

Church Lane Primary School  
 and Nursery

Mathematics Curriculum

2020/2021

Year 3

Year 3 – Mathematics curriculum

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| Subject area | Overview | Lessons | Equipment | Key Vocab |
| Place Value | Place value within 1,000 | Counting in 100s | Base 10 equipment (100s)  Bags and boxes of objects in 100s  Bead strings  100 square  Base 10 equipment (1s and 10s) | Hundreds (100s), tens (10s), ones (1s)  Place value  More, less  Greater than, less than, equal to  Order, compare  Digit, one thousand  Part-whole model, place value grid, number line  Estimate, halfway, exchange  Taller, tallest, longest, shortest, greatest, smallest, most, least, fewest |
| Representing numbers to 1,000 |
| 100s, 10s and 1s (1) |
| 100s, 10s and 1s (2) |
| The number line to 1,000 (1) |
| The number line to 1,000 (2) |
| Finding 1, 10 and 100 more or less |
| Comparing numbers to 1,000 (1) |
| Comparing numbers to 1,000 (2) |
| Ordering numbers to 1,000 |
| Counting in 50s |
|  |  |  |  |  |
| Addition and subtraction | Adding and subtracting | Adding and subtracting 100s | Base 10 equipment  Place value counters  Place value cards  Place value grids | Add, addition  Subtract, subtraction, take away, difference  Exchange, pattern, variation, column method, mental method, part-whole model, number line  Total, altogether, calculations, regroup, partition, solutions  Place value, number bonds, fact family, related facts, number statements, method, order  Hundreds (100s), tens (10s), ones (1s) digits, zero  Multiples of 10, multiples of 100, 3-digit number, 2-digit number, 10 ones, 10 tens  Left, greater than, less than, fewer, more, metres, miles, centimetres, symbol |
| Adding and subtracting a 3-digit number and 1s |
| Adding a 3-digit number and 1s |
| Subtracting 1s from a 3-digit number |
| Adding and subtracting a 3-digit number and 10s |
| Adding a 3-digit number and 10s |
| Subtracting 10s from a 3-digit number |
| Adding and subtracting a 3-digit and 2-digit number |
| Adding a 3-digit and 2-digit number |
| Subtracting a 2-digit number from a 3-digit number |
|  |  |  |  |  |
| Addition and subtraction | Adding and subtracting | Addition and subtraction | Base 10 equipment  Place value equipment  Part-whole models | Add, addition  Subtract, subtraction  Total, altogether  Exchange  Part-whole, whole, part  Place value  Hundreds (100s), tens (10s), ones (1s)  Column method  Mental method, mentally  Estimate, estimation  Approximate, approx., approximation approximately about  Fact family  Bar model  Digits  Multiple  Logically  Function machine |
| Adding two 3-digit numbers (1) |
| Adding two 3-digit numbers (2) |
| Subtracting a 3-digit number from a 3-digit number (1) |
| Subtracting a 3-digit number from a 3-digit number (2) |
| Estimating answers to additions and subtractions |
| Checking strategies |
| Problem solving – addition and subtraction (1) |
| Problem solving – addition and subtraction (2) |
|  |  |  |  |  |
| Multiplication and division | Multiplying and dividing | Multiplication – equal grouping | Cubes  Counters  Number lines | Equal groups, unequal groups, shared equally  Multiply, multiplication statement, multiplication fact, multiplication sentence, divide, division statement, division fact  Times-table  Group, share  Whole, left over, remainder  One-step, two-step, multi-step  Array, bar model, number line  Pattern  Count up, total, double, method  Repeated addition |
| Multiplying by 3 |
| Dividing by 3 |
| 3 times-table |
| Multiplying by 4 |
| Dividing by 4 |
| 4 times-table |
| Multiplying by 8 |
| Dividing by 8 |
| 8 times-table |
| Problem solving – multiplication and division (1) |
| Problem solving – multiplication and division (2) |
| Understanding divisibility (1) |
| Understanding divisibility (2) |
| Related facts – multiplication and division |
|  |  |  |  |  |
| Multiplication and division | Multiplying and dividing | Comparing multiplication and division statements (1) | Counters | Multiplication  Division  Greater than  Less than  Equal  Remainder  Share  Partition  Tens (10s)  Ones (1s)  exchange |
| Related multiplication calculations |
| Related multiplication and division calculations |
| Comparing multiplication and division statements (2) |
| Multiplying a 2-digit number by a 1-digit number (1) |
| Multiplying a 2-digit number by a 1-digit number (2) |
| Multiplying a 2-digit number by a 1-digit number (3) |
| Dividing a 2-digit number by a 1-digit number (1) |
| Dividing a 2-digit number by a 1-digit number (2) |
| Dividing a 2-digit number by a 1-digit number (3) |
| How many ways? |
| Problem solving – mixed problems (1) |
| Problem solving – mixed problems (2) |
| Problem solving – mixed problems (3) |
|  |  |  |  |  |
| Fractions | Understanding fractions | Unit and non-unit fractions | Coloured rods (to make a bar model)  Fraction scaffolds  Double-sided counters | Part, whole, equal parts, fraction, unit fraction, non-unit fraction, denominator, numerator  Partition, split, share, group, interval, combine, count on, count back, represent  Halves, thirds, quarters, fifths, sixths, sevenths, eighths, ninths, tenths, elevenths, twelfths  Mixed number, whole number, fractional part, integer, set of objects |
| Making the whole |
| Tenths (1) |
| Tenths (2) |
| Fractions as numbers (1) |
| Fractions as numbers (2) |
| Fractions as numbers (3) |
| Fractions of a set of objects (1) |
| Fractions of a set of objects (2) |
| Fractions of a set of objects (3) |
| Problem solving - fractions |
|  |  |  |  |  |
| Fractions | Understanding fractions | Equivalent fractions (1) | Fraction strips  Bar model  Paper strips | Part, whole, equal parts, unit fraction, non-unit fraction, denominator, numerator, equivalent fraction  Partition, split, share, count on, count back, compare, measure, calculate, method  Whole number, add, subtract, difference, multiply, divide, equal to, greater than, less than |
| Equivalent fractions (2) |
| Equivalent fractions (3) |
| Comparing fractions |
| Comparing and ordering fractions |
| Adding fractions |
| Subtracting fractions |
| Problem solving – adding and subtracting fractions |
| Problem solving – fractions of measures |
|  |  |  |  |  |
| Statistics | Present information in different ways | Pictograms (1) | Number lines  Cubes  counters | Pictogram  Key, Symbol  Compare, Least, most  Altogether  Bar chart  Horizontal axis, vertical axis  Scale, Half-way between  Table, Row, column  Order  Smallest, larges, total |
| Pictograms (2) |
| Bar charts (1) |
| Bar charts (2) |
| Tables |
|  |  |  |  |  |
| Measure | Money | Pounds and pence | Plastic  Paper coins  notes | Pounds (£), pence (p)  Convert  Total  Difference  change |
| Converting pounds and pence |
| Adding money |
| Subtracting amounts of money |
| Problem solving – money |
|  |  |  |  |  |
| Measure | length | Measuring length (1) | Metre rulers  Centimetre rulers | Millimetres, centimetres, metres  Measure, measurement, length, height, width, distance, diagonal  How long? How wide? How tall? How high?  Ruler, metre stick, metre ruler  Longer, shorter, longest, shortest, furthest  Perimeter  Addition, subtraction, find the difference, repeated, addition, multiplication  Greater than, less than  Polygon, quadrilateral, triangle, rectangle  Compare, convert, equal, equivalent, ascending, predict, calculate, expression, method |
| Measuring length (2) |
| Equivalent lengths – metres and centimetres |
| Equivalent lengths – centimetres and millilitres |
| Comparing lengths |
| Adding lengths |
| Subtracting lengths |
| Measuring the perimeter (1) |
| Measuring the perimeter (2) |
| Problem solving – length (1) |
| Problem solving – length (2) |
|  |  |  |  |  |
| Measure | Time | Months and years | Calendars | Month, year, leap year  January, February, March, April, May, June, July, August, September, October, November, December  Day, hour, minute, second  Midnight, midday/noon  Hour hand, minute hand, past, to, half past, o’clock, quarter past, quarter to, Roman numerals  Longer, shorter, the same, units, last, convert, how long, left, passed, fastest, slowest  12-hour clock, 24-hour clock  Start time, end time, duration, time taken, finish, forwards, backwards, twice  Daytime, night time, around the clock, am, pm  Morning, afternoon, evening, night |
| Hours in a day |
| Estimating time |
| Telling time to 5 minutes |
| Telling time to the minute (1) |
| Telling time to the minute (2) |
| Telling time to the minute (3) |
| Finding the duration |
| Comparing duration |
| Finding start and end times |
| Measuring time in seconds |
|  |  |  |  |  |
| Measure | Mass | Measuring mass (1) | Weighing scales  Modelling clay  Number lines  parachute | Mass  Weigh  Measure  Grams  Kilograms  Interval  Scale |
| Measuring mass (2) |
| Measuring mass (3) |
| Comparing masses |
| Adding and subtracting masses |
| Problem solving - mass |
|  |  |  |  |  |
| Measure | Capacity | Measuring capacity (1) | Number lines  Capacity measuring equipment (selection of 100ml, 500ml and litre containers) | Capacity, amount, measurement  Litres, millilitres  Scale, number line, interval  Compare, convert, order |
| Measuring capacity (2) |
| Measuring capacity (3) |
| Comparing capacities |
| Adding and subtracting capacities |
| Problem solving - capacity |
|  |  |  |  |  |
| Shape | Angles and properties of shape | Turns and angles | Toy figures  Diagrams of eight-point compass (or chalks so this can be drawn on the playground)  An object to represent the rover | Right angle, quarter turn, half turn (and other angles)  Vertical, horizontal, parallel, perpendicular  Triangle, square, (other 2D shapes)  Cube, cuboid, prism, cylinder, cone, triangular prism,, tetrahedron (other 3D shapes)  Describe, property, 2D, 3D, draw accurately, construct |
| Right angles in shapes |
| Comparing angles |
| Drawing accurately |
| Types of line (1) |
| Types of line (2) |
| Recognising and describing 2D shapes |
| Recognising and describing 3D shapes |
| Constructing 3D shapes |

At the end of each **unit**, please allow ALL pupil to independently complete the end of unit assessment. This can be found on your PowerMaths online account.

* Click on your unit (left hand side)
* Scroll down to the bottom of the screen to find ‘assess’ menu.
* Print off end of unit test and stick it in their book.

At the end of each **term** (Autumn, Spring, Summer), please complete the end of term assessments from White Rose Maths. These can be find using the web address: <https://whiterosemaths.com/resources/assessment/primary-assessment/end-of-term-primary/>

Displays should be a ‘working wall’ including **up-to-date** information and pupil work. It should also include questions and challenges. It **must** show the **progressive journey** your class have been on throughout that unit.

All classrooms should follow the colour co-ordinated questions:

Orange – fluency (no worded response necessarily required, although KS2 should request pupils to answer using Stem sentences E.G 2 + 2 = The total of 2 plus 2 is 4)

Blue – reasoning – there should be a written worded response which is grammatically coherent with correct punctuation.

Green – problem solving – the children should show their workings (journey). We should be looking for and encouraging systematic approaches, using all prior knowledge not ‘trial and error’

**Next steps** should take learning to the next level. For example: a child has only completed fluency questions, their next step could be a reasoning or a pupil that has only completed fluency supported, then a fluency independently is a good next step.  
  
**Immediate interventions or pre-**learning should take place regularly with **ALL** pupils.