, higher, longest, shortest, tallest, highest, far, near, close, **weight**, weigh, weighs, balances, **heavy, light**, heavier than, lighter than, heaviest, lightest, scales, **capacity** and volume full, half **full, empty**, holds, container, **money**, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, describe, draw, compare, sort, What could we try next? How did you work it out? Time, days of the week, Monday, Tuesday..... day, week, birthday, holiday, morning, afternoon, evening, night, bedtime, dinner time, playtime, today, yesterday, tomorrow, before, after, next, last, now, soon, early, late, quick, quicker, quickest, quickly, slow, slower, slowest, slowly, old, older, oldest, new, newer, newest, takes, longer, takes less **time**, hour, o'clock, half past, clock, watch, hands, shape, flat, curved, straight, round, hollow, solid, sort, size **bigger**, larger, **smaller** symmetrical, pattern, repeating pattern match, **2-D shapes** Rectangle (including square) circle triangle, Corner, Side, **3-D shapes** cube, pyramid, sphere, cone, cuboid, face, edge, position, over, under, above, below, top, bottom, side, on, in, outside, inside, around, in front, behind, front, back, beside, next to, opposite, between, left, right, up, down, forwards, backwards, sideways, across, next to, close, near, far, along, through, to, from, towards, away from, whole turn, half turn, number sentence, e.g. $3 + 2$, **number line, equals, measure**

Mathematics EYFS

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

Nursery (five terms)

| Mathematics | |
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| Comparison, Counting, Cardinality, Composition, Spatial awareness, Shape, Pattern | |
| Term 1 | The Links School Ready |
| <p>M-Uses some number names and number language within play</p> <p>SA-Responds to and uses language of position and direction</p> <p>S- Chooses items based on their shape which are appropriate for the child's purpose</p> | <p>Children come into Nursery with some number language e.g. I'm three</p> <p>Children enjoy joining in with simple counting songs and rhymes</p> |
| Term 2 | The Links School Ready |
| <p>M-Compares two small groups of up to five objects, saying when there the same number of objects in each group, e.g. You've got two, I've got two. Same!</p> <p>C- May enjoy counting verbally as far as they can go</p> <p>SA-Predicts, moves and rotates objects to fit the space or create the shape they would like</p> | <p>Children join in with the calendar each day beginning to use fingers to support counting.</p> <p>Children can complete simple puzzles correctly fitting pieces in each hole turning until they fit.</p> <p>Children use a variety of shapes to create models and pictures, appropriately using shape for a purpose.</p> |
| Term 3 | The Links School Ready |
| <p>C-Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5,</p> <p>Ca-Subitises one, two and three objects (without counting)</p> <p>Co-Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers</p> <p>S-Responds to both informal language and common shape names</p> <p>S-Shows awareness of shape similarities and differences between objects</p> | <p>Children enjoy playing with and counting a variety of objects, and enjoy counting along the number line.</p> <p>Children are able to recognise how many children can play in an area and if there is any more space for them to join, e.g. there are only four allowed in the water area, three children are playing there so they can join, three plus one is four.</p> <p>Children can talk about and recognise common shapes within the environment using language to name and describe the different shapes</p> |

| Term 4 | The Links School Ready |
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| <p>C-May show fascination with large numbers</p> <p>Ca-Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle)</p> <p>Ca-Links numerals with amounts up to 5 and maybe beyond</p> <p>Co- Separates a group of three or four objects in different ways, beginning to recognise the total is still the same.</p> <p>S- Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes.</p> <p>P- Explores and adds to simple linear patterns of two or threes repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC)</p> <p>M- Recalls a sequence of events in everyday life and stories.</p> | <p>Children enjoy completing practical maths activities, adding, subtracting, matching, counting etc. They take pride in working out the correct answer and will use what they have learnt during their play.</p> <p>Children enjoy looking at numbers beyond 10, during the calendar and counting children in the class, some children begin to show an interest in larger numbers.</p> <p>Children enjoy using 3D shapes to create buildings and castles, joining different shapes to create towers etc.</p> <p>Children enjoy creating repeated patterns on peg boards and on simple computer games</p> <p>Children have a good understanding of the Nursery routine and are able to sequence their Nursery day.</p> |
| Term 5 | The Links School Ready |
| <p>Ca- Explores using a range of their own marks and signs to which they ascribe mathematical meanings</p> <p>Co- Beginning to use understanding of number to solve problems in play and meaningful activities</p> <p>Beginning to recognise that each counting number is more than the one before</p> <p>S- Attempts to create arches and enclosures when building, using trail and improvement to select blocks</p> <p>P- Creates their own spatial pattern showing some organisation or regularity.</p> <p>Joins in with simple pattern in sounds, objects, games and stories dance and movement, predicting what comes next.</p> <p>M- In meaningful contexts, finds the longer or shorter, heavier or lighter and more or less full of two items.</p> | <p>Children begin to form numerals and marks to give meaning and show findings for a number problem.</p> <p>Children enjoy joining in with songs such as five little monkeys, five little ducks, five speckled frogs, and begin to understand what happens when one is taken away. They also begin to understand one more and can give one more than a given number during an activity.</p> <p>Children can fill containers full, half full, nearly empty and partly full to ensure they use the correct amount of ingredients when baking or making playdough.</p> <p>When digging up potatoes' children are able to use scales to help find the heaviest and lightest potato, children can also compare the length and size of other plants, fruit and veg they have grown.</p> <p>Children look at the patterns of a butterfly and learn about symmetrical patterns, they create their own spatial patterns using a variety of media.</p> |

Reception

Early Learning Goal: Mathematics: Number

R- By the end of the Autumn Term children should be able to...

Recognise and name numbers 0 to 5 – when not in order

Counting, 1:1 correspondence to 5 - how many?

Counting, 1:1 correspondence to 5 – give me?

Know that anything can be counted (to 5) claps, drum beats...

Count an irregular arrangement to 5

Understand that zero means nothing

Match numeral to quantity to 5 – concrete and visual

Display a deep understanding of the composition of numbers to 5

Solve addition and subtraction calculations to 5 - practically and visually Find 1 more and 1 less numbers to 5 (NP) – using concrete and number line Addition facts to 5 (fingers to help)

Subtraction facts to 5 (fingers to help)

Number bonds to 2, 3 and 4 (using concrete aids to help)

Subitise to 5 - dots on a die, Numicom piece, ten-frame,

Begin to understand double 1,2,3 and halving even numbers to 6

The Links School Ready

Know numbers of personal significance (age, birthday, house number etc.)

Use a wide variety of vocabulary related to number and events, altogether, add, total, plus, more than, take away subtract, less than, fewer than, greater than, equals, the same as, month/day, before/ after, next

Say number in sequence within 20 (17,18,19 or 12,11,10)

Count and compare small sets

Begin to estimate

Order and compare 3 objects according to length, height, mass

Begin to show their working out using resources, objects, pictures, words or number.

Formation of numbers to 5

R= By the end of the Spring term children should be able to...

Recognise and read numbers to 7 including when not in order with the aid of a number line, picture clues

Accurate 1:1 correspondence concrete, visual to 7

Know that anything can be counted e.g. claps, drum beats... to 7

Count an irregular arrangement to 7

Match numeral to quantity to 7

Display a deep understanding of the composition of numbers to 7

Begin to look at 9 and 10

Begin to count upto 10 objects

Match numeral to 10 objects

Begin to subitise upto 10

Begin to form numbers up to 10

Say some numbers in sequence 25,26,27

Begin to read numbers in the environment (that is a 3 and that is a 6 rather than 36).

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| <p>Becoming more confident with the part whole model for numbers to 7 Solve addition and subtraction calculations to 10 practically and visually Find 1 more and 1 less using numbers to 7 (N)– using numberlines)(NP)</p> <p>Quick mental recall - addition facts to 7 (fingers to help)</p> <p>Quick mental recall - subtraction facts within 7(fingers to help)</p> <p>Number bonds to 5, 6 and 7 (using concrete aids to help)</p> <p>Know that addition and subtraction are related (to 7) (NP)</p> <p>Recognises half and double up to 10</p> | |
| <p>R+ By the end of the Summer term children should be able to...</p> <p>Recognise and read numbers to 10 – including when not in order and show that they understand the relationship between them</p> <p>Display a deep understanding of the composition of numbers to 10</p> <p>Acurate 1:1 correspondence to 10 using concrete apparatus - visually</p> <p>Confidently count to 10</p> <p>Subitise to 10</p> <p>Match numeral to quantity up to 10 – inc. out of sequence</p> <p>Understand 1 more and 1 less for numbers to 10 (NP)</p> <p>Mentally recall number bonds to 5 without apparatus/ begin recall to 10</p> <p>Calculate addition bonds and subtraction facts to/within 10 using apparatus and/or number line if needed</p> <p>Know that addition and subtraction are related (NP)</p> <p>Mentally, quickly recall all doubles to 5 (ie. double 1, 2, 3, 4, 5) (NP)</p> <p>Mentally, quickly recall half of 2,4,6, 8,and 10 (NP)</p> <p>Know that doubling and halving are related (inverse operation)</p> <p>Subitise to 5 – dots on a dice, numicom piece, ten-frame, pebbles, etc,</p> <p>Know that = means must balance is worth the same as</p> | <p>Use numbers and symbols to record their work</p> <p>Automatic recall of number facts to 5 and some facts to 10</p> <p>Explore number composition of numbers beyond 10</p> <p>Count accurately beyond 10</p> <p>Say some numbers in sequence 45.46.47</p> <p>Use Number lines/tracks, real-life objects and manipulatives should be used routinely to support scaffolding and modelling. Vocabulary should be consistent and reinforced</p> |

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| Solve addition and subtraction calculations when = is presented in different place (eg. 10 = | |
| <p>Early Learning Goal: Mathematics Number</p> <p>Children at the expected level of development will:</p> <p>Have a deep understanding of number to 10, including the composition of each number;</p> <p>Subitise (recognise quantities without counting) up to 5;</p> <p>Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.</p> | |

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| <p>Early Learning Goal: Mathematics Numerical Patterns</p> | |
| <p>R- By the end of the Autumn Term children should be able to...</p> <p>Count by rote forwards and backwards to 10 – visual aid</p> <p>Hold fingers up correctly for each number to 10</p> <p>Count on and back in 1s from any number to 10 – visual aid and fingers</p> <p>Know by heart the number before and after numbers to 5</p> <p>Chant rhymes involving numbers e.g. 1, 2 buckle my shoe...</p> <p>Chant a number song involving even/ odd numbers</p> | <p>The Links School Ready</p> <p>Begin to count aloud to 20</p> |
| <p>R= By the end of the Spring term children should be able to...</p> <p>Count in 1s forwards to 20 and beyond – visual aid</p> <p>Count forwards in 1s from any number (to 20) – visual aid</p> <p>Count back in 1s from 20– visual aid</p> <p>Say the number before and after to 10 - visual aid</p> <p>Compare a variety of quantities up to 5 (N)</p> <p>Use the vocabulary more, most, greater, fewer, less than and equals(N)</p> | <p>Begin to count aloud to 30</p> |

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| <p>Explore odd and even numbers to 10 using Numicon and objects, recognising and discussing the patterns</p> <p>Know that addition and subtraction are related (N)</p> <p>Doubles to 5 concrete aid or fingers (N)</p> <p>Half of numbers 2,4,6,8,10 - concrete (N)</p> | |
| <p>R+ By the end of the Summer term children should be able to...</p> <p>Count by rote from 0 forwards to 20 and beyond</p> <p>Compare and order a variety of quantities up to 10 (N)</p> <p>Use the vocabulary more, most, greater fewer, less than etc. up to 10 (N)</p> <p>Identifies odd and even numbers to 10 represented by structures</p> | <p>Begin to count aloud to past 30</p> |
| <p>Early Learning Goal: Mathematics Numerical Patterns</p> <p>Children at the expected level of development will:</p> <p>Be able to verbally count beyond 20, recognising the patterns of the counting system</p> <p>Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than, or the same as the other quantity</p> <p>Explore and represent patterns within numbers up to 10, including odd and even numbers, double facts and how quantities can be distributed equally</p> | |

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| <p>No ELG Mathematics: Shape, Space and Measure</p> | |
| <p>R- By the end of the Autumn Term children should be able to...</p> <p>Measures</p> <p>Enjoys tackling problems involving prediction and discussion of comparisons of length</p> <p>Becomes familiar with measuring tools in everyday experiences and play Is increasingly able to order and sequence events using everyday language related to time</p> <p>Spatial Awareness</p> | <p>Comparing size, mass & capacity Use language such as big, little, small, long short, heavy light. Explore concepts in continuous provision</p> <p>Exploring pattern Recognise, copy and continue simple pattern, AB,AB</p> <p>Circles and triangles Learn circle have one curved side, triangles have 3 straight sides Use language such as round, curved, straight</p> <p>Positional language Begin to use positional language in, on top, next to, over, around, through Use and understand positional language in their play and when following instructions</p> <p>Shapes with 4 sides Recognise some shapes have 4 straight sides and 4 corners</p> |

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| <p>Uses spatial language, including following and giving directions, using relative terms</p> <p>Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes</p> | <p>Time Talk about night and day in their routine Begin to use language day, night, before, after, today, tomorrow Begin to measure for example 3 sleeps till my birthday or 2 min timer for brushing teeth</p> |
| <p>R= By the end of the Spring term children should be able to...</p> <p>Time</p> <p>Becomes familiar with measuring tools in everyday experiences and play Is increasingly able to order and sequence events using everyday language related to time</p> <p>Measures</p> <p>Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy</p> <p>Spatial Awareness</p> <p>Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes</p> <p>Begin to become aware of some properties of shape, 'this is like a brick I can stack it'.</p> <p>Begin to make simple models and pictures selecting blocks/shapes needed</p> | <p>Time</p> <p>Use language now, before, later, soon Recognise some events happen the same day ach week. E.G. PE is on a Wednesday, and use and understand words today, tomorrow, yesterday. Talk about events they are looking forward to (holidays or birthdays) Know timers such as a stop watch can measure things in short period's e.g. how many jumps in 30 seconds, to now some things take a long time such as a plant growing</p> <p>Comparing Mass Be able to hold objects and compare heavy, light Begin to use language heavy, heavier, light, lighter</p> <p>Comparing Capacity Be able to explore capacity using sand water etc. Use language full, empty, half, nearly</p> <p>Length, height Begin to use language to describe object the tree is tall Make simple comparison a house is bigger than a pencil Begin to use language taller, shorter, wider, longer</p> <p>3D shape and pattern Explore similarities and difference, begin to name grouping, sorting, stack and roll. Pattern copy and repeat explore their own pattern AAB,ABB ETC</p> |
| <p>R+ By the end of the Summer term children should be able to...</p> <p>Spatial Awareness</p> <p>Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints Investigates turning and flipping objects in order to make shapes fit and create models; predicting and visualising how they will look (spatial reasoning)</p> <p>May enjoy making simple maps of familiar and imaginative environments, with landmarks Shape</p> <p>Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes</p> | <p>Spatial reasoning</p> <p>3D shape-Match, rotate and manipulate shapes Complete simple jigsaws and shapes puzzles by manipulating and rotating pieces Match shapes on picture boards Use positional language to describe where shapes are in relation to each other.</p> <p>Compose and decompose shapes Understand shapes can be combined and separated to make new shapes (explore with shapes pictures and tangrams)</p> <p>Visualize, build and mapping shapes Can make models, maps from real life or stories by visualising where objects and shapes should be Use gesture and positional language to explain their understanding</p> <p>Money Pay for things in the role play shop Know that we can use money to pay for things</p> |

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| <p>Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes</p> <p>Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build</p> | <p>Use language coins, money, pence, change, how much?</p> <p>Use different prices "that's 10p please etc</p> |
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Year 1 Mathematics - Long Term Plan

| Year 1 – Autumn Term | Year 1 – Spring Term | Year 1 – Summer Term |
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| <ol style="list-style-type: none"> 1. Counts to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number <ul style="list-style-type: none"> Counts, reads and writes numbers to 100 in numerals 2. Given a number, identifies one more and one less 3. Uses the language of: equal to, more than, less than (fewer), most, least 4. Reads, writes and interprets mathematical statements involving addition (+) and equals (=) signs 5. Reads, writes and interprets mathematical statements involving subtraction (-) and equals (=) signs 6. Represents and uses number bonds and related subtraction facts within 20 7. Recognises, finds and names a half as one of two equal parts of an object or shape 8. Sequences events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening) 9. Recognises and uses language relating to dates, including days of the week, weeks, months and years 10. Measures and begins to record the following: <ul style="list-style-type: none"> ○ time (hours, minutes, seconds) 11. Tells the time to the hour and half past the hour and draws the hands on a clock face to show these times 12. Recognises and names common 2-D shapes, including: <ul style="list-style-type: none"> ○ 2-D shapes (for example, rectangles (including squares), circles and triangles) <p>Three additional weeks for assessments, revisiting areas of need and consolidation.</p> | <ol style="list-style-type: none"> 1. Counts in multiples of twos, fives and tens 2. Identifies and represents numbers using objects and pictorial representations including the number line 3. Adds and subtracts one-digit and two-digit numbers to 20, including zero 4. Solves one-step problems that involve addition and subtraction, using concrete objects and pictorial representations 5. Solves one-step problems involving multiplication and division, by calculating the answer using concrete objects 6. Recognises, finds and names a quarter as one of your equal parts of an object or shape <p>Measures and begins to record the following:</p> <ol style="list-style-type: none"> 7. lengths and heights 8. mass/weight 9. capacity and volume 10. Recognises and knows the value of different denominations of coins and notes 11. Recognises and names common 3-D shapes, including: <ul style="list-style-type: none"> ○ 3-D shapes (for example, cuboids (including cubes), pyramids and spheres) 12. Describes position, direction and movement, including whole, half, quarter and three-quarter turns. <p>One additional week for assessments, revisiting areas of need and consolidation.</p> | <ol style="list-style-type: none"> 1. Reads and writes numbers from 1 to 20 in words 2. Solves missing number problems such as $7 = - 9$ 3. Solves one-step problems involving multiplication and division, by calculating the answer using pictorial representations and arrays with the support of the teacher 4. Recognises, finds and names a half as one of two equal parts of a quantity 5. Recognises, finds and names a quarter as one of your equal parts of a quantity <ul style="list-style-type: none"> Compares, describes and solves practical problems for: 6. lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) 7. mass or weight (for example, heavy/light, heavier than, lighter than) 8. capacity/volume (for example, full/empty, more than, less than, quarter) 9. time (for example, quicker, slower, earlier, later) 10. Recognises and names common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> ○ 2-D shapes (for example, rectangles (including squares), circles and triangles) ○ 3-D shapes (for example, cuboids (including cubes), pyramids and spheres) <p>Two additional weeks for assessments, revisiting areas of need and consolidation.</p> |

| Maths vocabulary for year 1 | | | | | | |
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| Number and place value | Addition and subtraction | Multiplication and division | Measurement | Geometry (position and direction) | Geometry (properties of shape) | Fractions |
| <p>Count (to 100) (on/up/to/from/down)</p> <p>Ordering (1st, 2nd, 3rd)</p> <p>Before, after</p> <p>More, less, many, few, fewer, most, least, fewest, smallest, greater, lesser</p> <p>Equal to</p> <p>Odd, even</p> <p>More than</p> <p>Less than ones, tens</p> <p>Digit</p> <p>Numeral</p> | <p>Number bonds, number line</p> <p>Add, plus, make, sum, total, addition, subtraction, altogether, put together, take away,</p> <p>Inverse</p> <p>Double, near double</p> <p>Half, halve</p> <p>Equals, is the same as (including equals sign)</p> <p>Difference between, distance between</p> | <p>Count in twos, fives, tens</p> <p>Count in tens (forwards from/backwards from)</p> <p>How many times?</p> <p>Grouping</p> <p>Lots of, groups of</p> <p>Multiple of, times, multiply, multiply by</p> <p>Repeated addition</p> <p>Array, row, column</p> <p>Double, halve</p> <p>Sharing, share, share equally</p> <p>Equal groups of</p> <p>Divide, divided by, left, left over</p> <p>Multiplication and division</p> | <p>Capacity, volume, Full, half full, empty, more than, less than, half, quarter</p> <p>Mass, weight</p> <p>Heavy, heavier, heaviest, light, lighter, lightest, heavier than, lighter than</p> <p>Time, Now, soon, earlier, later, hours, minutes, seconds</p> <p>Quick, quicker, quickest, quickly, fast, faster, fastest, slow, slower, slowest, slowly</p> <p>Days of the week</p> <p>Months of the year</p> <p>Seasons: spring, summer, autumn, winter</p> <p>Day, week, month, year, weekend</p> <p>Morning, afternoon, evening, night, midnight</p> <p>Bedtime, dinnertime, playtime</p> <p>Today, yesterday, tomorrow</p> <p>Chronological order (time order)</p> <p>Before, after</p> <p>Next, last</p> <p>Hour, o'clock, half past</p> | <p>Position, direction, movement, whole, half, quarter and three-quarter turns</p> <p>Left, right</p> <p>Over, under, underneath, above, below, top, bottom, side, middle</p> <p>on, in, outside, inside</p> <p>around, in front of, behind, on top of, near close, far, up, down, forwards, backwards</p> <p>Front, back</p> <p>Before, after</p> <p>Beside, next to, Opposite</p> <p>Between, edge, centre</p> | <p>2D, 3D</p> <p>Cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square, rectangle</p> <p>Shape</p> <p>Flat, curved, straight, round</p> <p>Corner (point, pointed)</p> | <p>Whole</p> <p>Equal parts, four equal parts</p> <p>One half, two halves</p> <p>A quarter, two quarters</p> <p>Fractions of</p> |

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| | | | <p>Clock face, watch, hands</p> <p>Always, never, often, sometimes, usually</p> <p>First, second, third, etc. Length, height,</p> <p>Long, longer, longest, short, shorter shortest, tall, taller, tallest, high, higher, highest</p> <p>Double, half</p> <p>Low, wide, narrow, deep, shallow, thick, thin</p> <p>Metre, kilograms, litre, meters, ruler, centimetres, grams, millilitres</p> <p>Container, weighing scales</p> <p>Value, Money, coins, notes, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, costs more, costs less, cheaper, costs the same as</p> | | | |
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Year 2 Mathematics – Long Term Plan

| Year 2 – Autumn Term | Year 2 – Spring Term | Year 2 – Summer Term |
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| <ol style="list-style-type: none"> 1. Recognises the place value of each digit in a two-digit number (tens, ones) Reads and writes numbers to at least 100 in numerals and in words 2. Compares and orders numbers from 0 up to 100 Uses <, > and = signs 3. Recalls and uses addition and subtraction facts to 20 fluently, and derives and uses related facts up to 100 Shows that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot 4. Adds and subtracts numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> • a two-digit number and ones • a two-digit number and tens • two two-digit numbers • adding three one-digit numbers 5. Counts in steps of 2 and 5 from 0, and in tens from any number, forward or backward Recalls and uses multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers 6. Recognises, finds, names and writes fractions $\frac{1}{3}$ and $\frac{1}{4}$ of a length, shape, set of objects or quantity (unit fractions) 7. Tells and writes the time to five minutes, including quarter past/to the hour and draws the hands on a clock face to show these times 8. Finds different combinations of coins that equal the same amounts of money 9. Recognises and uses symbols for pounds (£) and pence (p) and combines amounts to make a particular value 10. Identifies and describes the properties of 2-D shapes, including the number of sides and symmetry in a vertical line | <ol style="list-style-type: none"> 1. Recognises and uses the inverse relationship between addition and subtraction and uses this to check calculations 2. and 3. Solves problems with addition and subtraction: <ul style="list-style-type: none"> ○ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ○ applying their increasing knowledge of mental and written methods 4. Calculates mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs Shows that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot 5. And 6. Chooses and uses appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}$C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels 7. Recognises, finds, names and writes fractions $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity (non-unit fractions) 8. Writes simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognises the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$. 9. Solves simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 10. Compares and sorts common 2-D and 3-D shapes and everyday objects | <ol style="list-style-type: none"> 1. Solves problems with addition and subtraction: applying their increasing knowledge of mental and written methods 2. Uses place value and number facts to solve problems 3. Identifies, represents and estimates numbers using different representations, including the number line 4. Recognises and uses the inverse relationship between addition and subtraction and uses this to check calculations and missing number problems 5. Counts in steps of 3 from any number, forward or backward 6. Solves problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. 7. Writes simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognises the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$. 8. Compares and sequences intervals of time Knows the number of minutes in an hour and the number of hours in a day 9. Compares and orders lengths, mass, volume/capacity and record the results using >, < and = 10. Uses mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) 11. Asks and answers simple questions by counting the number of objects in each category and sorting the categories by quantity Asks and answers questions about totalling and comparing categorical data |

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| <p>11. Identifies and describes the properties of 3-D shapes, including the number of edges, vertices and faces</p> <p>12. Orders and arranges combinations of mathematical objects in patterns and sequences</p> <p>Three additional weeks for assessments, revisiting areas of need and consolidation.</p> | <p>Identifies 2-D shapes on the surface of 3-D shapes, (for example a circle on a cylinder and a triangle on a pyramid)</p> <p>11. Interprets and constructs simple pictograms, tally charts, block diagrams and simple tables</p> <p>Two additional weeks for assessments, revisiting areas of need and consolidation.</p> | <p>One additional week for assessments, revisiting areas of need and consolidation.</p> |
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| Maths vocabulary for year 2 | | | | | | | |
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| Number and place value | Addition and Subtraction | Multiplication and Division | Measurement | Geometry (position and direction) | Geometry (properties of shape) | Fractions | Statistics |
| <p>Numbers to one hundred</p> <p>Hundreds</p> <p>Partition</p> <p>Zero, place holder</p> <p>Count in 2s, 3s and 5s</p> <p>Digit, tens and ones</p> <p>Estimate, compare, order, greater than, less than and equals</p> | <p>Mental and written methods</p> <p>Addition, subtraction</p> <p>one-digit number, two-digit number</p> <p>commutative, inverse sum, difference</p> | <p>Multiplication and division facts, multiplication tables (2s, 5s and 10s)</p> <p>Odd and even, multiplication, division and equals signs</p> <p>Commutative</p> <p>Arrays</p> <p>Mental methods</p> <p>Repeated addition</p> <p>Multiply, multiply by, product, divide, divide by, grouping, sharing, doubling, halving</p> | <p>Estimate, measure, length, height, metre, centimetre, mass, kilograms, grams, degree Celsius, temperature, capacity, litres, millilitres, ruler, scales, thermometers, measuring vessels</p> <p>Pounds, pence, (all coins and notes)</p> <p>Time, quarter past, quarter to, hour and minutes in a day, analogue clock</p> <p>Half as high, twice as wide</p> | <p>Order, arrange, pattern, sequence, position, direction, movement, turn, rotation, right angle, clockwise, anti-clockwise, quarter turn, half turn, three quarter turn</p> | <p>2D and 3D</p> <p>Properties, similarities and differences</p> <p>Number of sides</p> <p>Symmetry</p> <p>Vertical line</p> <p>Vertices, edges, faces</p> <p>See shape names in Y1, plus quadrilaterals, polygons, cuboid, prism, cone</p> | <p>A quarter, two quarters, three quarters, one third</p> <p>Equivalence, equivalent</p> <p>Fractions of</p> <p>Unit fraction and non-unit fraction</p> | <p>Interpret, construct</p> <p>Pictogram, tally chart, block diagram, simple table</p> <p>Count, sort</p> <p>Represent</p> <p>Label, title</p> <p>Most popular, most common, least popular, least common</p> |

Year 3 Mathematics – Long Term Plan

| Year 3 – Autumn Term | Year 3 – Spring Term | Year 3 – Summer Term |
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| <ol style="list-style-type: none"> 1. Recognises the place value of each digit in a three-digit number (hundreds, tens, ones) Reads and writes numbers up to 1000 in numerals and in words 2. Compares and orders numbers up to 1000 3. Finds 10 or 100 more or less than a given number 4. Adds and subtracts numbers mentally, including: <ul style="list-style-type: none"> • a three-digit number and ones • a three-digit number and tens • a three-digit number and hundreds 5. Adds and subtracts numbers with up to three digits, using formal written methods of columnar addition and subtraction 6. Recalls and uses multiplication and division facts for the 3, 4 and 8 multiplication tables Counts from 0 in multiples of 4, 8, 50 and 100 7. Counts up and down in tenths Recognises that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 8. Adds and subtracts fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) 9. Compares and orders unit fractions, and fractions with the same denominators 10. And 11. Tells and writes the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks 12. Uses vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight Knows the number of seconds in a minute and the number of days in each month, year and leap year | <ol style="list-style-type: none"> 1. Identifies, represents and estimates numbers using different representations 2. Adds and subtracts amounts of money to give change, using both £ and p in practical contexts 3. Writes and calculates mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods 4. Estimates the answer to a calculation and uses inverse operations to check answers 5. Recognises, finds and writes fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Recognises and uses fractions as numbers: unit fractions and non-unit fractions with small denominators 6. Recognises and shows, using diagrams, equivalent fractions with small denominators 7. Measures, compares, adds and subtracts: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) 8. Measures the perimeter of simple 2-D shapes 9. Records and compares time in terms of seconds, minutes and hours Estimates and reads time with increasing accuracy to the nearest minute 10. Recognises angles as a property of shape or a description of a turn Identifies right angles Recognises that two right angles make a half-turn, three make three quarters of a turn and four a complete turn Identifies whether angles are greater than or less than a right angle | <ol style="list-style-type: none"> 1. Identifies horizontal and vertical lines and pairs of perpendicular and parallel lines 2. And 3. Solves number problems and practical problems involving finding 10 more or less, place value, comparing and ordering up to 1000 and reading and writing numbers up to 1000 in numerals and words 4. And 5. Solves problems, including missing number problems, using number facts, place value, and more complex addition and subtraction 6. And 7 Solves problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects 8. And 9. Solves problems that involve recognising that tenths arise from dividing an object into 10 equal parts and dividing one-digit numbers or quantities by 10; counting up and down in tenths; recognising, finding and writing fractions; adding and subtracting fractions with the same denominator within one whole and comparing and ordering unit fractions and fractions with the same denominator 10. and 11. Solves one-step and two-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in scaled bar charts and pictograms and tables |

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| <p>Compares durations of events, (for example to calculate the time taken by particular events or tasks)</p> <p>13. Draws 2-D shapes and make 3-D shapes using modelling materials Recognises 3-D shapes in different orientations and describes them</p> <p>Two additional weeks for assessments, revisiting areas of need and consolidation.</p> | <p>11. Interprets and presents data using bar charts, pictograms and tables</p> <p>Two additional weeks for assessments, revisiting areas of need and consolidation.</p> | <p>One additional week for assessments, revisiting areas of need and consolidation.</p> |
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| Maths vocabulary for year 3 | | | | | | |
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| Place value | Addition and subtraction | Multiplication and division | Measurement | Geometry (properties of shape) | Fractions | Statistics |
| <p>Place holder, value</p> <p>Multiples of 4, 8, 50 and 100</p> <p>10/100 more/less</p> <p>Hundreds, tens ones, thousand, thousands</p> <p>Compare and order, partitioning, estimate, represent, identify</p> | <p>Column addition and subtraction</p> <p>Mentally</p> <p>Inverse operations, calculation</p> <p>Three-digit number</p> | <p>Multiplication and division facts, multiplication tables (3s, 4s and 8s)</p> <p>Short multiplication, short division</p> <p>Mathematical statements</p> <p>Commutative</p> <p>Product</p> | <p>Length, mass, volume, capacity</p> <p>Perimeter</p> <p>2D and 3D shapes</p> <p>Pounds, pence, change</p> <p>Analogue clock, 12-hour clock, 24-hour clock, digital</p> <p>Minute, hour, seconds, o'clock, am, pm, morning, afternoon, noon and midnight, number of days in each month, year and leap year</p> <p>Duration</p> <p>Grams, kilograms, meter, centimetres, millimetres, litres and millilitres</p> <p>Roman numerals I to XII</p> | <p>2D, 3D (names and properties) Orientations Turn Right angle, half turn, three quarter turn, complete turn</p> <p>Greater than/less than a right angle Horizontal, vertical, perpendicular and parallel lines</p> <p>Symmetrical and non-symmetrical</p> <p>Lengths of lines, acute and obtuse</p> | <p>Numerator, denominator</p> <p>Unit fraction, non-unit fraction</p> <p>Compare and order</p> <p>Tenths</p> <p>Equivalent</p> <p>Decimal</p> <p>Part, whole</p> | <p>Bar chart, pictogram, table</p> <p>One step, two step</p> <p>How many more?, how may fewer?</p> <p>Scale</p> <p>Venn diagram</p> <p>Axis, axes</p> <p>Diagram</p> |

Year 4 Mathematics – Long Term Plan

| Year 4 – Autumn Term | Year 4 – Spring Term | Year 4 – Summer Term |
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| <ol style="list-style-type: none"> 1. Recognises the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) Orders and compares numbers beyond 1000 2. Finds 1000 more or less than a given number 3. Counts backwards through zero to include negative numbers 4. Adds and subtracts numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 5. Uses place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers 6. Multiplies two-digit and three-digit numbers by a one-digit number using formal written layout 7. Counts up and down in hundredths Recognises that hundredths arise when dividing an object by one hundred and dividing tenths by ten 8. Finds the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths 9. Recognises and shows, using diagrams, families of common equivalent fractions 10. Adds and subtracts fractions with the same denominator 11. Converts between different units of measure (for example, kilometre to metre; hour to minute) 12. Reads, writes and converts time between analogue and digital 12- and 24-hour clocks 13. Compares and classifies geometric shapes, including quadrilaterals and triangles, based on their properties and sizes 14. Describes positions on a 2-D grid as coordinates in the first quadrant Plots specified points and draws sides to complete a given polygon | <ol style="list-style-type: none"> 1. Counts in multiples of 6, 7, 9, 25 and 1000 2. Rounds any number to the nearest 10, 100 or 1000 Rounds decimals with one decimal place to the nearest whole number 3. Identifies, represents and estimates numbers using different representations 4. Reads Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value 5. Recalls multiplication and division facts for multiplication tables up to 12×12 Estimates and uses inverse operations to check answers to a calculation 6. Recognises and writes decimal equivalents of any number of tenths or hundredths Recognises and writes decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$ 7. Compares numbers with the same number of decimal places up to two decimal places 8. Estimates, compares and calculates different measures, including money in pounds and pence 9. Measures and calculates the perimeter of a rectilinear figure (including squares) in centimetres and metres Finds the area of rectilinear shapes by counting squares 10. Identifies acute and obtuse angles and compares and orders angles up to two right angles by size 11. Describes movements between positions as translations of a given unit to the left/right and up/down 12. Interprets and presents discrete and continuous data using appropriate graphical methods, including bar charts and time graphs | <ol style="list-style-type: none"> 1. And 2. Solves number and practical problems that involve multiples of 6, 7, 8, 9, 25 and 1000; finding 1000 more or less than a given number; counting backwards, including negative numbers; ordering and comparing numbers beyond 1000; estimating and using inverse operations and rounding numbers to the nearest 10, 100 and 1000, and with increasingly large positive numbers 3. Solves addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 4. Recognises and uses factor pairs and commutativity in mental calculations 5. Solves problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects 6. Solves problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number 7. Solves simple measure and money problems involving fractions and decimals to two decimal places 8. Solves problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 9. Identifies lines of symmetry in 2-D shapes presented in different orientations Completes a simple symmetric figure with respect to a specific line of symmetry 10. And 11, Solves comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs |

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| One additional week for assessments, revisiting areas of need and consolidation. | One additional week for assessments, revisiting areas of need and consolidation. | One additional week for assessments, revisiting areas of need and consolidation. |
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Maths vocabulary for year 4

| Number and place value | Addition and Subtraction | Multiplication and division | Measurement | Geometry (position and direction) | Geometry (properties of shape) | Fractions and decimals | Statistics |
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| <p>Multiples of 6, 7, 9, 25 and 1000</p> <p>Thousands, hundreds, tens, ones, zero, negative numbers, order, compare, identify, represent and estimate Round (to nearest)</p> <p>Thousand more/less than</p> <p>Count through zero, including backwards</p> <p>Roman numerals (I to C) Numeral system Decimal numbers</p> | <p>Column addition and subtraction</p> <p>Mentally</p> <p>Inverse operations, calculation</p> <p>Three-digit number Four-digit number</p> | <p>Multiplication and division facts (up to 12x12) Factor pairs Commutativity</p> <p>Short multiplication, short division</p> <p>Division facts</p> <p>Inverse</p> <p>Derive</p> | <p>Convert</p> <p>Perimeter, area</p> <p>Rectilinear</p> <p>Estimate, compare, calculate</p> <p>Pounds, pence</p> <p>Analogue, digital</p> <p>Hours, minutes, seconds, years, months weeks and days</p> | <p>2D grid</p> <p>Coordinates</p> <p>Translation</p> <p>1st Quadrant</p> <p>x-axis, y-axis, axes</p> | <p>2D, 3D (names and properties)</p> <p>Quadrilaterals (parallelogram, rhombus, trapezium)</p> <p>Regular and irregular, polygon</p> <p>Triangles (isosceles, equilateral, scalene)</p> <p>Compare and classify</p> <p>Right angle, acute and obtuse angles</p> <p>Line symmetry, symmetry, symmetric figure</p> | <p>Equivalent decimals and fractions</p> <p>Tenths and hundredths</p> <p>Unit and non-unit fractions</p> <p>Denominator and numerator</p> <p>Nearest whole number</p> <p>One and two decimal places</p> <p>Factors, multiples</p> | <p>Interpret, present, Discreet and continuous data</p> <p>Time graph, bar charts, scale and data</p> |

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Year 5 Mathematics – Long Term Plan

| Year 5 – Autumn Term | Year 5 – Spring Term | Year 5 – Summer Term |
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| <ol style="list-style-type: none"> 1. Reads, writes, orders and compares numbers to at least 1 000 000 and determine the value of each digit 2. Counts forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 3. Interprets negative numbers in context, counts forwards and backwards with positive and negative whole numbers, including through zero 4. Adds and subtracts numbers mentally with increasingly large numbers Adds and subtracts whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 5. Multiplies and divides numbers mentally drawing upon known facts Divides numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context 6. Multiplies numbers up to 4 digits by a one-digit number using a formal written method 7. Reads and writes decimal numbers as fractions (for example, $0.71 = \frac{71}{100}$) Recognises and uses thousandths and relate them to tenths, hundredths and decimal equivalents Reads, writes, orders and compares numbers with up to three decimal places 8. Recognises mixed numbers and improper fractions and converts from one form to the other and writes mathematical statements > 1 as a mixed number (for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$) | <ol style="list-style-type: none"> 1. Multiplies and divides whole numbers and those involving decimals by 10, 100 and 1000 2. Rounds any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Rounds decimals with two decimal places to the nearest whole number and to one decimal place Uses rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy 3. Reads Roman numerals to 1000 (M) and recognise years written in Roman numerals. 4. Identifies multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. Knows and uses the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Establishes whether a number up to 100 is prime and recall prime numbers up to 19 5. Recognises and uses square numbers and cube numbers, and the notation for squared (2) and cubed (3) 6. Multiplies numbers up to 4 digits by a two-digit number using long multiplication for two-digit numbers 7. Multiplies proper fractions and mixed numbers by whole numbers, supported by materials and diagrams 8. Recognises the per cent symbol (%) and understands that per cent relates to “number of parts per hundred” and writes percentages as a fraction with denominator 100, and as a decimal 9. Measures and calculates the perimeter of composite rectilinear shapes in centimetres and metres | <ol style="list-style-type: none"> 1. Solves number problems and practical problems that involve reading, writing, ordering and comparing numbers to 1,000,000; negative numbers in context and rounding numbers up to 1,000,000 2. Solves problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Solves addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 3. Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes Solves problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. 4. Solves problems involving number up to three decimal places 5. Solves problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25. 6. Uses all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation including scaling 7. Uses the properties of rectangles to deduce related facts and find missing lengths and angles 8. Understands and uses approximate equivalences between metric units and common imperial units such as inches, pounds and pints 9. Identifies, describes and represents the position of a shape following a reflection or translation, using the appropriate language, and knows that the shape has not changed 10. Solves comparison, sum and difference problems using information presented in a line graph 11. Completes, reads and interprets information in tables, including timetables |

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| <p>9. Identifies, names and writes equivalent fractions of a given fraction, represented visually, including tenths and hundredths Compares and orders fractions whose denominators are all multiples of the same number</p> <p>10. Adds and subtracts fractions with the same denominator and denominators that are multiples of the same number</p> <p>11. Solves problems involving converting between units of time</p> <p>12. Converts between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</p> <p>13. Identifies 3-D shapes, including cubes and other cuboids, from 2-D representations</p> <p>14. Knows angles are measured in degrees: estimates and compares acute, obtuse and reflex angles Distinguishes between regular and irregular polygons based on reasoning about equal sides and angles</p> <p>One additional week for assessments, revisiting areas of need and consolidation</p> | <p>Calculates and compares the area of rectangles(including squares) and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimates the area of irregular shapes</p> <p>10. Estimates volume (for example, using 1 cm^3 blocks to build cubes and cuboids) and capacity (for example, using water)</p> <p>11. Draws given angles, and measures them in degrees ($^\circ$)</p> <p>12. Identifies:</p> <ul style="list-style-type: none"> • angles at a point and one whole turn (total 360°) • angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) • other multiples of 90° <p>One additional week for assessments, revisiting areas of need and consolidation</p> | <p>One additional week for assessments, revisiting areas of need and consolidation</p> |
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| Maths vocabulary for year 5 | | | | | | | |
|---|---|---|---|---|---|--|---|
| Number and place value | Addition and subtraction | Multiplication and division | Measurement | Geometry (position and direction) | Geometry (properties of shape) | Fractions, decimals and percentages | Statistics |
| <p>Million, hundred thousands, ten thousands, hundreds, tens, ones</p> <p>Powers of 10</p> <p>Negative numbers</p> <p>Rounding</p> <p>Roman numerals to 1000</p> <p>Decimal numbers</p> | <p>Column addition and subtraction (more than 4-digits)</p> <p>Accuracy</p> <p>Mentally</p> <p>Inverse operations, calculation</p> <p>Multi-step problems</p> | <p>Multiples, factors</p> <p>Factor pairs</p> <p>Composite numbers, prime numbers, prime factors, square number, cubed number</p> <p>Formal written method of short division, interpreting remainders</p> <p>Short and long multiplication</p> <p>Scaling</p> | <p>Volume, area, perimeter, square centimetres and square meters</p> <p>Convert</p> <p>Decimal notation</p> <p>Scaling</p> <p>Imperial units, metric units, kilometre, meter, centimetre, millimetre, gram, kilogram, litre, millilitre, inches, pounds</p> | <p>Reflection</p> <p>Translation</p> <p>Coordinates</p> <p>Quadrant</p> <p>Axes</p> | <p>2D, 3D (names and properties)</p> <p>Angle, acute, obtuse, reflex, degrees, protractor, angles at a point, angles on a straight line</p> <p>Deduce/deductions properties</p> <p>Diagonal</p> <p>Parallel sides</p> <p>Regular and irregular Polygons</p> | <p>Denominator and numerator</p> <p>Multiples</p> <p>Equivalent fraction Tenths, hundredths, thousandths</p> <p>Proper fractions, improper fractions, mixed numbers</p> <p>Decimal equivalents</p> <p>Whole number, one decimal place, two decimal places</p> <p>Convert</p> <p>Per cent, percentage</p> | <p>Comparison, sum and difference</p> <p>Line graph, tables, timetables, time graphs</p> <p>Interpret</p> <p>Scales</p> |

Year 6 Mathematics – Long Term Plan

| Year 6 – Autumn Term | Year 6 – Spring Term | Year 6 – Summer Term |
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| <ol style="list-style-type: none"> 1. Reads, writes, orders and compares numbers up to 10 000 000 and determines the value of each digit 2. Identifies the value of each digit in numbers given to three decimal places and multiplies and divides numbers by 10, 100 and 1000 giving answers up to three decimal places 3. Uses negative numbers in context, and calculates intervals across zero | <ol style="list-style-type: none"> 1. Rounds any whole number to a required degree of accuracy 2. Solves problems involving the calculation of percentages (for example, of measures and such as 15% of 360) and the use of percentages for comparison 3. Performs mental calculations, including with mixed operations and large numbers | <ol style="list-style-type: none"> 1. Interprets and constructs pie charts and line graphs and uses these to solve problems 2. Solves number and practical problems, including addition and subtraction Solves problems involving addition, subtraction, multiplication and division Solves addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why |

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| <p>4. Multiplies one-digit numbers with up to two decimal places by whole numbers Multiplies multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</p> <p>5. Divides numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to context</p> <p>6. Uses their knowledge of the order of operations to carry out calculations involving the four operations</p> <p>7. Identifies common factors, common multiples and prime numbers</p> <p>8. Uses common multiples to express fractions in the same denomination Compares and orders fractions, including fractions >1</p> <p>9. Adds and subtracts fractions with different denominators and mixed numbers, using the concept of equivalent fractions Uses common factors to simplify fractions</p> <p>10. Recalls and uses equivalences between simple fractions, decimals and percentages, including in different contexts</p> <p>11. Uses, reads, writes and converts between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places</p> <p>12. Calculates the area of parallelograms and triangles</p> <p>13. Recognises angles where they meet at a point, are on a straight line, or are vertically opposite, and finds missing angles</p> <p>14. Compares and classifies geometric shapes based on their properties and sizes and finds unknown angles in any triangles, quadrilaterals, and regular polygons Illustrates and names parts of circles, including radius, diameter and circumference and knows that the diameter is twice the radius</p> | <p>Divides numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interprets remainders as whole number remainders, fractions, or by rounding, as appropriate for the context Uses written division methods in cases where the answer has up to two decimal places</p> <p>4. Multiplies simple pairs of proper fractions, writing the answer in its simplest form (for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) Divides proper fractions by whole numbers (for example, $\frac{1}{3} \div 2 = \frac{1}{6}$)</p> <p>5. Associates a fraction with division and can calculate decimal fraction equivalents (for example, 0.375) for a simple fraction (for example, $\frac{3}{8}$)</p> <p>6. Recognises that shapes with the same areas can have different perimeters and vice versa Recognises when it is possible to use formulae for area and volume of shapes</p> <p>7. Calculates, estimates and compares volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units (for example, mm^3 and km^3) Converts between miles and kilometres (starter activity)</p> <p>8. Draws 2-D shapes using given dimensions and angles</p> <p>9. Describes positions on the full coordinate grid (all four quadrants) Draws and translates simple shapes on the coordinate plane, and reflects them in the axes</p> <p>10. Uses simple formulae</p> <p>11. Solves problems involving the relative sizes of two quantities where missing</p> | <p>3. Uses estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy Solves problems which require answers to be rounded to specified degrees of accuracy</p> <p>4. Solves problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</p> <p>5. Recognises, describes and builds simple 3-D shapes, including making nets</p> <p>6. Solves problems involving unequal sharing and grouping using knowledge of fractions and multiples</p> <p>7. Generates and describes linear number sequences Expresses missing number problems algebraically</p> <p>8. Enumerates possibilities of combinations of two variables Finds pairs of numbers that satisfy an equation involving two unknowns</p> <p>Pupils will then be given the opportunity to revisit many of the skills and curriculum content covered both in Year 6 and also the rest of Key Stage 2, through project work. This provides an opportunity to ensure any possible gaps in understanding are addressed before children move on to secondary school.</p> |
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| <p>One additional week for assessments, revisiting areas of need and consolidation</p> | <p>values can be found by using integer multiplication and division facts Solves problems involving similar shapes where the scale factor is known or can be found</p> <p>12. Calculates and interprets the mean as an average</p> <p>One additional week for assessments, revisiting areas of need and consolidation</p> | <p>Four additional weeks for assessments, revisiting areas of need and consolidation in preparation for secondary school.</p> |
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Maths vocabulary for year 6

| Number and place value | Addition and subtraction Multiplication and division | Measurement | Geometry (position and direction) | Geometry (properties of shape) | Fractions, decimals and percentages | Ratio and Proportion | Algebra | Statistics |
|--|--|--|--|---|--|--|---|---|
| <p>Ten million, million, hundred thousands, ten thousands, thousands, hundreds, tens, ones</p> <p>Round to a required</p> | <p>Multi digit</p> <p>Short and long multiplication</p> <p>Short and long division</p> <p>Interpreting remainders</p> | <p>Conversion</p> <p>Units of measure</p> <p>Decimal notation</p> <p>Convert</p> <p>Length, mass,</p> | <p>Four quadrants (for coordinates), full coordinate grid, coordinate plane</p> <p>Reflect</p> <p>Axes, coordinates</p> | <p>2D, 3D (names and properties)</p> <p>Nets</p> <p>Dimensions, angles, properties</p> <p>Compare and classify</p> | <p>Simplify, simplest form, common factors, common multiples, same denomination, numerator, denominator, equivalent, proper fraction, decimal fraction</p> <p>Tenths, hundredths, thousandths, three</p> | <p>Relative sizes of two quantities</p> <p>Percentages of amounts, percentages for comparison</p> <p>Scale factor</p> <p>Ratio</p> | <p>Linear number sequence</p> <p>Simple formulae</p> <p>Algebraically</p> <p>Variables</p> <p>Enumerate</p> | <p>Mean and average</p> <p>Line graphs and pie charts</p> <p>Interpret and construct</p> <p>Data set</p> |

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|--------------------|---|-------------------------------|--------|--|---|--|---------------------|--|
| degree of accuracy | Order of operations, brackets | volume, time, area, perimeter | Vertex | Regular and irregular polygons | decimal places, two decimal places, one decimal place, decimals, percentage, equivalences | | Symbols and letters | |
| Negative numbers | Inverse | Miles and kilometres | | Angle, acute, obtuse, reflex, degrees, protractor | Rounding, estimating | | | |
| | Mixed operations | Parallelogram | | Vertically opposite (angles), angles meet on straight line | | | | |
| | Common factors, common multiples, prime numbers | Estimate and compare | | Circumference, radius, diameter | | | | |
| | Estimation | | | | | | | |
| | Degree of accuracy | | | | | | | |

Vocabulary Key:

Yellow font is core vocabulary to focus on

Green font is National Curriculum vocabulary