

Ox Close Federation

Maths Medium Term Planning

Year 2



Autumn					
Topic	Suggested teaching weeks	White Rose Small Steps	Link to National Curriculum and NRIC Problem Solving	Link to Ready to Progress documents	Key Vocabulary
Number Place Value	4 weeks	Step 1 Numbers to 20 Step 2 Count objects to 100 by making 10s Step 3 Recognise tens and ones Step 4 Use a place value chart Step 5 Partition numbers to 100 Step 6 Write numbers to 100 in words Step 7 Flexibly partition numbers to 100 Step 8 Write numbers to 100 in expanded form Step 9 10s on the number line to 100 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	Pupils should be taught to: <ul style="list-style-type: none"> • 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 • use place value and number facts to solve problems. <p><u>Snail One Hundred (G) *</u> <u>That Number Square *</u></p>	2NPV–1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and nonstandard partitioning. 2NPV–2 Reason about the location of any twodigit number in the linear number system, including identifying the previous and next multiple of 10. 2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice.	1-100, hundreds, partition, recombine, hundred more/less, hundreds column, compare, order, in words, greater than, less than symbols
Number	5 weeks	Step 1 Bonds to 10	Pupils should be taught to:	2AS–1 Add and subtract	add, more, plus, make, sum, total, altogether, plus inverse,

Addition and subtraction		<p>Step 2 Fact families - addition and subtraction bonds within 20</p> <p>Step 3 Related facts</p> <p>Step 4 Bonds to 100 (tens)</p> <p>Step 5 Add and subtract 1s</p> <p>Step 6 Add by making 10</p> <p>Step 7 Add three 1-digit numbers</p> <p>Step 8 Add to the next 10</p> <p>Step 9 Add across a 10</p> <p>Step 10 Subtract across 10</p> <p>Step 11 Subtract from a 10</p> <p>Step 12 Subtract a 1-digit number from a 2-digit number (across a 10)</p> <p>Step 13 10 more, 10 less</p> <p>Step 14 Add and subtract 10s</p> <p>Step 15 Add two 2-digit numbers (not across a 10)</p> <p>Step 16 Add two 2-digit numbers (across a 10)</p> <p>Step 17 Subtract two 2-digit numbers (not across a 10)</p> <p>Step 18 Subtract two 2-digit numbers (across a 10)</p> <p>Step 19 Mixed addition and subtraction</p> <p>Step 20 Compare number sentences</p> <p>Step 21 Missing number problems</p>	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • a two-digit number and ones • 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. <p><u>The Add and Take-away Path * Unit Differences *</u></p>	<p>across 10.</p> <p>2AS–2 Recognise the subtraction structure of ‘difference’ and answer questions of the form, “How many more...?”.</p> <p>2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a twodigit number.</p> <p>2AS–4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 twodigit numbers.</p> <p>2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice.</p>	<p>double, near double, Equals, is the same as, equals sign, find the difference, difference between, how many more make? How many more/fewer is...than...? How much more is...? Subtract, takeaway, Fewer, less count on, count back part-whole model</p>
Geometry Shape	3 weeks	Step 1 Recognise 2-D and 3-D shapes	Pupils should be taught to: <ul style="list-style-type: none"> • identify and describe the properties of 2-D shapes, 	2G–1 Use precise language to describe the properties of 2D and 3D	Rotation, clockwise, anticlockwise, straight line, ninety degree turn, right angle, Size,

		<p>Step 2 Count sides on 2-D shapes</p> <p>Step 3 Count vertices on 2-D shapes</p> <p>Step 4 Draw 2-D shapes</p> <p>Step 5 Lines of symmetry on shapes</p> <p>Step 6 Use lines of symmetry to complete shapes</p> <p>Step 7 Sort 2-D shapes</p> <p>Step 8 Count faces on 3-D shapes</p> <p>Step 9 Count edges on 3-D shapes</p> <p>Step 10 Count vertices on 3-D shapes</p> <p>Step 11 Sort 3-D shapes</p> <p>Step 12 Make patterns with 2-D and 3-D shapes</p>	<p>including the number of sides and line symmetry in a vertical line</p> <ul style="list-style-type: none"> ▪ 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. <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ 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). <p><u>Triangle or No Triangle? *</u></p>	<p>shapes, and compare shapes by reasoning about similarities and differences in properties.</p>	<p>bigger, smaller, larger, symmetrical, line of symmetry, fold, match, mirror line, reflection, pattern, repeating pattern. Base, diagonal</p> <p>sort, cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square, shape, flat, curved, straight, round, hollow, solid, edge, centre, corner, direction, point, pointed, make, build, draw, rotated, vertex, vertices, apex, faces</p>
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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	5 weeks	Step 1 Recognise equal groups Step 2 Make equal groups Step 3 Add equal groups Step 4 Introduce the multiplication symbol Step 5 Multiplication sentences Step 6 Use arrays Step 7 Make equal groups – grouping Step 8 Make equal groups – sharing Step 9 The 2 times-table Step 10 Divide by 2 Step 11 Doubling and halving Step 12 Odd and even numbers Step 13 The 10 times-table Step 14 Divide by 10 Step 15 The 5 times-table Step 16 Divide by 5 Step 17 The 5 and 10 times-tables <u>Always, Sometimes or Never? *</u> <u>I'm Eight *</u>	Pupils should be taught to: <ul style="list-style-type: none"> 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 (\times), division (\div) and equals (=) signs show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. 	2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables. 2MD–2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).	Repeated addition, multiply, multiplication, product, factor, arrays, Double, half. Repeated subtraction, divide, groups of, share, division, equal. Commutative.
Number Fractions	3 weeks	Step 1 Introduction to parts and whole Step 2 Equal and unequal parts Step 3 Recognise a half Step 4 Find a half Step 5 Recognise a quarter Step 6 Find a quarter Step 7 Recognise a third Step 8 Find a third Step 9 Find the whole	Pupils should be taught to: <ul style="list-style-type: none"> recognise, find, name and write fractions one third, one quarter, 2 quarters and 3 quarters 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 $\frac{1}{2}$. 		Whole, equal parts, four equal parts, one half, two halves, equal, a quarter, quarters, pictorial representation of... Three quarters, one third, a third, equivalence, equivalent Two thirds, Denominator, numerator, fraction bar

		<p>Step 10 Unit fractions</p> <p>Step 11 Non-unit fractions</p> <p>Step 12 Recognise the equivalence of a half and two-quarters</p> <p>Step 13 Recognise three-quarters</p> <p>Step 14 Find three-quarters</p> <p>Step 15 Count in fractions up to a whole</p>	<p>Happy Halving ***</p>		
<p>Measurement</p> <p>Length and height</p>	2 weeks	<p>Step 1 Measure in centimetres</p> <p>Step 2 Measure in metres</p> <p>Step 3 Compare lengths and heights</p> <p>Step 4 Order lengths and heights</p> <p>Step 5 Four operations with lengths and heights</p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 		<p>length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) rulers, scales, thermometers mass, volume/capacity</p>
<p>Measurement</p> <p>Money</p>	2 weeks	<p>Step 1 Count money – pence</p> <p>Step 2 Count money – pounds (notes and coins)</p> <p>Step 3 Count money – pounds and pence</p> <p>Step 4 Choose notes and coins</p> <p>Step 5 Make the same amount</p> <p>Step 6 Compare amounts of money</p> <p>Step 7 Calculate with money</p> <p>Step 8 Make a pound</p> <p>Step 9 Find change</p> <p>Step 10 Two-step problems</p>	<ul style="list-style-type: none"> • compare and order lengths, mass, volume/capacity and record the results using >, < and = • 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 <p>Little Man **</p> <p>Five Coins **</p> <p>The Puzzling Sweet Shop **</p>		<p>pounds (£) and pence (p)</p>

Summer					
Topic	Suggested teaching weeks	White Rose Small Steps	Link to National Curriculum and NRich Problem Solving	Link to Ready to Progress documents	Vocabulary
Measurement Mass, capacity and temperature	3	Step 1 Compare mass Step 2 Measure in grams Step 3 Measure in kilograms Step 4 Four operations with mass Step 5 Compare volume and capacity Step 6 Measure in millilitres Step 7 Measure in litres Step 8 Four operations with volume and capacity Step 9 Temperature	<ul style="list-style-type: none"> 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 = 		length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) rulers, scales, thermometers mass, volume/capacity
Measurement Time	3	Step 1 O'clock and half past Step 2 Quarter past and quarter to Step 3 Tell the time past the hour Step 4 Tell the time to the hour Step 5 Tell the time to 5 minutes Step 6 Minutes in an hour Step 7 Hours in a day	<ul style="list-style-type: none"> 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. What Is the Time? *		Hour, minute, second, days, weeks, to five minutes, quarter past/to
Statistics	2	Step 1 Make tally charts Step 2 Tables Step 3 Block diagrams Step 4 Draw pictograms (1–1) Step 5 Interpret pictograms (1–1) Step 6 Draw pictograms (2, 5 and 10) Step 7 Interpret pictograms (2, 5 and 10)	<ul style="list-style-type: none"> 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. Ladybird Count *		Tally chart, block diagram, table, pictogram, key, data
Geometry Position and direction	2	Step 1 Language of position Step 2 Describe movement Step 3 Describe turns	<ul style="list-style-type: none"> order and arrange combinations of mathematical objects in patterns and sequences 		Rotation, clockwise, anticlockwise, straight line, ninety degree turn, right

		Step 4 Describe movement and turns Step 5 Shape patterns with turns	• 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).		angle, Size, bigger, smaller, larger, symmetrical, line of symmetry, fold, match, mirror line, reflection, pattern, repeating pattern. Base, diagonal whole turn, half turn, left turn, right turn, quarter turn,
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