Grade 2 Maths Curriculum Framework Document

Number
Numbers and the number system
1. Count, read, and write numbers to at least 100 and back again.
2. Count up to 100 objects, e.g. beads on a bead bar.
3. Count on in ones and tens from single and two-digit numbers and back again.
4. Count in twos, fives, and tens and use grouping in twos, fives, or tens to count larger groups of objects
5. Begin to count on in small constant steps such as threes and fours.
6. Know what each digit represents in two-digit numbers; partition into tens and ones.
7. Find 1 or 10 more/less than any two-digit number.
8. Round two-digit numbers to the nearest multiple of 10.
9. Say a number between any given neighbouring pairs of multiples of 10, e.g. 40 and 50.
10. Place a two-digit number on a number line marked off in multiples of ten.
11. Recognise and use ordinal numbers up to at least the tenth number and beyond.
12. Order numbers to 100; compare two numbers using the $>$ and $<$ signs.
13. Give a sensible estimate of up to 100 objects, e.g. choosing from 10, 20, 50, or 100.
14. Understand even and odd numbers and recognise these up to at least 20.
15. Sort numbers, e.g. odd/even, multiples of 2, 5, and 10.
16. Recognise that we write one half as '½', one quarter '¼', and three quarters '3/4'.
17. Recognise that 2/2 or 4/4 make a whole and that ½ and 2/4 are equivalent.
18. Recognise which shapes are divided in halves or quarter, and which are not.
19. Find halves and quarters of shapes and small numbers of objects.

Calculation

Mental strategies
1. Find and learn by heart all numbers to 10 and pairs with a total of 20.
2. Partition all numbers to 20 into pairs and record the related addition and subtraction facts.
3. Find all pairs of multiples of 10 with a total of 100 and record the related additional and subtraction facts.
4. Learn and recognise multiples of 2, 5, and 10, and derive the related division facts.
5. Find and learn doubles for all numbers up to 10, 15, 20, 25, and 50.

Addition and subtraction
1. Relate counting on/back in tens to finding 10 more/less than any two-digit number and then to adding and subtracting other multiples of 10, e.g. 75 – 30.
2. Use the '=' sign to represent equality, e.g. 16 + 4 = 17 + 3.
3. Add four or five small numbers together.
4. Recognise the use of a symbol such as x or y to represent an unknown, e.g. $x + 3 = 10$.
5. Solve number sentences such as $27 + x = 30$.
6. Add and subtract a single digit number to and from a two-digit number.
7. Add pairs of two-digit numbers.
8. Find a small difference between pairs of two-digit numbers.
9. Understand that addition can be done in any order, but subtraction cannot.
10. Understand subtraction as both difference and take away.

Multiplication and division
1. Understand multiplication as repeated addition and use the * sign.
2. Understand multiplication as describing an array.
3. Understand division as grouping and use the ÷ sign.
4. Use counting in twos, fives, or tens to solve practical problems involving repeated addition.
5. Find doubles of multiples of 5 up to double 50 and corresponding halves.
6. Double two-digit numbers.
7. Work out multiplication and division facts for the 3* and 4* tables.
8. Understand that division can leave some left over.

Geometry
Shapes and geometric reasoning
1. Sort, name, describe, visualise, and draw 2D shapes (e.g. squares, rectangles, circles, regular and irregular pentagons and hexagons) reffering to their properties; recognise common 2D shapes in different positions and orientations.
2. Sort, Name, describe, and make 3D shapes (e.g. cubes, cuboids, cones, cylinders, spheres, and pyramids) referring to their properties; recognise 2D drawings of 3D shapes.
3. Identify reflective symmetry in patterns and 2D shapes; draw lines of symmetry.
4. Find examples of 2D and 3D shapes and symmetry in the environment.

Position and movement
1. Follow and give instructions involving position, direction, and movement.
2. Recognise whole, half, and quarter turn, both clockwise and ant-clockwise.
3. Recognise that a right angle is a quarter turn.

Measure
Money
1. Recognise all OMR coins and notes.

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2. Use money notation.
3. Find totals and the coins and notes required to pay a given amount; work out change.

Length, mass, and capacity
1. Estimate, measure, and compare lengths, weights, and capacities, choosing and using suitable uniform non-standard and standard units and appropriate measuring instruments.
2. Compare lengths, weights, and capacities using the standard units: centimetre, metre, 100g, kilogram, and litre.

Time
1. Know the units of time (seconds, minutes, hours, days, weeks, months, and years).
2. Know the relationships between consecutive units of time.
3. Read the time to the half hour on digital and analogue clocks.
4. Measure activities using seconds and minutes.
5. Know and order the days of the week and the months of the year.

Handling data
Organising, categorising, and representing data
1. Answer a question by collecting and recording data in lists and tables, representing it as block graphs and pictograms to show results.
2. Use Carroll and Venn diagrams to sort numbers or objects using one criterion; begin to sort numbers and objects using two criteria; explain choices using appropriate language, including the use of the word *not*.

Problem solving
1. Using techniques and skills in solving mathematical problems
2. Choose appropriate mental strategies to carry out calculations and explain how they worked out the answer.
3. Explain methods and reasoning orally.
4. Explore number problems and puzzles.
5. Make sense of simple word problems (single and easy two-step problems), decide what operations (addition or subtraction, simple multiplication or division) are needed to solve them and, with help, represent them, with objects, drawings, or on a number line.
6. Make up a number story to go with a calculation, including the context of using money.
7. Check the answer to an addition by adding the numbers in a different order or by using a different strategy, e.g. 35 + 19 by adding 20 to 35 and subtracting 1, and by adding 30 + 10 and 5 + 9.
8. Check a subtraction by adding the answer to the smaller number in the original subtraction.
9. Describe and continue patterns which count on in 2s, 3s, 4s, or 5s to 30 or more.

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10. Identify simple relationships between numbers and shapes, e.g. *This number is double…*; *These shapes all have…sides.*
11. Make a sensible estimate for the answer to a calculation.
12. Consider whether an answer is reasonable.

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