

Church Lane Primary School  
 and Nursery

Mathematics Curriculum

2020/2021

Year 4

Year 4 – Mathematics curriculum

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| Subject area | Overview | Lessons | Equipment | Key Vocab |
| Place Value | Numbers to 10,000 | Numbers to 1,000 | Place value counters  Base 10 equipment  Number line  Place value grid  Place value cards | Tens, hundreds, thousands  Rounding, counting, represent, compare, order  More than, less than  Partition, recombine  Numerals  Nearest, distance |
| Rounding to the nearest 10 |
| Rounding to the nearest 100 |
| Counting in 1,000 |
| Representing 4-digit numbers |
| 1,000s, 100s, 10s, 1s |
| The number line to 10,000 (1) |
| The number line to 10,000 (2) |
| Roman numerals to 100 |
|  |  |  |  |  |
| Place value | 4-digit numbers | Finding 1,000 more or less | Base 10 equipment  Place value counters  Number lines  Place value grids | Thousands, hundreds, tens, ones  Place value  More, less  Greater than, less than, equal to  Order, compare  Round to, nearest  Negative, positive  Step  Ascending, descending |
| Comparing 4-digit numbers (1) |
| Comparing 4-digit numbers (2) |
| Ordering numbers to 10,000 |
| Rounding to the nearest 1,000 |
| Solving problems using rounding |
| Counting in 25s |
| Negative numbers (1) |
| Negative numbers (2) |
|  |  |  |  |  |
| Addition and subtraction | Adding and subtracting | Adding and subtracting 1s, 10s, 100s, 1,000s | Place value counters  Base 10 equipment | Addition  Subtraction  Total  More than  Less than  Difference  Exchange  Column method  Estimate  Accurate  Efficient  Exact  Strategy  diagram |
| Adding two 4-digit numbers (1) |
| Adding two 4-digit numbers (2) |
| Adding two 4-digit numbers (3) |
| Subtracting two 4-digit numbers (1) |
| Subtracting two 4-digit numbers (2) |
| Subtracting two 4-digit numbers (3) |
| Subtracting two 4-digit numbers (4) |
| Equivalent difference |
| Estimating answers to additions and subtractions |
| Checking strategies |
| Problem solving – addition and subtraction (1) |
| Problem solving – addition and subtraction (2) |
| Problem solving – addition and subtraction (3) |
| Problem solving - addition and subtraction (4) |
|  |  |  |  |  |
| Multiplication and division | Multiplying and dividing | Multiplying by multiples of 10 and 100 | Base 10 equipment  Multiplication square  counters | Times-table, times, times by  Multiply, multiple, multiply by  Divide, divide by  Grouping, groups of, lots of, sets of, grouped, x groups of y  Sharing, share, equal, equally  Number facts, number sentences, multiplication facts/ sentences, division facts/ sentences, fact family  Ones, tens, hundreds, zero, how many, total, method, calculation, exchange, solve, less than, greater than, added, sort, sum, recall |
| Dividing multiples of 10 and 100 |
| Multiplying by 0 and 1 |
| Dividing by 1 |
| Multiplying and dividing by 6 |
| 6 times-table |
| Multiplying and dividing by 9 |
| 9 times-table |
| Multiplying and dividing by 7 |
| 7 times-table |
| 11 and 12 times-tables |
|  |  |  |  |  |
| Multiplication and division | Multiplying and dividing | Problem solving – addition and subtraction | Cubes  Counters | Multiplication, multiplication statement  Grouping, groups, equal, total, repeated addition  Correspondence, multiply, divide, combinations  Divide, division statement  Times-tables  Whole, left over, remainder  One-step, two-step, multi-step  Array, bar model, part-whole model |
| Problem solving – mixed problems |
| Using written methods to multiply |
| Multiplying a 2-digit number by a 1-digit number |
| Multiplying a 3-digit number by a 1-digit number |
| Problem solving – multiplication |
| Multiplying more than two numbers (1) |
| Multiplying more than two numbers (2) |
| Problem solving – mixed correspondence problems |
| Dividing a 2-digit number by a 1-digit numbers (1) |
| Division with remainders |
| Dividing a 2-digit number by a 1-digit number (2) |
| Dividing a 2-digit number by a 1-digit number (3) |
| Dividing a 3-digit number by a 1-digit number |
| Problem solving - division |
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| Fractions and decimals | Tenths and hundredths | Tenths and hundredths (1) | Counters  Large hundredths grid  Base 10 equipment | Tenths, hundredths  Equivalent fractions  Improper fractions, mixed numbers  Simplify, simplest fractions |
| Tens and hundredths (2) |
| Equivalent fractions (1) |
| Equivalent fractions (2) |
| Simplifying fractions |
| Fractions greater than 1 (1) |
| Fractions greater than 1 (2) |
|  |  |  |  |  |
| Fractions and decimals | Adding and subtracting fractions | Adding fractions | Fraction cards  Base 10 equipment | Numerator, denominator  Fractions, whole number, mixed number, proper fraction, improper fraction  Add, subtract, multiply, divide, sign, greater than, less than  Whole, part, find .. of ..  Fraction strip, represent, number line, diagram, problem solving |
| Subtracting fractions (1) |
| Subtracting fractions (2) |
| Problem solving – adding and subtracting fractions (1) |
| Problem solving – adding and subtracting fractions (2) |
| Calculations fractions of a quantity |
| Problem solving – fraction of a quantity (1) |
| Problem solving – fraction of a quantity (2) |
|  |  |  |  |  |
| Fractions and decimals | Decimals | Tenths (1) | Place value counters | Decimal point, whole, tenths, hundredths, integer, tenths column hundredths column  One more, one less, greater than, increase, decrease  Divide, regroup, equivalent, partition |
| Tenths (2) |
| Tenths (3) |
| Dividing by 10 (1) |
| Dividing by 10 (2) |
| Hundredths (1) |
| Hundredths (2) |
| Hundredths (3) |
| Dividing by 100 |
| Dividing by 10 and 100 |
|  |  |  |  |  |
| Fractions and decimals | Decimals | Making a whole | Hundredth grid  Blank ten frames  Number cards  1s and tenths place value counters  Large laminated part-whole model | Tens, ones, tenths, hundredths, fractions  Decimal points, decimal place  Equivalent, number bond, equivalent fraction  Whole number, digit  Rounding, round up, round down, multiply, divide  Greater than, less than, equal to, smallest, lightest, greatest, heaviest, capacity  Order, compare, statement, ascending, convert  Part-whole, place value, bar model |
| Writing decimals |
| Comparing decimals |
| Ordering decimals |
| Rounding decimals |
| Halves and quarters |
| Problem solving - decimals |
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| Measure | Perimeter | Kilometres | Metre sticks  Distance tables | Kilometres, metres, centimetres  Convert, equivalent to  Perimeter, distance, around  Total  Length, width  Square, rectangle, rectilinear shape |
| Perimeter of a rectangle (1) |
| Perimeter of a rectangle (2) |
| Perimeter of rectilinear shapes (1) |
| Perimeter of rectilinear shapes (2) |
|  |  |  |  |  |
| Measure | Area | What is area? | Small counters  Variety of flat non-standard units to measure (flat coloured squares or triangles, playing cards, coins)  Variety of squares and rectangles to measure (book covers, newspaper pages, paper, card) | Area, space, inside, units, rows  Lengths, width, measure  (shapes)  Larger, more area, smaller, less area, least area, greatest area  Right angle  Counting, subtraction  Reflection, rotation  Compare, order, size |
| Counting squares (1) |
| Counting squares (2) |
| Making shapes |
| Comparing area |
|  |  |  |  |  |
| Measure | Money | Pounds and pence | Plastic coins  crayons | Notes, coins, pounds, pence  Add, subtract  Change  Round to the nearest, order  Greater than, less than  Cheaper, more expensive  Estimate, over estimate, under estimate, total |
| Pounds, tenths, hundredths |
| Ordering amounts of money |
| Rounding money |
| Using rounding to estimate money |
| Problem solving – pounds and pence |
| Problem solving – multiplication and division |
| Solving two-step problems |
| Problem solving - money |
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| Measure | Time | Units of time (1) | Digital timers  stopwatches | Seconds, minutes, hours  Days, weeks, months, years  Units of time  Convert, equal to, compare  12-hour, 24-hour, am, pm  Analogue, digital  Bar model |
| Units of time (2) |
| Converting times (1) |
| Converting times (2) |
| Problem solving – units of time |
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| Geometry | Angles and 2D shapes | Identifying angles | A range of 2D shapes  Paper squares  Clock face | Angle, acute, obtuse, right angle, quarter turn, half turn, interior angles, exterior angles  (shape names)  Regular, irregular, side length, length, perimeter  Symmetrical, symmetry, lines of symmetry, horizontal, vertical, diagonal, reflective, sequence, pattern  Sort, group, compare, order, properties  Shape, vertices, parallel |
| Comparing and ordering angles |
| Identifying regular and irregular shapes |
| Classifying triangles |
| Classifying and comparing quadrilaterals |
| Deducing facts about shape |
| Lines of symmetry inside a shape |
| Lines of symmetry outside a shape |
| Completing a symmetric figure |
| Completing a symmetric shape |
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| Measure | Position and direction | Describing position (1) | Access to the Internet  Simple maps | Coordinates  Position  Horizontal, vertical  Up, down,  left, right  square, rectangle  vertex, vertices |
| Describing position (2) |
| Drawing on a grid |
| Reasoning on a grid |
| Moving on a grid |
| Describing a movement on a grid |
|  |  |  |  |  |
| Statistics | Recording and interpreting data | Charts and tables (1) | Rulers  Multilink cubes | Table, line graph, bar chart, pictogram  Discrete data, continuous data  Operation  Altogether more than, greatest, smallest  compare |
| Charts and tables (2) |
| Line graphs (1) |
| Line graphs (2) |
| Problem solving - graphs |
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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.