Ox Close Federation
Maths Medium Term Planning
Year 3

Autumn

Topic	Suggested teaching weeks	White Rose Small Steps	Link to National Curriculum and NRICH Problem Solving	Link to Ready to Progress documents	Key Vocabulary
Number **Place Value**	3 weeks	Step 1 Represent numbers to 100 Step 2 Partition numbers to 100 Step 3 Number line to 100 Step 4 Hundreds Step 5 Represent numbers to 1,000 Step 6 Partition numbers to 1,000 Step 7 Flexible partitioning of numbers to 1,000 Step 8 Hundreds, tens and ones Step 9 Find 1, 10 or 100 more or less Step 10 Number line to 1,000 Step 11 Estimate on a number line to 1,000 Step 12 Compare numbers to 1,000 Step 13 Order numbers to 1,000 Step 14 Count in 50s	Pupils should be taught to: ・count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number ・recognise the place value of each digit in a three-digit number (hundreds, tens, ones) ・compare and order numbers up to 1000 ・identify, represent and estimate numbers using different representations ・read and write numbers up to 1000 in numerals and in words ・solve number problems and practical problems involving these ideas.	3NPV–1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other threedigit multiples of 10. 3NPV–2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning. 3NPV–3 Reason about the location of any threedigit number in the linear number system, including identifying the previous and next multiple of 100 and 10.	1-1000, Roman numerals I-XIII, thousands column, consecutive
Number **Addition and subtraction**	5 weeks	Step 1 Apply number bonds within 10 Step 2 Add and subtract 1s Step 3 Add and subtract 10s	Pupils should be taught to: ・add and subtract numbers mentally, including: ・a three-digit number and ones ・a three-digit number and tens	3AS–1 Calculate complements to 100.	Column addition, column subtraction, operations, exchanging

		Step 4 Add and subtract 100s Step 5 Spot the pattern Step 6 Add 1s across a 10 Step 7 Add 10s across a 100 Step 8 Subtract 1s across a10 Step 9 Subtract 10s across a 100 Step 10 Make connections Step 11 Add two numbers (no exchange) Step 12 Subtract two numbers (no exchange) Step 13 Add two numbers (across a 10) Step 14 Add two numbers (across a 100) Step 15 Subtract two numbers (across a 10) Step 16 Subtract two numbers (across a 100) Step 17 Add 2-digit and 3-digit numbers Step 18 Subtract a 2-digit number from a 3-digit number Step 19 Complements to 100 Step 20 Estimate answers Step 21 Inverse operations Step 22 Make decisions	・a three-digit number and hundreds ・add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction ・estimate the answer to a calculation and use inverse operations to check answers ・solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. **Three Neighbours **** **Play to 37 (G) ***	3AS–2 Add and subtract up to three-digit numbers using columnar methods. 3AS–3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction. 3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).	
Number **Multiplication and division A**	4 weeks	Step 1 Multiplication – equal groups Step 2 Use arrays Step 3 Multiples of 2 Step 4 Multiples of 5 and 10 Step 5 Sharing and grouping Step 6 Multiply by 3 Step 7 Divide by 3 Step 8 The 3 times-table	Pupils should be taught to: ・recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables ・write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental	3MD–1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.	Product, multiples of 4, 8, 50 and 100, scale up, Short multiplication, grid method, divisor, chunking, expanded method, short division

| | | Step 9 Multiply by 4
Step 10 Divide by 4
Step 11 The 4 times-table
Step 12 Multiply by 8
Step 13 Divide by 8
Step 14 The 8 times-table
Step 15 The 2, 4 and 8 times-tables | and progressing to formal written methods
・solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Odd Times Even ***
Ordering Cards * | 3NF–2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.

3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10). | |

Spring

Topic	Suggested teaching weeks	White Rose Small Steps	Link to National Curriculum and NRICH Problem Solving	Link to Ready to Progress documents	Vocabulary
Number **Multiplication and division B**	3 weeks	Step 1 Multiples of 10 Step 2 Related calculations Step 3 Reasoning about multiplication Step 4 Multiply a 2-digit number by a 1-digit number – no exchange Step 5 Multiply a 2-digit number by a 1-digit number – with exchange Step 6 Link multiplication and division Step 7 Divide a 2-digit number by a 1-digit number – no exchange Step 8 Divide a 2-digit number by a 1-digit number – flexible partitioning Step 9 Divide a 2-digit number by a 1-digit number – with remainders Step 10 Scaling Step 11 How many ways?	⋅ recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables ⋅ write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods ⋅ solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects **Which Symbol? ***	3MD–1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division. 3NF–2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number. 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).	Product, multiples of 4, 8, 50 and 100, scale up, Short multiplication, grid method, divisor, chunking, expanded method, short division
Measurement **Length and perimeter**	3 weeks	Step 1 Measure in metres and centimetres Step 2 Measure in millimetres Step 3 Measure in centimetres and millimetres Step 4 Metres, centimetres and millimetres Step 5 Equivalent lengths (metres and centimetres) Step 6 Equivalent lengths (centimetres and millimetres) Step 7 Compare lengths Step 8 Add lengths	⋅ measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) **Car Journey ***		lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

		Step 9 Subtract lengths Step 10 What is perimeter? Step 11 Measure perimeter Step 12 Calculate perimeter			
Number **Fractions A**	3 weeks	Step 1 Understand the denominators of unit fractions Step 2 Compare and order unit fractions Step 3 Understand the numerators of non-unit fractions Step 4 Understand the whole Step 5 Compare and order non-unit fractions Step 6 Fractions and scales Step 7 Fractions on a number line Step 8 Count in fractions on a number line Step 9 Equivalent fractions on a number line Step 10 Equivalent fractions as bar model	・ count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 ・ recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators ・ recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators ・ recognise and show, using diagrams, equivalent fractions with small denominators ・ add and subtract fractions with the same denominator within one whole [for example, 7 5 + 7 1 = 7 6] ・ compare and order unit fractions, and fractions with the same denominators ・ solve problems that involve all of the above. **Fraction Match ***	3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3F–2 Find unit fractions of quantities using known division facts (multiplication tables fluency). 3F–3 Reason about the location of any fraction within 1 in the linear number system. 3F–4 Add and subtract fractions with the same denominator, within 1.	Numerator, denominator, unit fraction, non-unit fraction, compare, order, tenths, bisect
Measurement **Mass and volume**	2 weeks	Step 1 Use scales Step 2 Measure mass in grams Step 3 Measure mass in kilograms and grams Step 4 Equivalent masses (kilograms and grams) Step 5 Compare mass	・ measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).		Metres, kilometre, m, km, grams, g, kilograms, kg, ml, millilitre, litres, l, Volume, capacity, mass

		Step 6 Add and subtract mass Step 7 Measure capacity and volume in millilitres Step 8 Measure capacity and volume in litres and millilitres Step 9 Equivalent capacities and volumes (litres and millilitres) Step 10 Compare capacity and volume Step 11 Add and subtract capacity and volume			

Summer

Topic	Suggested teaching weeks	White Rose Small Steps	Link to National Curriculum and NRICH Problem Solving	Link to Ready to Progress documents	Vocabulary
Number Fractions B	3 weeks	Step 1 Add fractions Step 2 Subtract fractions Step 3 Partition the whole Step 4 Unit fractions of a set of objects Step 5 Non-unit fractions of a set of objects Step 6 Reasoning with fractions of an amount	・ count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 ・ recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators ・ recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators ・ recognise and show, using diagrams, equivalent fractions with small denominators ・ add and subtract fractions with the same denominator within one whole [for example, 7 5 + 7 1 = 7 6] ・ compare and order unit fractions, and fractions with the same denominators ・ solve problems that involve all of the above.	3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3F–2 Find unit fractions of quantities using known division facts (multiplication tables fluency). 3F–3 Reason about the location of any fraction within 1 in the linear number system. 3F–4 Add and subtract fractions with the same denominator, within 1.	Numerator, denominator, unit fraction, non-unit fraction, compare, order, tenths, bisect
Measurement Money	2 weeks	Step 1 Pounds and pence Step 2 Convert pounds and pence Step 3 Add money Step 4 Subtract money Step 5 Find change	・ add and subtract amounts of money to give change, using both £ and p in practical contexts		Change, pounds, pence

Measurement Time	3 weeks	Step 1 Roman numerals to 12 Step 2 Tell the time to 5 minutes Step 3 Tell the time to the minute Step 4 Read time on a digital clock Step 5 Use am and pm Step 6 Years, months and days Step 7 Days and hours Step 8 Hours and minutes – use start and end times Step 9 Hours and minutes - use durations Step 10 Minutes and seconds Step 11 Units of time Step 12 Solve problems with time	⋅ tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks **How Much Did it Cost? ****		Leap year, twelve hour, twenty four hour clock
Geometry Shape	2 weeks	Step 1 Turns and angles Step 2 Right angles Step 3 Compare angles Step 4 Measure and draw accurately Step 5 Horizontal and vertical Step 6 Parallel and perpendicular Step 7 Recognise and describe 2-D shapes Step 8 Draw polygons Step 9 Recognise and describe 3-D shapes Step 10 Make 3-D shapes	⋅ draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them ⋅ recognise angles as a property of shape or a description of a turn ⋅ identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle ⋅ identify horizontal and vertical lines and pairs of perpendicular and parallel lines	3G–1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations. 3G–2 Draw polygons by joining marked points, and identify parallel and perpendicular sides.	Greater/less than ninety degrees, orientation, same orientation, different orientation Horizontal, vertical, perpendicular, parallel, hexagon, pentagon, octagon, parallelogram, rhombus, angles

			A Puzzling Cube *		
Statistics	2 weeks	Step 1 Interpret pictograms Step 2 Draw pictograms Step 3 Interpret bar charts Step 4 Draw bar charts Step 5 Collect and represent data Step 6 Two-way tables	∙ interpret and present data using bar charts, pictograms and tables ∙ solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.		Chart, bar chart, frequency table, carroll diagram, venn diagam, axis, axes, diagram,