

Church Lane Primary School
 and Nursery

Mathematics Curriculum

2020/2021

Year 2

Year 2 – Mathematics curriculum

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Subject area | Overview | Lessons | Equipment | Key Vocab |
| Place Value | Number to 100 | Counting objects to 100 | Blank number linesCountable objectsBead strings | Less than, fewer, smaller, lessGreater than, larger, bigger, moreEqual toGreatest, biggestFewest, smallestTens, onesHow many?, count, partitionPlace value grid, part-whole model |
| Representing numbers to 100 |
| Tens and ones (1) |
| Tens and ones (2) |
| Representing numbers on a place value grid |
| Comparing numbers (1) |
| Comparing numbers (2) |
| Ordering numbers |
| Counting in 2s, 5s, 10s |
| Counting in 3s |
|  |  |  |  |  |
| Addition and subtraction | Adding and subtracting | Related facts – addition and subtraction | CubesCountersBlank part-whole modelBlank addition and subtraction calculation scaffoldsBase 10 equipmentDigit cardsPhysical resources to make parts and wholes | Part, whole. Part-wholeAdd, added, plus, total, altogether, sum, calculationCount, count on, count back, leftSubtract, take away, minusExchange, compare, greater than, less than, more, lessOnes, tens, 10 more, 10 less, place value, column, 1-digit number, 2-digit numberNumber sentence, number bonds, known fact, fact family |
| Using number facts to check calculations |
| Comparing number sentences |
| Finding related facts |
| Making number bonds to 100 |
| Adding and subtracting 1s |
| Finding 10 more and 10 less |
| Adding and subtracting 10s |
| Adding a 2-digit and 1-digit number (1) |
| Adding a 2-digit and 1-digit number (2) |
| Subtracting a 1-digit number from a 2-digit number (1) |
| Subtracting a 1-digit number from a 2-digit number (2) |
|  |  |  |  |  |
| Addition and subtraction | Adding and subtracting larger numbers | Adding two 2-digit numbers (1) | Base 10 equipmentPlace value gridStrawsElastic bandsPictures of numbers made with base 10 equipmentPlace value counters | Part, whole. Part-wholeAdd, added, plus, total, altogether, sum, calculationCount, count on, count back, left, differenceSubtract, take away, minusExchange, compare, greater than, less than, more, less, regroup, representOnes, tens, 10 more, 10 less, place value, column, 1-digit number, 2-digit number, bar modelNumber sentence, number bonds, known fact, fact family |
| Adding two 2-digit numbers (2) |
| Subtracting a 2-digit number from another 2-digit number (1) |
| Subtracting a 2-digit number from another 2-digit number (2) |
| Subtracting a 2-digit number from another 2-digit number (3) |
| Subtracting a 2-digit number from another 2-digit number (4) |
| Adding three 1-digit numbers |
| Solving word problems – the bar model (1) |
| Solving word problems – the bar model (2) |
|  |  |  |  |  |
| Measure | Money | Counting money – coins | Currency (coins 1p - £2)Base ten equipmentCurrency (notes £5 - £20)Sorting hoopstrays  | Money, coins, notesPounds (£), pence (p)Change, left, right, money, buy(s), spend, stepHow much?, value, amount total, altogether, parts, between, differenceCount on, sort, match, compare, add, addition, calculate, subtractionGreat(er/est), smallest, exact(ly), higher, lower, most, leastMore than, less than, equalPart-whole model, number line, bar model |
| Counting money – notes |
| Counting money – coins and notes |
| Showing equal amounts of money (1) |
| Showing equal amounts of money (2) |
| Comparing amounts of money |
| Calculating the total amount |
| Finding change |
| Solving two-step word problems |
|  |  |  |  |  |
| Multiplication and division | Multiplying  | Making equal groups | CountersMultilink cubesClassroom objects in equal groups that make a clear distinction between the objects put into groups and what the groups are (such as pens in packs, eggs in egg boxes) | Equal groupsRepeated additionSkip countingNumber in a groupNumber of groupsTimesTimes-tableMultiply/ multiplicationMore than, less thanArrayRows /columnsBar modelEqual partsNumber of equal partsTimes bigger/ times taller/Times greaterTwice as big |
| Multiplication as equal groups |
| Adding equal groups |
| Multiplication sentences |
| Using array |
| 2 times-table |
| 5 times-table |
| 10 times-table |
| Solving word problems - multiplication |
|  |  |  |  |  |
| Multiplication and division | Dividing | Making equal groups | CountersBlank number linesCubes  | Divide, division, the division sign ShareGroupOdd, evenTimes-tablesEqual groups, number of groups |
| Sharing and grouping |
| Dividing by 2 |
| Odd and even numbers |
| Dividing by 5 |
| Dividing by 10 |
| Bar modelling – grouping |
| Bar modelling – sharing |
| Solving word problems division |
|  |  |  |  |  |
| Statistics | Recording, Representing and interpreting data | Making tally charts | Number linesCountersRulerCounting in 5s number line | Tally chart, tallyPictogramBlock diagramTableMore, less, most, leastFavourite, popularEqualRepresent, symbol, key, informationTotal, altogetherCompare |
| Creating pictograms (1) |
| Creating pictograms (2) |
| Interpreting pictograms (1) |
| Interpreting pictograms (2) |
| Block diagrams |
| Solving word problems |
|  |  |  |  |  |
| Measure | Length and height | Measuring in centimetres | RulersSelection of objects to measureInterlocking centimetre cubes | Length, heightWidth, distanceLong, longer, short, shorterTallMetres, centimetresOrder, compareRuler, measure stickMeasureZeroGreater than, less than, equal to |
| Measuring in metres |
| Comparing lengths |
| Ordering lengths |
| Solving word problems - length |
|  |  |  |  |  |
| Shape | Properties of shape | Recognising 2D and 3D shapes | A range of 2D and 3D shapes with labelsMaterials for printing with 3D shapes | Circle, semicircleOval, triangle, square, rectangle, quadrilateral Polygon, pentagon, hexagon, octagonSphere, hemisphereCone, ovoid, cylinderTriangle-based pyramid, square-based pyramid, pentagon-based pyramid, hexagon-based pyramidCube, cuboidTriangular prism, pentagonal prism, hexagonal prism2D, 3DPropertiesSide, vertex, vertices, edge, facePatternSymmetry, symmetrical, line of symmetryCurved surface |
| Drawing 2d shapes |
| Counting sides on 2D shapes |
| Counting vertices on 2D shapes |
| Finding lines of symmetry |
| Sorting 2D shapes |
| Making patterns with 2D shapes |
| Counting faces on 3D shapes |
| Counting edges on 3D shapes |
| Counting vertices on 3D shapes |
| Sorting 3D shapes |
| Making patterns with 3D shapes |
|  |  |  |  |  |
| Fractions  | Recognising, finding and understanding fractions | Introducing whole and parts | Sentence scaffoldsObjects in classroom that contain multiple parts (pencil cases that contain multiple parts) | FractionHalf, quarter, thirdWholePart, equal partNumerator, denominatorFraction barUnit fraction, non-unit fractionEquivalentThree-quartersEqualDivided byOdd, evenSharepattern |
| Making equal parts |
| Recognising a half (1/2) |
| Finding a half |
| Recognising a quarter (1/4) |
| Finding a quarter |
| Unit fractions |
| Understanding other fractions |
| ½ and 2/4 |
| Finding 3/4  |
| Understanding a whole |
| Understanding whole and parts |
| Counting in halves |
| Counting in quarters |
|  |  |  |  |  |
| Shape | Position and direction | Describing movement | Laminated gridsObjects (including 2D and 3D shapes) | Quarter turn, half turn, whole turnClockwise, anti-clockwiseForwards, backwardsLeft, right, up, downTurn, middle,Position, patternAbove, below, top, bottom, betweenCube, cylinder, circle, semi-circle, triangle, rectangle, square |
| Describing turns |
| Describing movement and turns |
| Making patterns with shapes |
|  |  |  |  |  |
| Four operations | Problem solving and efficient methods | My way, your way! | CoinsCompleted number lineBlank number lineCompleted bar modelColoured rods | Part, whole, part-wholeAdd, addition, more than, +Subtract, subtraction, difference, change, take away, less than, -Divide, division, shareMultiply, multiplication, lots of, XAltogether, groups of, total, sum, total costRepresentation, bar model, efficient  |
| Using number facts |
| Using number facts and equivalence |
| Using a 100-square |
| Getting started |
| Missing numbers |
| Mental addition and subtraction (1) |
| Mental addition and subtraction (2) |
| Efficient subtraction |
| Solving problems – addition and subtraction |
| Solving problems – multiplication and division |
| Solving problems using the four operations |
|  |  |  |  |  |
| Measure | Time | Telling and wiring the time to the hour and half hour |  | Hands, face, hour, minute, analogueO’clock, part, to, half past, quarter past, quarter to, quarter of an hourAlmost, same, units, last, convert, how long, left, passed, shorter, longer, faster, slowestFive, ten, fifteen, twenty, twenty-five, thirty, thirty-five, forty, forty-five, fifty, fifty-five, sixty5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60Time, start time, end time, duration, time taken, finish, forwards, backwards, twice24 hours, day, daytime, night time, around the clock, am, pmMidday, midnight, morning, afternoon |
| Telling the time to the quarter hour |
| Telling the time to 5 minutes |
| Minutes in an hour |
| Finding duration of time |
| Comparing durations of time |
| Finding the end time |
| Finding the start time |
| Hours in a day |
|  |  |  |  |  |
| Measure | Weight, volume and temperature | Comparing mass | Balance scalesRange of objects of different masses | Balance, comparing, estimating, reasoning, accurately, total, scale, interval100s, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000Mass, weight, grams, kilograms, kilosVolume, capacity, millilitres, litresTemperature, thermometer, degrees CelsiusMore than, less than, identical, divideHeavier, heaviest, lighter, lightestGreater, greatest, least, smaller, smallest, full, half, three-quarters, quarters, nearest to, times as muchHotter, hottest, warmer, warmest, colder, coldest, cooler, coolest |
| Measuring mass in grams (1) |
| Measuring mass in grams (2) |
| Measuring mass in kilograms |
| Comparing volume |
| Measuring volume in millilitres (1) |
| Measuring volume in millilitres (2) |
| Measuring volume in litres |
| Measuring temperature using a thermometer |
| Reading thermometers |
|  |  |  |  |  |

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.