Maths Long Term Overview – Year 2

Curriculum Rationale

Our maths curriculum has been designed to support a mastery approach to teaching and learning whilst effectively meeting the National Curriculum aims and objectives. This curriculum aims to provide children with time to apply their skills, explore concepts thoroughly and to demonstrate a deeper understanding of mathematical concepts. This curriculum aims to support pupils and teachers in developing a greater confidence within mathematics and strives to provide children with the opportunities to become mathematicians.

A mathematician is somebody who: makes connections, shows fluency, can provide a reason for what they are doing, is creative, checks their work in a variety of ways, is resilient, explains, evaluates, models, invents, applies their learning to a range of contexts, is curious, has confidence, uses mistakes to improve, is resourceful and efficient.

At Whitemoor, we aim to provide a knowledge-rich curriculum, allowing time for pupils to develop a deeper understanding and make connections between new and prior learning. Therefore, our lessons are created with care and are constantly adapted over time (using input from staff, up-to-date research and observations of pupils) to meet the needs of our pupils and allow them to continue making progress over time. Lessons are designed to provide a variety of representations, which is vital to introduce and explore concepts effectively. All lessons will contain: recall of prior learning, a range of representations, fluency, problem solving and reasoning opportunities.

Key Documents

NCETM Calculations Guidance
NCETM Maths Guidance for KS1 and KS2
NCETM 5 Big Ideas for Mastery
NCETM Ready-to-progress criteria
White Rose Schemes of Learning

Maths Long Term Overview – Year 2

Yearly Overview												
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Place Value				Addition and Subtraction					Shape		
Spring	Money		Multiplication and Division					Length and Height		Mass, capacity and temperature		
Summer	Fractions			Time			Statistics		Position and Direction		Consolidation	

Maths Long Term Overview – Year 2

Autumn Term Coverage and National Curriculum Objectives (13 weeks and 4 days)		
Week 1 – Week 4	**Week 5 – Week 9**	**Week 10 – Week 12**
Place Value NCETM Resources: Recall: Autumn Block 1 Flashback 4 National Curriculum Objectives: Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Recognise the place value of each digit in a two-digit number (tens, ones) Identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use and = signs Read and write numbers to at least 100 in numerals and in words	Addition and Subtraction NCETM Resources: Recall: Autumn Block 2 Flashback 4 National Curriculum Objectives: Solve problems with addition and subtraction: • using concrete objects and pictorial representations, including those involving numbers, quantities and measures • applying their increasing knowledge of mental and written methods Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: • a two-digit number and ones	Shape NCETM Resources: Recall Autumn Block 3 Flashback 4 National Curriculum Objectives: Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] Compare and sort common 2-D and 3-D shapes and everyday objects.

Maths Long Term Overview – Year 2

Use place value and number facts to solve problems.	• a two-digit number and tens • two two-digit numbers • adding three one-digit numbers Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	

Autumn Small Steps		
Place Value (3 weeks)	**Addition and Subtraction (5 weeks)**	**Multiplication and Division (4 weeks)**
Step 1: Numbers to 20	Step 1: Bonds to 10	Step 1: Recognise 2-D and 3-D shapes
Step 2: Count objects to 100 by making 10s	Step 2: Fact families – addition and subtraction within 20	Step 2: Count sides on 2-D shapes
Step 3: Recognise tens and ones	Step 3: Related facts	Step 3: Count vertices on 2-D shapes
Step 4: Use a place value chart	Step 4: Bonds to 100 (tens)	Step 4: Draw 2-D shapes
Step 5: Partition numbers to 100	Step 5: Add and subtract 1s	Step 5: Lines of symmetry on shapes
Step 6: Write down numbers to 100	Step 6: Add by making 10	Step 6: Use lines of symmetry to complete shapes
Step 7: Flexibly partition numbers to 100	Step 7: Add three 1-digit numbers	Step 7: Sort 2-D shapes
Step 8: Write numbers to 100 in expanded form	Step 8: Add to the next 10	Step 8: Count faces on 3-D shapes
Step 9: 10s on the number line to 100		

Maths Long Term Overview – Year 2

Step 10: 10s and 1s on the number line to 100 *Step 11: Estimate numbers on a number line* *Step 12: Compare objects* *Step 13: Compare numbers* *Step 14: Order objects and numbers* *Step 15: Count in 2s, 5s and 10s* *Step 16: Count in 3s*	*Step 9: Add across a 10* *Step 10: Subtract across a 10* *Step 11: Subtract from a 10* *Step 12: Subtract a 1-digit number from a 2-digit number (across a 10)* *Step 13: 10 more, 10 less* *Step 14: Add and subtract 10s* *Step 15: Add two 2-digit numbers (not across a 10)* *Step 16: Add two 2-digit numbers (across a 10)* *Step 17: Subtract two 2-digit numbers (not across a 10)* *Step 18: Subtract two 2-digit numbers (across a 10)* *Step 19: Mixed addition and subtraction* *Step 20: Compare number sentences* *Step 21: Missing number problems*	*Step 9: Count edges on 3-D shapes* *Step 10: Count vertices on 3-D shapes* *Step 11: Sort 3-D shapes* *Step 12: Make patterns with 2-D and 3-D shapes*

Maths Long Term Overview – Year 2

Spring Term Coverage and National Curriculum Objectives (11 weeks 2 days)			
Week 1 – Week 2	**Week 3 – Week 7**	**Week 8 – Week 9**	**Week 10 – Week 12**
Money NCETM Resources: Recall: Spring Block 1 Flashback 4 National Curriculum Objectives: 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 Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	Multiplication and Division NCETM Resources: Recall: Spring Block 2 Flashback 4 National Curriculum Objectives: Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	Length and Height NCETM Resources: Recall: Spring Block 3 Flashback 4 National Curriculum Objectives: Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels Compare and order lengths, mass, volume/capacity and record the results using >, < and =	Mass, capacity and temperature NCETM Resources: Recall: Spring Block 4 Flashback 4 National Curriculum Objectives: Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels Compare and order lengths, mass, volume/capacity and record the results using >, < and =

Maths Long Term Overview – Year 2

	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.		

Spring Small Steps			
Money (2 weeks)	**Multiplication and Division (5 weeks)**	**Length and Height (2 weeks)**	**Mass, capacity and temperature (3 weeks)**
Updated when new steps are released (November 2022)	*Updated when new steps are released (November 2022)*	*Updated when new steps are released (November 2022)*	*Updated when new steps are released (November 2022)*

Maths Long Term Overview – Year 2

Summer Term Coverage and National Curriculum Objectives (13 weeks 4 days)			
Week 1 – Week 3	**Week 4 – Week 6**	**Week 7 – Week 8**	**Week 9 – Week 10**
Fractions NCETM Resources: Recall: Summer Block 1 Flashback 4 National Curriculum Objectives: 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 Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	Time NCETM Resources: Recall: Summer Block 2 Flashback 4 National Curriculum Objectives: Compare and sequence intervals of time 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 Know the number of minutes in an hour and the number of hours in a day.	Statistics NCETM Resources: Recall: Summer Block 3 Flashback 4 National Curriculum Objectives: Interpret and construct simple pictograms, tally charts, block diagrams and simple tables 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.	Position and Directions NCETM Resources: Recall: Summer Block 4 Flashback 4 National Curriculum Objectives: Order and arrange combinations of mathematical objects in patterns and sequences 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 anticlockwise).

Maths Long Term Overview – Year 2

Summer Small Steps			
Fractions (3 weeks)	**Time (3 weeks)**	**Statistics (2 weeks)**	**Position and Direction (2 weeks)**
Updated when new steps are released (March 2023)	*Updated when new steps are released (March 2023)*	*Updated when new steps are released (March 2023)*	*Updated when new steps are released (March 2023)*