



Year 3 Maths Long Term Overview Scheme 3.0

Rationale

This overview is designed to run alongside the White Rose Schemes of Learning (Version 3.0) found [here](#). The small steps within White Rose are not necessarily designed to cover one lesson so some may be repeated which can be used to consolidate concepts or allow children greater access to reasoning and problem solving. The lessons that are linked to the [DFE ready to progress criteria](#) are identified with a reference such as **(NPV-1)**, teachers can use these to refer to the document for additional planning support. Due to differing term lengths, these overviews do not directly match those on White Rose. For instance, some units are started earlier in the term or the term before, but they all correlate with the schemes of learning.

Vocabulary

There are also two vocabulary rows on the document, which show the subject specific vocabulary that needs to be introduced or re-introduced as part of the unit as well as what should have been covered in the previous year group. It is essential that teachers refer to previous year's vocabulary especially if children are not secure. If children are still struggling to define certain pieces of vocabulary, teachers should be encouraged to reintroduce them. Whole school vocabulary progression documents are within the Maths area on ReachIn and this language is also present on the accompanying knowledge organisers.

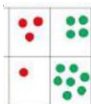
Consolidation/revisiting

The consolidation row has been removed from the most recent overviews as we suggest that the White Rose 'Flashback 4s' are used to revisit and consolidate learning as they reduce workload for teachers and comprehensively revisit taught content. If you chose not to use these, teachers should be encouraged to spend half the week looking at the previous year's small steps before teaching a unit and revisit them briefly. For the other half, they'd be encouraged to revisit learning they've done during the current year.

Also, the new White Rose schemes have removed the explicit recap sessions, however the beginning of the units include steps from the previous year to ensure children have the required knowledge to access new learning.

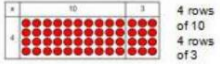
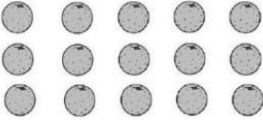
Assessment/Consolidation Weeks

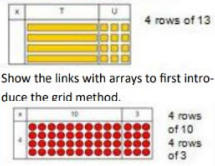
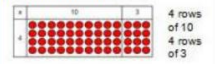
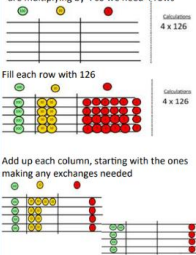
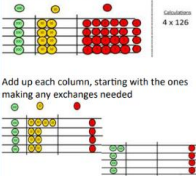
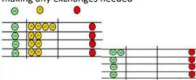
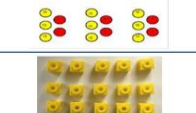
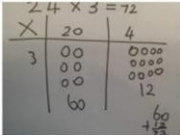
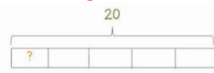
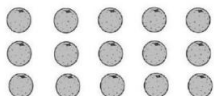
The end of unit assessments have been left in, these can be taken from the previous years' resources as they will broadly match the topic being taught. Finally, within the plans there are also assessment/consolidation weeks which have been put in to revisit topics children struggled with or as buffers for if and when units overrun to accommodate assessments, trips, productions etc. These documents are also fully editable so topics or assessment weeks can be moved around or lengthened if necessary and to accommodate different term lengths. The term lengths are kept as seven weeks for the two autumn half terms and summer 2 and six for the rest. However, they can be adapted to meet differing term lengths. However, they can be adapted to meet differing term lengths

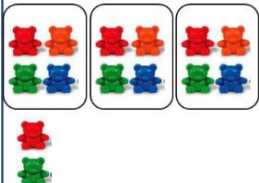
Autumn 1	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Units	Cover previous knowledge – Addition, subtraction and place value.	Number: Place Value	Number: Place Value	Number: Place Value	Number: Addition and subtraction	Number: Addition and subtraction	Number: Addition and subtraction
Lesson objectives (Small steps)	MENTAL MATHS WEEK	1) Represent numbers to 100 (NPV-2) 2) Partition numbers to 100 (NPV-2) 3) Numbers line to 100 (NPV-3) 4) Hundreds (NPV-1, NPV-2) 5) Represent numbers to 1000 (NPV-2)	6) Partition numbers to 1000 (NPV-2) 7) Flexible partitioning of numbers to 1000 (NPV-2) 8) Hundreds, tens and ones (NPV-2) 9) Find 1,10 and 100 more or less (NPV-3) 10) Number line to 1000 (NPV-3)	11) Estimate on a number line to 1000 (NPV-3) 12) Compare numbers to 1000 (NPV-3) 13) Order numbers to 1000 (NPV-3) 14) Count in 50s (NPV-4) 15) Mini-assessment (end of unit assessment)	1) Apply number bonds within 10 2) Add and subtract 1s (AS-2) 3) Add and subtract 10s (AS-2) 4) Add and subtract 100s (AS-2) 5) Spot the pattern (AS-2) 6) Add 1s across a 10 (AS-2) 7) Add 10s across 100 (AS-2) 8) Subtract 1s across a 10 (AS-2) 9) Subtract 10s across 100 (AS-2) 10) Make connections (AS-2) Begin using concrete resources – column addition/subtraction no regrouping, moving on to column addition/subtraction with regrouping.	11) Add two numbers (no exchange) (AS-2) 12) Subtract two numbers (no exchange) (AS-2) 13) Add two numbers (across a 10) (AS-2) 14) Add two numbers (across a 100) (AS-2) Move on to pictorial, drawing counters using 10s/1s frame Pictorial Children move to drawing the counters using a tens and one frame.   Children can draw a representation of the grid to further support their understanding, carrying the ten underneath the line. 	15) Subtract two numbers (across a 10) (AS-2) 16) Subtract two numbers (across a 100) (AS-2) 17) Add 2-digit and 3-digit numbers (AS-2) 18) Subtract a 2-digit number from a 3-digit number (AS-2) Continue to use pictorials, slowly shifting to abstract – compact column method. $\begin{array}{r} 223 \\ + 114 \\ \hline 337 \end{array}$ Add the ones first, then the tens, then the hundreds. $\begin{array}{r} 20 + 5 \\ 40 + 8 \\ 60 + 13 = 73 \end{array}$ Start by partitioning the numbers before formal column to show the exchange. $\begin{array}{r} 536 \\ + 85 \\ \hline 621 \\ 11 \end{array}$

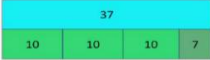
					Column Addition—no regrouping (friendly numbers) Add two or three 2 or 3-digit numbers. Model using Dienes or Numicon Add together the ones first, then the tens. Move to using place value counters Exchange ten ones for a ten. Model using Numicon and pv counters. Use base 10 or Numicon to model Begin with base 10 or Numicon. Move to pv counters, modelling the exchange of a ten into ten ones. Use the phrase 'take and make' for exchange.	Pictorial Draw representations to support understanding Children may draw base ten or PV counters and cross off.	Intermediate step may be needed to lead to clear subtraction understanding. Begin by partitioning into pv columns Then move to formal method.
Vocabulary (Year group specific)		Three-digit hundreds	Three-digit 10 or 100 more	Three-digit Ascending Descending	3 digit number Estimate	3-digit number Column addition Column subtraction	3-digit number Column addition Column subtraction

			10 or 100 less hundreds	hundreds 10 or 100 more 10 or 100 less		Estimate Exchange	Estimate Exchange
Previous years Vocabulary	Multiples Place value Compare Count in steps Estimate Partition Tens Ones	Place value Compare Count in steps Estimate Partition Tens Ones	Multiples Place value Compare Count in steps Digit Two digits Estimate		Facts 2-digit number Commutative Inverse Number bonds Addition/add Subtraction/subtract	Facts 2-digit number Commutative Inverse Addition/add Subtraction/subtract	Facts 2-digit number Commutative Inverse Addition/add Subtraction/subtract

Autumn 2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Units	Number: Addition and subtraction	Number: Multiplication and division A	Number: Multiplication and division A	Mental Maths Week	Number: Multiplication and division A	Number: Multiplication and division A	Assessment and Consolidation week
Lesson objectives (Small steps) MULTIPLICATION AND DIVISION STRATEGIES TO BE CONSOLIDATED DURING SPRING 1.	19) Complements to 100 (AS-1) 20) Estimate answers (AS-2) 21) Inverse operations (AS-2) 22) Make decisions 23) Mini-assessment (end of unit assessment) Embed previous	1) Multiplication – equal groups (MD-1) 2) Using arrays (MD-1) 3) Multiples of 2 (MD-1) 4) Multiples of 5 and 10 (MD-1) Begin using concrete resources. 	5) Sharing and grouping (MD-1) 6) Multiply by 3 (MD-1) 7) Divide by 3 (MD-1) 8) The 3 times-table (NF -2) Consolidate previous learning and move on	Monday – add or subtract 9, 19, 11 or 21 by rounding and compensating. Tuesday – Double multiples of 5 up to 50. Wednesday - Halving multiples of 10 up to 100. Thursday – Near doubles for addition	9) Multiply by 4 (MD-1) 10) Divide by 4 (MD-1) 11) The 4 times-tables (NF -2) 12) Multiply by 8 (MD-1) Moving on to pictorial representations for both multiplication	13) Divide by 8 (MD-1) 14) The 8 times-table (NF -2) 15) The 2, 4 and 8 times-tables (NF -2) 16) Mini-assessment (end of unit assessment) Introduce the compact method. 	Revisit concepts children struggled with as well as act as a buffer for any units that overran

	strategies focusing on the abstract method as well as reasoning questions – use stem sentences. I know that...	Use base 10. Move onto base ten to move towards a more compact method.  4 rows of 10 4 rows of 3 Show the links with arrays to first introduce the erid method.  4 rows of 10 4 rows of 3	to PVCs. Move on to place value counters to show how we are finding groups of a number. We are multiplying by 4 so we need 4 rows  Calculations 4×126 Fill each row with 126  Calculations 4×126 Add up each column, starting with the ones making any exchanges needed  Calculations 4×126 Introduce division as grouping/with arrays. Use cubes, counters, objects or place value counters to aid understanding.  24 divided into groups of 6 = 4 $96 \div 3 = 32$  Link division to multiplication by creating an array and thinking about the number sentences that can be created. Eg $15 \div 3 = 5$ $5 \times 3 = 15$ $15 \div 5 = 3$ $3 \times 5 = 15$	Friday – Number bonds to 20	and division.  Bar model are used to explore missing numbers  Continue to use bar modelling to divide.  $20 \div 5 = ?$ $5 \times ? = 20$ And division with arrays. 	Then, abstract. How many groups of 6 in 24? $24 \div 6 = 4$	
Vocabulary (Year group specific)	3-digit number Column addition Column subtraction Estimate Exchange Complements Operations	Mathematical statements Missing number problems Correspondence problems Derived facts	Mathematical statements Missing number problems Correspondence problems Derived facts		Mathematical statements Missing number problems Correspondence problems Derived facts	Mathematical statements Missing number problems Correspondence problems Derived facts	
Previous years Vocabulary	Facts 2-digit number Commutative Inverse	Commutative Repeated addition Multiplication tables Odd numbers Even numbers	Commutative Repeated addition Multiplication tables Odd numbers Even numbers		Commutative Repeated addition Multiplication tables Odd numbers Even numbers	Commutative Repeated addition Multiplication tables Odd numbers Even numbers	

Spring 1	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Units	Number: Multiplication and division B	Number: Multiplication and division B	Number: Multiplication and division B	Measurement: Length and Perimeter	Mental Maths Week	Measurement: Length and Perimeter
Lesson objectives (Small steps)	1) Multiples of 10 (MD-1) 2) Related calculations (MD-1) 3) Reasoning about multiplication (MD-1) 4) Multiply a 2-digit number by a 1 digit number- no exchange (MD-1) Continue to embed previous strategies (see Autumn 2) – quick recap leading up to compact methods for multiplication and division. Focus on reasoning.	5) Multiply a 2-digit number by 1 digit number – with exchange (MD-1) 6) Link multiplication and division (MD-1) 7) Divide a 2-digit number by a 1-digit number – no exchange (MD-1) 8) Divide a 2-digit number by a 1-digit number – flexible partitioning (MD-1)	9) Divide a 2-digit number by a 1-digit number – with remainders (MD-1) 10) Scaling (NF-3) (MD-1) 11) How many ways? (MD-1) 12) Mini assessment (end of unit assessment) Division with remainders: Pictorial>Concrete>Abstract $14 \div 3 =$ Divide objects between groups and see how much is left over 	1) Measure in metres and centimetres 2) Measure in millimetres 3) Measure in centimetres and millimetres 4) Metres, centimetres and millimetres 5) Equivalent lengths (metres and centimetres) (NPV-2) 6) Equivalent lengths (centimetres and millimetres) (NPV-2) 7) Compare lengths (NPV-3)	Monday – Multiplication 3,4,8 Tuesday – Division 3,4,8 Wednesday – Counting back in 10s from a three digit number over the 100 barrier Thursday – Double multiples of 5 up to 50. Friday - Add three small numbers by putting the largest number first and/or finding a pair totalling 9, 10 or 11.	8) Add lengths (AS-2) 9) Subtract lengths (AS-2) 10) What is perimeter? (AS-2) 10) Measure perimeter (AS-2) 11) Calculate perimeter (AS-2) 12) Mini assessment (end of unit assessment)

			Jump forward in equal jumps on a number line then see how many more you need to jump to find a remainder.  Draw dots and group them to divide an amount and clearly show a remainder.  Use bar models to show division with remainders.  Complete written divisions and show the remainder using r. $29 \div 8 = 3 \text{ REMAINDER } 5$ ↑ ↑ ↑ ↑ dividend divisor quotient remainder			
Vocabulary (Year group specific)	Mathematical statements Missing number problems Integer scaling problems Correspondence problems Exchange	Mathematical statements Missing number problems Integer scaling problems Correspondence problems Exchange	Mathematical statements Missing number problems Integer scaling problems Correspondence problems Exchange Remainders	Millimetre mm Equivalent		Millimetre mm Equivalent Perimeter
Previous years Vocabulary	Commutative Repeated addition Multiplication tables Odd numbers Even numbers Derived facts	Commutative Repeated addition Multiplication tables Odd numbers Even numbers Derived facts	Commutative Repeated addition Multiplication tables Odd numbers Even numbers Derived facts	Standard units Estimate Measure Compare Order Record results Centimetre cm Metre m		Standard units Estimate Measure Compare Order Record results Centimetre cm Metre m

Spring 2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Units	Fractions A	Fractions A	Fractions A	Mental Maths Week	Measurement: Mass and capacity	Measurement: Mass and capacity and Assessment Week – 3 Lessons Measurment and capacity, 2 lessons Testing
Lesson objectives (Small steps)	1) Understand the denominators of unit fractions (F-1) 2) Compare and order unit fractions (F-3) 3) Understand the numerator of non-unit fractions (F-1) 4) Understand the whole (F-1)	5) Compare and order non-unit fractions (F-3) 6) Fractions and scales (F-3) 7) Fractions on a number line (F-3)	8) Count in fractions on a number line (F-3) 9) Equivalent fractions on a number line (F-1) 10) Equivalent fractions as bar models (F-1) 11) Mini assessment (end of unit assessment)	Monday – pairs of multiples of 100 with a total of 1000 Tuesday – Pairs of multiples of 5 to 100 Wednesday - add or subtract 9,19 11 or 21 by rounding and compensating. Thursday – add or subtract mentally near multiples of 10 to or from a 2-digit number. Friday – Add three small numbers by putting the largest number first and/or finding a pair totalling 9, 10 or 11.	1) Use scales 2) Measure mass in grams 3) Measure mass in kilograms and grams 4) Equivalent masses (kilograms and grams) 5) Compare mass 6) Add and subtract mass	7) Measure capacity and volume in millilitres 8) Measure capacity and volume in litres and millilitres 9) Equivalent capacities and volumes (litres and millilitres) 10) Compare capacity and volume 11) Add and subtract capacity and volume
Vocabulary (Year group specific)	Tenths	Tenths	Equivalent fractions Tenths		Consolidate previous years	Consolidate previous years
Previous years Vocabulary	Three quarters Third Equivalence Unit fractions Non-unit fractions Numerator Denominator One whole	Three quarters Third Equivalence Unit fractions Non-unit fractions Numerator Denominator One whole	Three quarters Third Equivalence Unit fractions Non-unit fractions Numerator Denominator One whole		Kilogram kg Gram g Millilitres ml Litres l Quarter full Three-quarter full Scales Temperature Celsius	Kilogram kg Gram g Millilitres ml Litres l Quarter full Three-quarter full Scales Temperature Celsius

Summer 1	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Units	Fractions B	Fractions B	Money	Money	Time and 3 Day mental Maths Week	Time

Lesson objectives (Small steps)	1) Add fractions (F-4) 2) Subtract fractions (F-4) 3) Partition the whole	4) Unit fractions of a set of objects 5) Non-unit fractions of a set of objects 6) Reasoning with fractions of an amount 7) Mini-assessment (end of unit assessment)	1) Pounds and pence 2) Convert pounds and pence (NPV-2) 3) Add money (AS-2)	4) Subtract Money (AS-2) 5) Find change (AS-2) 6) Mini-assessment (end of unit assessment)	1) Roman numerals to 12 Order of small steps changed. 5) Use AM and PM 6) Years, months and days 7) Days and hours 8) Hours and minutes – use start and end times	2) Tell the time to 5 minutes 3) Tell the time to the minute 4) Read time on a digital clock
Vocabulary (Year group specific)	Equivalent fractions Tenths	Equivalent fractions Tenths	Consolidate previous years	Consolidate previous years	Analogue clock Digital Roman numerals Noon Midnight	a.m./p.m. 12-hour clock 24-hour clock Leap year
Previous years Vocabulary	Three quarters Third Equivalence Unit fractions Non-unit fractions Numerator Denominators One whole	Three quarters Third Equivalence Unit fractions Non-unit fractions Numerator Denominators One whole	Value Change Pounds Pence	Value Change Pounds Pence	Intervals of time Quarter past/to Duration	Intervals of time Quarter past/to Duration

Summer 2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Units	Time	Shape	Mental Maths Week	Shape	Statistics	Statistics	Consolidation
Lesson objectives (Small steps)	9) Hours and minutes – use durations 10) Minutes and seconds 11) Units of time 12) Solve problems with time 13) Mini-assessment (end of unit assessment)	1) Turns and angles (G-1) 2) Right angles (G-1) 3) Compare angles (G-1) 4) Measure and draw accurately (G-2) 5) Horizontal and vertical (G-2)	Monday – Bridge through multiples of 10 then adjust. Tuesday – multiply 10/100 shift in digits one/two places to the left. Wednesday – Doubling and halving (100).	6) Parallel and perpendicular (G-2) 7) Recognise and describe 2D shapes (G-2) 8) Draw polygons 9) Recognise and describe 3D shapes (G-2) 10) Make 3D shapes (G-2) Mini-assessment (end of unit assessment)	1) Interpret pictograms 2) Draw pictograms 3) Interpret bar charts	4) Draw bar charts 5) Collect and represent data 6) Two-way tables 7) Mini assessment (end of unit assessment)	These weeks to act as buffer for any units that needed to be extended due to AFL. This is also to be used as a reflection of assessment week to address any gaps in knowledge children have within the current years' curriculum and to revisit and consolidate learning from the year. Once these are

			Thursday – count on or back in 10sa and 1s. Friday - Add three small numbers by putting the largest number first and/or finding a pair totalling 9, 10 or 11.				devised they can be added to the overview These weeks can also be used to extend the shape unit as it is 10 small steps and may run over. Potential Mental Maths Week 75% Mental maths, 25% reasoning and application
Vocabulary (Year group specific)	Analogue clock Digital Roman numerals Noon Midnight Leap year a.m./p.m. 12-hour clock 24-hour clock	Orientations Angles Turn Right angles Right angle triangle Half turn Three quarters of a turn Greater than right angle Less than right angle Horizontal lines Vertical lines Acute angles Obtuse Angles Line of symmetry		Perpendicular lines Parallel lines Orientations Angles Turn Right angles Right angle triangle Half turn Three quarters of a turn Greater than right angle Less than right angle Horizontal lines Vertical lines Polygon	Bar chart	Bar chart Two-way tables Data	
Previous years Vocabulary	Intervals of time Quarter past/to Duration Minutes Seconds	Edges Vertices Faces Sides		Edges Vertices Faces Sides	Table Pictograms Tally chart Block diagram Simple table Category Sorting Totalling Comparing Horizontal Vertical	Table Pictograms Tally chart Block diagram Simple table Category Sorting Totalling Comparing Horizontal Vertical	

