Year 3 Small Steps

Year 3			
Number and Place Value			
Vocabulary: Digit, numbers to one thousand; 3-digit; thousand; ascending, descending *(integer, compare, equal to, partition, hundreds, tens, ones)*			
Autumn 3-weeks			
Step		**NC links**	**Notes:**
1	Represent and partition numbers to 100	Identify, represent, and estimate numbers using different representations. Recognise the place value of each digit in a 3-digit number (hundreds, tens, ones)	This is 2 steps on WRM – feel free to break this down if needed.
2	Hundreds	Read and write numbers up to 1,000 in numerals and words. Identify, represent, and estimate numbers using different representations. Recognise the place value of each digit in a 3-digit number. (hundreds, tens, ones)	Can be done through BK and BS instead of SDI if pupils are confident
3	Represent numbers to 1,000 (including in numerals & words)		
4	Partition numbers to 1,000 (including flexible partitioning).		
5	Hundreds, tens and ones	Read and write numbers up to 1,000 in numerals and words. Recognise the place value of each digit in a 3-digit number (hundreds, tens, ones)	This step is additional on White Rose – use this to consolidate partitioning of 3-digit numbers – only if necessary.
6	Number line to 1,000 (including estimating).		
7	Compare numbers to 1,000	Compare and order numbers up to 1,000	
8	Order numbers to 1,000	Compare and order numbers up to 1,000	
9	Application	Solve number problems and practical problems involving these ideas	
Year 3			
Addition and subtraction			
Vocabulary: Column, column addition and subtraction; regroup; efficient; estimate *(bar model, inverse, exchange)*			
Autumn 5-weeks			
Step		**NC links**	**Notes:**
1	Apply number bonds within 10	Add and subtract numbers mentally, including: a 3-digit number and ones a 3-digit number and tens a 3-digit number and hundreds	The order of these steps has changed from WRM to ensure addition is taught then subtraction.
2	Add and subtract 1s Add and subtract 10s Add and subtract 100s	Add and subtract numbers mentally, including: • a 3-digit number and ones • a 3-digit number and tens • a 3-digit number and hundreds	These steps can be broken down into multiple sessions or taught as one depending on the cohort – many opportunities to consolidate this across the year in arithmetic.
3	Add 1 across a 10 Add 10s across 100		As above
4	Add two numbers (no exchange)	Add and subtract numbers with up to three digits, using formal written. methods of columnar addition and subtraction Solve problems, including missing number problems, using number. facts, place value, and more complex addition and subtraction	
5	Add two numbers (across a 10)		
6	Add to numbers (across 100)		
7	Add 2-digit and 3-digit numbers (across 10 and 100)		

8	Subtract 1s across a 10 Subtract 10s across 100	Add and subtract numbers mentally, including: • a 3-digit number and ones • a 3-digit number and tens • a 3-digit number and hundreds	
9	Subtract two numbers (no exchange)	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	
10	Subtract two numbers (across a 10)		
11	Subtract two numbers (across a 100)		
12	Subtract a 2-digit number from a 3-digit number (across 10 and 100)		
13	Inverse operations	Estimate the answer to a calculation and use inverse operations to check answers	*Estimate answers and use inverse operations to check.
14	Application	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction Estimate the answer to a calculation and use inverse operations to check answers	Ensure the NC content is covered in the application sessions.
Year 3			
Multiplication and Division			
Vocabulary: Fours, eights; remainder; divisor, dividend, quotient *(multiples, repeated addition, multiply, commutative, array, division, grouping, sharing)*			
Autumn 5 weeks			
Step		**NC links**	**Notes:**
1	Multiplication – equal groups	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written method	Ensure times tables and division facts are taught daily in Basic Knowledge and applied weekly to arithmetic sessions.
2	Use arrays	Show that multiplication of two numbers can be done in any order (commutative) and division on one number by another cannot (Y2)	
3	Sharing and grouping	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods	
4	Application of times table knowledge to problem solving.	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 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods	Resources will be available on WRM under multiplying and dividing by 3, 4 and 8.
5	Related calculations Reasoning about multiplication	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods	
6	Multiply a 2-digit number by a 1-digit number – no exchange		Teachers may wish to use some arithmetic sessions to focus on formal multiplication and division if this is needed to secure pupil knowledge
7	Multiply a 2-digit number by a 1-digit number – with exchange		
8	Divide a 2-digit number by a 1-digit		

	number – no exchange	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.	
9	Divide a 2-digit number by a 1-digit number – flexible partitioning		
10	Divide a 2-digit number by a 1-digit number – with remainders		
11	Scaling problems		
12	Application – including 'How many ways?'		
Year 3			
Fractions			
Vocabulary: Non-unit fraction; tenths, two tenths, three tenths etc; two thirds; fifth, sixth, ninth; decimal, decimal point *(numerator, denominator, equivalence, equivalent)*			
	Spring 5-weeks		**Notes:**
1	Understand the denominators of unit Fractions Understand the numerators of non-unit Fractions	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators 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 Compare and order unit fractions, and fractions with the same denominators	
2	Understand the whole		
3	Tenths		
4	Compare and order unit fractions		
5	Compare and order non-unit fractions		
6	Fractions on a number line (including scales)		
7	Equivalent fractions on a number line	Recognise and show, using diagrams, equivalent fractions with small Denominators	
8	Equivalent fractions as a bar model		
9	Reason and problem solve using knowledge of fractions learned so far.	solve problems that involve all of the above	
10	Add fractions	Add and subtract fractions with the same denominator within one whole	These steps will be revisited regularly during arithmetic
11	Subtract fractions		
12	Partition the whole		
13	Unit fractions of a set of objects	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators solve problems that involve all of the above	
14	Non-unit fractions of a set of objects		
15	Application		

Year 3 Small Steps

Year 3			
Money			
Vocabulary: *(Value, coin, note, amount, total, change, value, pence, pound)*			
Spring 2-week block			
Step		**NC links**	**Notes:**
1	Identify and convert pounds and pence	Add and subtract amounts of money to give change, using both £ and p in practical contexts	If pupils are secure in identifying coins and notes from KS1 they can move straight to converting. If not, spend time on identifying money first.
2	Add money		
3	Subtract money		
4	Find change		
5	Application		
Year 3			
Time			
Vocabulary: Leap year; minutes past/to; a.m., p.m.; analogue, digital; twelve-hour /twenty-four- hour clock; Roman numerals I to XIII *(hour, o'clock, half past, minute, second, watch hands)*			
Spring 3 -week block			
Step		**NC links**	**Notes:**
1	Roman numerals to 12	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	
2	Tell the time to 5 minutes		Ensure pupils are secure with telling time on clocks before moving onto SDI
3	Tell the time to the minute		
4	Read time on a digital clock – using am and pm		
5	Years, months, days and hours	Know the number of seconds in a minute and the number of days in each month, year and leap year Compare durations of events	
6	Minutes and seconds		
7	Hours and minutes using start and end times		
8	Hours and minutes using durations		
9	Application		
Year 3			
Statistics			
Vocabulary: Chart, bar chart; frequency table, Carroll diagram *(Count, tally, tally chart, table; data, represent, sort; pictogram, symbol; block diagram, axis; label, title, scale; most popular, most common, least popular, least common; Venn diagram, Carrol diagram)*			
Spring 2-week block			
Step		**NC links**	**Notes:**
1	Interpret pictograms	Interpret and present data using bar charts, pictograms and tables	
2	Draw pictograms		
3	Interpret bar charts		

4	Draw bar charts	Solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables	
5	Collect and represent data		
6	Two-way tables		
7	Solve one and two step problems		

Year 3

Shape

Vocabulary:
Parallel, perpendicular; surface; acute angle, obtuse angle. *(Pentagon, hexagon, octagon, quadrilateral; prism; vertices, vertex; rotate; Symmetry, symmetrical, line of symmetry; horizontal, vertical; Fold; pattern, repeating pattern, polygon, 2D, 3D, corners, face, side, edge).*

Summer 3-week block

Step		NC links	Notes:
1	Right angles	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 Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Identify horizontal and vertical lines and pairs of perpendicular and parallel lines Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Including turns – knowing 2 right angles make a half turn etc.
2	Compare angles		
3	Measure and draw accurately		
4	Horizontal and vertical		
5	Parallel and perpendicular		
6	Recognise and describe 2D shapes		
7	Draw polygons		
8	Recognise and describe 3D shapes		
9	Make 3D shapes		

Year 3

Mass and Capacity

Vocabulary:
(g/kg; ml/l; temperature, thermometer, degrees Celsius, increase, decrease, warmer, colder, mass, capacity, balance, scales, volume, full, half full, empty)

Summer 3-week block

Step		NC links	Notes:
1	Measure mass in grams	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ensure pupils are provided opportunities to weigh using scales.
2	Measure mass in kilograms and grams		
3	Equivalent masses (kilograms and grams)		
4	Add and subtract mass		
5	Measure capacity and volume in Millilitres		
6	Measure capacity and volume in litres and millilitres		
7	Equivalent capacities and volumes (litres and millilitres)		

8	Add and subtract capacity and Volume		
9	Compare units of measure		WRM – Compare mass, compare capacity and Volume.
Year 3			
Length and Perimeter			
Vocabulary: mm; perimeter *(Distance, metres, length, measure, ruler, cm)*			
Summer 4- weeks			
Step:		**NC links**	**Notes:**
1	Measure in metres and centimetres	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	
2	Measure in millimetres		
3	Measure in centimetres and millimetres		
4	Metres, centimetres and millimetres		
5	Equivalent lengths (metres and centimetres)		
6	Equivalent lengths (centimetres and millimetres)		
7	Compare lengths		
8	Add lengths Subtract lengths		
9	Measure perimeter	Measure the perimeter of simple 2-D shapes	
10	Calculate perimeter		

Year 3 Small Steps

Year 3					
Basic Knowledge DELTA progression to MTC and beyond:					
count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Non-stat Pupils continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency. Through doubling, they connect the 2, 4 and 8 multiplication tables non-stat Pupils now use multiples of 2, 3, 4, 5, 8, 10, 50 and 100					
DELTA SSA end points:					
Place Value	Addition	Subtraction	Multiplication	Division	Fractions
500 + ☐ + 9 = 809	204 + 15 =	284 - 85 =	32 X 4 =	2 ⟌ 64	$\frac{4}{7}$ + ☐ = 1

Year 3			
Basic Knowledge and Basic Skills			
Strand		**NC links**	**Notes:**
PV	Find 1, 10 or 100 more or less	Count from zero in multiples of 4, 8, 50 and 100- find 10 or 100 more or less than a given number	Will come into other steps (e.g. PV step 2 – Hundreds) but address any gaps through arithmetic.
PV	Count in 50s and 100s	Count from zero in multiples of 4, 8, 50 and 100.	
M&D	Multiples of 2	Count in steps of 2, 3 and 5 from 0, and in 10s from any number, forward and backward (Y2) 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 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods Recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers (Y2)	Daily times table stick session is essential. Ensure the vocabulary of 'multiples' is discussed. E.g. how do we know it is a multiple of 5? What do you notices about all the multiples of 2?
M&D	Multiples of 5 and 10		
M&D	Multiply by 3		
M&D	Divide by 3		
M&D	Multiply by 4		
M&D	Divide by 4		
M&D	Multiply by 8		
M&D	Divide by 8		
M&D	Multiples of 10		
M&D	Link multiplication and division	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods	Incorporate into the times table stick sessions.