| Year 2 Mathematics Content Map | | | |
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| **Unit and time** | **Skill** | **Reasoning** | **Problem Solving** |
| TERM 1 | | | |
| **Place Value within 100**<br><br>**4 weeks**<br><br>*White Rose NCETM units 1.8 and 1.9* | • Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward<br>• Recognise the place value of each digit in a two-digit number (tens, ones)<br>• Identify, represent and estimate numbers using different representations, including the number line (include scales of 1, 2, 5 and 10)<br>• Compare and order numbers from 0 up to 100; use and = signs (link to measure)<br>• Read and write numbers to at least 100 in numerals and in words<br>• Use place value and number facts to solve problems. (link to money/ measure) | • True or False?<br>• Odd one out<br>• Ordering | Find all the possibilities |
| **Addition and Subtraction (within 20)**<br><br>**3 weeks**<br><br>*White Rose – up to step 11 (only using numbers to 20)*<br>*NCETM units 2 and 3* | • Solve problems with addition and subtraction (include adding 3 numbers and bringing the 10):<br>- using concrete objects and pictorial representations, including those involving numbers, quantities and measures<br>- applying their increasing knowledge of mental and written methods<br>• *Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 20* *This is the focus of this 3 weeks. Children should recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships (7+3 =10 then 17+3=20: If 7-3=4 then 17-3=14 leading to 14+3=17 and 3+14=17)*<br>• Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot | • Hard and easy questions<br>• Fact families | |
| TERM 2 | | | |
| **Measure (length and height)**<br><br>**1 week**<br><br>*White Rose (Step 1-4 not Step 5)* | • Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm);<br>• Compare and order lengths and record the results using >, < and = | • Make an estimate | Looking for patterns |
| **Addition and Subtraction (within 100)**<br><br>**3 weeks**<br><br>*White Rose – from step 12 and including step 5* | • Solve problems with addition and subtraction<br>- using concrete objects and pictorial representations, including those involving numbers, quantities and measures<br>- applying their increasing knowledge of mental and written methods<br>• Applying their increasing knowledge of mental and written methods | • What's the missing number? (inverse and fact families)<br>• The answer is … what's the question? | |

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| *from length and height)*<br>*NCETM unit 1.13* | • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100<br>• Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:<br>- a two-digit number and ones<br>- a two-digit number and tens<br>- two two-digit numbers<br>- adding three one-digit numbers<br>• Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot<br>• Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. | | |
| **Shape**<br><br>**3 weeks**<br><br>*White Rose*<br><br>*NCETM unit 7* | • Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line<br>• identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces<br>• identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]<br>• Compare and sort common 2-D and 3-D shapes and everyday objects. | • Odd one out<br>• Continue the pattern<br>• Other possibilities | |
| TERM 3 – 6 weeks | | | |
| **Statistics**<br><br>**2 weeks**<br><br>*White Rose* | • interpret and construct simple pictograms, tally charts, block diagrams and tables<br>• ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity<br>• ask-and-answer questions about totalling and comparing categorical data | Create a question<br><br>True or false | Working systematically |
| **Multiplication (objectives continue to next term)**<br><br>**4 weeks**<br><br>*White Rose step 1 - 7*<br><br>*NCETM unit 5* | • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers<br>• calculate mathematical statements for multiplication within the multiplication tables and write them using the multiplication (×) and equals (=) signs<br>• solve problems involving multiplication, using materials, arrays, repeated addition, mental methods, and multiplication, including problems in contexts | True or false<br><br>Spot the mistake<br><br>Do, then explain | |

| TERM 4 – 6 weeks | | | |
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| **Multiplication (continued)**<br><br>**2 weeks**<br><br>*White Rose step 1 -7*<br><br>*NCETM unit 5* | • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers<br>• calculate mathematical statements for multiplication within the multiplication tables and write them using the multiplication (×) and equals (=) signs<br>• solve problems involving multiplication, using materials, arrays, repeated addition, mental methods, and multiplication, including problems in contexts | Missing number<br><br>Prove it | Visualising |
| **Division**<br><br>**2 weeks**<br><br>*White Rose step 8 and 9*<br><br>*NCETM unit 6* | • calculate mathematical statements for division within the multiplication tables and write them using the division (÷) and equals (=) signs<br>• solve problems involving division, using materials, mental methods, and multiplication and division facts, including problems in contexts | Making links<br><br>Prove it | |
| **Measure – mass, capacity, temperature**<br><br>**2 weeks**<br><br>*White Rose*<br><br>*NCETM unit 14* | • choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) (revisit briefly); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels<br>• compare and order lengths (revisit), mass, volume/capacity and record the results using >, < and = | Do, then explain<br><br>What's the same? What's different? | |
| **TERM 5 – 4 ½ weeks** | | | |
| **Time**<br><br>**1 ½ weeks**<br><br>*White Rose*<br><br>*NCETM unit 11* | • compare and sequence intervals of time<br>• 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<br>• know the number of minutes in an hour and the number of hours in a day | The answer is … what's the question?<br><br>What do you notice? | Conjecturing and generalising |
| **Fractions**<br><br>**3 weeks**<br><br>*White Rose*<br><br>*NCETM unit 10* | • recognise, find, name and write fractions $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity<br>• write simple fractions, for example $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ | Odd one out<br><br>Spot the mistake<br><br>What do you notice? | |
| **TERM 6 - 6 weeks** | | | |
| **Multiplication and division**<br><br>**3 weeks** | • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers | | Reasoning and convincing |

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| *White Rose (revisit steps where needed)*<br><br>*NCETM unit 13* | • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs<br>• show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot<br>• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts | | |
| **Money**<br><br>**2 weeks**<br><br>*White Rose*<br><br>*NCETM unit 11* | • recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value<br>• find different combinations of coins that equal the same amounts of money<br>• solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change | Possibilities | |
| **Position and direction**<br><br>**1 week**<br><br>*White Rose*<br><br>*NCETM unit 12* | • order and arrange combinations of mathematical objects in patterns and sequences<br>• use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) | What comes next? | |