**SANDBROOK SMATHS LONG TERM ASSESSMENT PLAN YEAR 2**

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| **LEARNING CYCLE** | **BOOK 2 CHAPTER** | **RELATED AM BULLET POINT** | **INTERIM TEACHER FRAMEWORK****(ARE)** | **MODERATION PAGE NOs.** | **EXPECTED BULLET POINT COMPLETION** | **AM ASSESSMENT MILESTONE** |
| **1** | **Numbers to 100** | 2.2. Recognise the place value of each digit in a two-digit number (tens, ones). | **1**. The pupil can partition two-digit numbers into different combinations of tens and ones. This may include using apparatus (e.g. 23 is the same as 2 tens and 3 ones which is the same as 1 ten and 13 ones). |  | **2.2** |  |
| 2.3. Identify, represent and estimate numbers using different representations, inc. the number line. |  |  | **2.3** |
| 2.4. Compare and order numbers from 0 up to 100; use <, > and = signs. |  |  | **2.4** |
| 2,5. Read and write numbers to at least 100 in numerals and in words. |  |  | **2.5** |
| **Addition and Subtraction** | 2.6. Solve problems with addition and subtraction: using concrete objects and pictorial representations; applying their increasing knowledge of mental and written methods. | **3**. The pupil can use estimation to check that their answers to a calculation are reasonable (e.g. knowing that 48 + 35 will be less than 100).**4.** The pupil can subtract mentally a two-digit number from another two-digit number when there is no regrouping required (e.g. 74 − 33). |  | **2.6** |
| 2.7. Recall and use add and subtract facts to 20 fluently, and derive and use related facts up to 100. |  |  | **2.7** |
| 2.8. Add and sub nos using concrete objects, pictorial representations, and mentally, including: a 2-digit no and 1s or 10s; two 2-digit numbers; adding three 1-digit numbers. | **2.** The pupil can add 2 two-digit numbers within 100 (e.g. 48 + 35) and can demonstrate their method using concrete apparatus or pictorial representations. |  | **2.8** |
| 2.9. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. |  |  | **2.9** |
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| **1** | **Addition and Subtraction** | 2.10. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. | **ARE:** **5.** The pupil can recognise the inverse relationships between addition and subtraction and use this to check calculations and work out missing number problems (e.g. ∆ − 14 = 28). |  | **2.10** | 2DA cumulative total of at least 9 bullet points |
| **2** | **Multiplication of 2, 5 and 10** | 2.11. Recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. | **ARE:** **6.** The pupil can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables to solve simple problems, demonstrating an understanding of commutativity as necessary (e.g. knowing they can make 7 groups of 5 from 35 blocks and writing 35 ÷ 5 = 7; sharing 40 cherries between 10 people and writing 40 ÷ 10 = 4; stating the total value of six 5p coins). |  |  |  |
| 2.12. Calculate mathematical statements for multiplication within the multiplication tables and write them using the multiplication (×),and equals (=) signs. |  |  |
| 2.13. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. |  |  |
| 2.14. Solve problems involving multiplication using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. |  |  |
| **Multiplication and Division Facts of 2, 5 and 10** | 2.1 Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward. | **ARE:** **6.** The pupil can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables to solve simple problems, demonstrating an understanding of commutativity as necessary (e.g. knowing they can make 7 groups of 5 from 35 blocks and writing 35 ÷ 5 = 7; sharing 40 cherries between 10 people and writing 40 ÷ 10 = 4; stating the total value of six 5p coins). |  | **2.1** |
| 2.11. Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. |  | **2.11** |
| 2.12. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. |  | **2.12** |
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| **2** | **Multiplication and Division Facts of 2, 5 and 10** | 2.13. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. | **ARE:** **6**. The pupil can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables to solve simple problems, demonstrating an understanding of commutativity as necessary (e.g. knowing they can make 7 groups of 5 from 35 blocks and writing 35 ÷ 5 = 7; sharing 40 cherries between 10 people and writing 40 ÷ 10 = 4; stating the total value of six 5p coins). |  | **2.13** |  |
| 2.14. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. |  | **2.14** |
| **Length** | 2.17. Choose/use appropriate stand units to estimate/measure length/height (m/cm) to nearest unit, using rulers,  |  |  |  |
| 2.18. Compare and order lengths, and record the results using >, < and = . |  |  |  | 2DA cumulative total of at least 15 bullet points |
|  |  |
| **3** | **Mass** | 2.17. Choose/use appropriate stand units to estimate/measure length/height (m/cm); mass (kg/g); temp (°C); cap (litres/ml) to nearest unit, using rulers, scales, thermometers and measuring vessels. |  |  |  |  |
| 2.18. Compare and order lengths, mass, volume/capacity and record the results using >, < and = . |  |  |  |  |
| **Temperature** | 2.17. Choose/use appropriate stand units to estimate/measure temp (°C); thermometers and measuring vessels. |  |  |  |  |
| **Picture Graphs**  | 2.29. Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. |  |  | **2.29** |  |
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| **3** | **Picture Graphs** | 2.30. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity; ask and answer questions about totalling and comparing categorical data. |  |  | **2.30** | 2DA cumulative total of at least 17 bullet points |
| **4** | **Word Problems** |  | **ARE:** 3. The pupil can use estimation to check that their answers to a calculation are reasonable (e.g. knowing that 48 + 35 will be less than 100). |  |  |  |
| **Money** | 2.19. Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. Find different combinations of coins that equal the same amounts of money. | **ARE:** 8. The pupil can use different coins to make the same amount (e.g. pupil uses coins to make 50p in different ways; pupil can work out how many £2 coins are needed to exchange for a £20 note). |  | **2.19** |  |
| 2.20. Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. |  | **2.20** |
| **2D Shapes** | 2.23. Identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line. |  |  | **2.23** |
| 2.26. Compare and sort common 2D shapes and everyday objects. |  |  |  |
| 2.28. Use math vocab to describe position, direction & movement inc movement in a straight line and distinguishing rotation as a turn & in terms of right angles for ⅟₄, ⅟₂, & ᶟ∕₄ turns (clock/anti-clockwise). |  |  | **2.28** | 2SA cumulative total of at least 21 bullet points |
| **5** | **3D Shapes** | 2.24. Identify and describe the properties of 3D shapes, inc the no. of edges, vertices and faces. | **ARE:** 11. The pupil can describe properties of 2-D and 3-D shapes (e.g. the pupil describes a triangle: it has 3 sides, 3 vertices and 1 line of symmetry; the pupil describes a pyramid: it has 8 edges, 5 faces, 4 of which are triangles and one is a square). |  | **2.24** |  |
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| **5** | **3D Shapes** | 2.25. Identify 2D shapes on the surface of 3D shapes, e.g. circle on a cylinder; a triangle on a pyramid. | **ARE:** 11. The pupil can describe properties of 2-D and 3-D shapes (e.g. the pupil describes a triangle: it has 3 sides, 3 vertices and 1 line of symmetry; the pupil describes a pyramid: it has 8 edges, 5 faces, 4 of which are triangles and one is a square). |  | **2.25** |  |
| 2.26. Compare and sort common 2D and 3D shapes and everyday objects. |  |  | **2.26** |
| 2.27. Order and arrange combinations of mathematical objects in patterns and sequences. |  |  | **2.27** |
| **Fractions** | 2.15. Recognise/find/name/write fractions ⅟₃, ⅟₄, 2/4, ᶟ∕₄of a length, shape, set of objects or quantity. | **ARE:** 7. The pupil can identify 1/3 , 1/4 , 1/2 , 2/4 , 3/4 and knows that all parts must be equal parts of the whole. |  | **2.15** |
| 2.16. Write simple fractions e.g. ⅟₂of 6 = 3 and recognise the equivalence of 2/4and ⅟₂. |  | **2.16** | 2AA cumulative total of at least 27 bullet points |
| **6** | **Time** | 2.21. Compare and sequence intervals of time. Know the number of minutes in an hour and the number of hours in a day. | **ARE:**10. The pupil can read the time on the clock to the nearest 15 minutes |  | **2.21** |  |
| 2.22. Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. |  | **2.22** |
| **Volume** | 2.17. Choose/use appropriate stand units to estimate/measure length/height (m/cm); mass (kg/g); temp (°C); cap (litres/ml) to nearest unit, using rulers, scales, thermometers and measuring vessels. |  |  | **2.17** |
| 2.18. Compare and order lengths, mass, volume/capacity and record the results using >, < and = . | **ARE:** 9. The pupil can read scales in divisions of ones, twos, fives and tens in a practical situation where all numbers on the scale are given (e.g. pupil reads the temperature on a thermometer or measures capacities using a measuring jug). |  | **2.18** | 2AA cumulative total of at least 30 bullet points |
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|  |  | MASTERY: The pupil can reason about addition (e.g. pupil can reason that the sum of 3 odd numbers will always be odd). |  |  |
|  |  | MASTERY: The pupil can use multiplication facts to make deductions outside known multiplication facts (e.g. a pupil knows that multiples of 5 have one digit of 0 or 5 and uses this to reason that 18 × 5 cannot be 92 as it is not a multiple of 5). |  |  |
|  |  | MASTERY: The pupil can work out mental calculations where regrouping is required (e.g. 52 − 27; 91 – 73). |  |  |
|  |  | MASTERY: The pupil can solve more complex missing number problems (e.g. 14 + – 3 = 17; 14 + ∆ = 15 + 27). |  |  |
|  |  | MASTERY: The pupil can determine remainders given known facts (e.g. given 15 ÷ 5 = 3 and has a remainder of 0, pupil recognises that 16 ÷ 5 will have a remainder of 1; knowing that 2 × 7 = 14 and 2 × 8 = 16, pupil explains that making pairs of socks from 15 identical socks will give 7 pairs and one sock will be left). |  |  |
|  |  | MASTERY: The pupil can solve word problems that involve more than one step (e.g. which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?). |  |  |
|  |  | MASTERY: The pupil can recognise the relationships between addition and subtraction and can rewrite addition statements as simplified multiplication statements (e.g. 10 + 10 + 10 + 5 + 5 = 3 × 10 + 2 × 5 = 4 × 10). |  |  |
|  |  | MASTERY: The pupil can find and compare fractions of amounts (e.g. 1/4 of £20 = £5 and 1/2 of £8 = £4 so 1/4 of £20 is greater than 1/2 of £8). |  |  |
|  |  | MASTERY: The pupil can read the time on the clock to the nearest 5 minutes. |  |  |
|  |  | MASTERY: The pupil can read scales in divisions of ones, twos, fives and tens in a practical situation where not all numbers on the scale are given. |  |  |
|  |  | MASTERY: The pupil can describe similarities and differences of shape properties (e.g. finds 2 different 2-D shapes that only have one line of symmetry; that a cube and a cuboid have the same number of edges, faces and vertices but can describe what is different about them). |  |  |