



Year 5 Maths Long Term Overview Version 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. This is particularly evident in the Y1 schemes. 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.

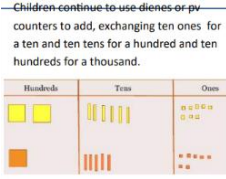
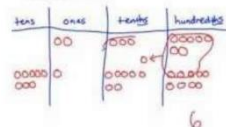
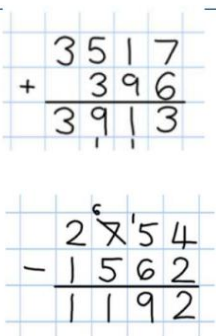
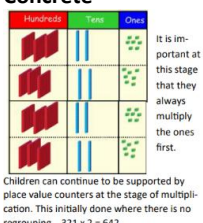
Consolidation/revisiting

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.

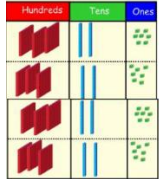
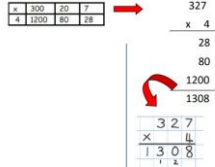
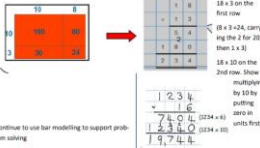
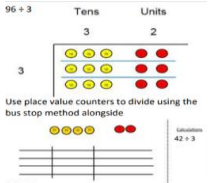
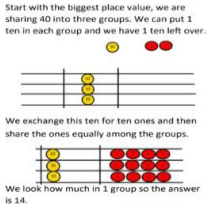
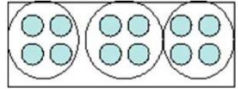
Autumn 1	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Units	Cover previous knowledge – Addition, subtraction and place value.	Number: Place Value	Number: Place Value	Number: Place Value	Number: Addition and subtraction	Number: Addition and subtraction	Number: Multiplication and division A
Lesson objectives (Small steps)		1) Roman numerals to 1000 2) Numbers to 10,000 3) Number to 100,000 4) Numbers to 1,000,000 5) Read and write numbers to 1,000,000 (NPV-2)	6) Powers of 10 (MD-1) 7) 10/100/1000/10,000/1000,000 more or less (NPV-3) 8) Partition numbers to 1,000,000 (NPV-3) 9) Number line to 1,000,000 (NPV-3) 10) Compare and order numbers to 100,000 (NPV-3)	11) Compare and order numbers to a 1,000,000 (NPV-3) 12) Round to the nearest 10, 100 and 1,000 (NPV-3) 13) Round within 100,000 (NPV-3) 14) Round within 1,000,000 (NPV-3) 15) Mini assessment (end of unit assessment)	1) Mental strategies 2) Add whole numbers with more than four digits 3) Subtract whole numbers with more than four digits 4) Round to check answers Concrete + pictorial (PV chart, counters)  Children continue to use dienes or PV counters to add, exchanging ten ones for a ten and ten tens for a hundred and ten hundreds for a thousand. 234 - 179 Model process of exchange using Numicon, base ten and then move to PV counters. To show exchanging: 	5) Inverse operations 6) Multi-step addition and subtraction problems 7) Compare calculations 8) Find missing numbers 9) Mini assessment (end of unit assessment) Abstract (use the term 'exchanging' for both addition 	1) Multiples (MD-2) 2) Common multiples (MD-2) 3) Factors (MD-2) 4) Common Factors (MD-2) 5) Prime numbers (MD-2) 6) Square numbers (MD-2) 7) Cube Numbers (MD-2) Concrete  It is important at this stage that they always multiply the ones first. Children can continue to be supported by place value counters at the stage of multiplication. This initially done where there is no regrouping. $321 \times 2 = 642$
Vocabulary (Year group specific)		Ten Thousand One Hundred Thousand Integer	Powers of Ten Thousand One Hundred Thousand Integer	Powers of Ten Thousand One Hundred Thousand Integer	Consolidate previous years' vocab	Consolidate previous years' vocab	Multiples Factors Prime numbers Product

Previous years Vocabulary		1000 more 1000 less Count backwards Four digit Round Roman numerals Thousands	1000 more 1000 less Count backwards Four digit Round Roman numerals Thousands	1000 more 1000 less Count backwards Four digit Round Roman numerals Thousands	Operations Methods Inverse Round Strategies Calculations	Operations Methods Inverse Round Strategies Calculations	Factor pairs Derived facts Distributive law Formal written layout Remainders
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Autumn 2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Units	Number: Multiplication and division A	Number: Fractions A	Number: Fractions A	Mental Maths Week	Number: Fractions A	Number: Fractions A	Assessment and Consolidation week
Lesson objectives (Small steps)	8) Multiply by 10, 100 and 1000 (MD-1) 9) Divide by 10, 100 & 1000 (MD-1) 10) Multiples of 10, 100 & 1000 (MD-1) 11) Mini assessment (end of unit assessment) PV grid and move counters/numbers	1) Find fractions equivalent to a unit fraction (F-2) 2) Find fractions equivalent to a non-unit fraction (F-2) 3) Recognise equivalent fractions (F-2) 4) Convert improper fractions to mixed numbers (F-2)	5) Convert mixed numbers to improper fractions (F-2) 6) Compare fractions less than 1 (F-2) 7) Order fractions less than 1 (F-2) 8) Compare and order fractions greater than 1 (F-2) 9) Add and subtract fractions with the same denominator	Focus upon multiplication and division during this week Partitioning model (area model) Monday use factors partition to carry out multiplication Tuesday – doubling and halving Wednesday Add three 3 digit multiples of 10 Thursday Add 3 or 4 small numbers,	10) Add fractions within 1 11) Add fractions with total greater than 1 12) Add to a mixed number 13) Add two mixed numbers	14) Subtract fractions 15) Subtract from a mixed number 16) Subtract from a mixed number – breaking the whole 17) Subtract mixed numbers 18) Mini assessment (end of unit assessment)	This week to act as a buffer for any units that over run or to revisit concepts children struggled with (also Xmas week and INSETs may be taking place)

				finding pairs that total 10 Friday Find 1,10 , 100 and 1000 more or less			
Vocabulary (Year group specific)	Multiples Factors Prime numbers Square Numbers Cube Numbers Product	Mixed numbers Fifths Proper fractions Improper fractions Equivalent fractions	Mixed numbers Fifths Proper fractions Improper fractions Equivalent fractions		Mixed numbers Fifths Proper fractions Improper fractions Equivalent fractions	Mixed numbers Fifths Proper fractions Improper fractions Equivalent fractions	
Previous years' Vocabulary	Factor pairs Derived facts Distributive law Formal written layout Remainders	Convert Proper fractions Improper fractions Decimal Equivalence Hundredth Unit fractions Non-unit fractions	Convert Proper fractions Improper fractions Decimal Equivalence Hundredth Unit fractions Non-unit fractions		Convert Proper fractions Improper fractions Decimal Equivalence Hundredth Unit fractions Non-unit fractions	Convert Proper fractions Improper fractions Decimal Equivalence Hundredth Unit fractions Non-unit fractions	

Spring 1	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Units	Number: Multiplication and division	Number: Multiplication and division	Fractions B	Fractions B	Mental Maths Week	Decimals and percentages
Lesson objectives (Small steps)	1) Multiply up to a 4-digit number by a 1-digit number (MD-3) 2) Multiply a 2-digit number by a 2-digit number (area model) (MD-3)	7) Short division (MD-4) 8) Divide a 4-digit number by a 1-digit number (MD-4) 9) Divide with remainders (MD-4) 10) Efficient division (MD-4)	1) Multiply a unit fraction by an integer 2) Multiply a non-unit fraction by an integer 3) Multiply mixed numbers by an integer	5) Fraction of an amount (F-1) 6) Find the whole (F-1) 7) Using fractions as operators (F-1)	Monday use factors partition to carry out multiplication Tuesday – doubling and halving	1) Decimals up to 2 decimal places (NPV-2) 2) Equivalent fractions and decimals (tenths) (F-3) 3) Equivalent fractions and decimals (hundredths) (F-3)

	3) Multiply a 2-digit number by a 2-digit number (MD-3) 4) Multiply a 3-digit number by a 2-digit number (MD-3) 5) Multiply a 4-digit number by a 2-digit number (MD-3) 6) Solve problems with multiplication (MD-3) Concrete Children can continue to be supported by place value counters at the stage of multiplication. This initially done where there is no regrouping. $321 \times 2 = 642$  It is important at this stage that they always multiply the ones first. The corresponding long multiplication is modelled alongside Pictorial to Abstract (x 1-digit)  Pictorial to Abstract (x2-digit)  Continue to use bar modelling to support problem solving.	11) Solve problems with multiplication and division (MD-3) (MD-4) 12) Mini assessment (end of unit assessment) Concrete (if needed)  Use place value counters to divide using the bus stop method alongside  Pictorial Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.  Encourage them to move towards counting in multiples to divide more efficiently. Abstract Begin with divisions that divide equally with no remainder. $\begin{array}{r} 218 \\ 3 \overline{) 654} \\ \underline{6} \\ 0 \\ \underline{0} \\ 0 \\ \underline{0} \\ 0 \end{array}$ Move onto divisions with a remainder. $\begin{array}{r} 86 \text{ r } 2 \\ 3 \overline{) 258} \\ \underline{24} \\ 18 \\ \underline{18} \\ 0 \end{array}$	4) Calculate a fraction of a quantity (F-1)	8) Mini assessment (End of unit assessment)	Wednesday -Use knowledge of number facts and place value to multiply or divide Thursday -Identify near doubles Friday Find 1,10 , 100 and 1000 more or less	4) Equivalent fractions and decimals (F-3) 5) Thousands as fractions (F-3)
Vocabulary (Year group specific)	Short division Decimals Product	Short division Decimals Product	Mixed numbers Fifths Integer	Mixed numbers Fifths Integer		Thousandths Percent %

Previous years' Vocabulary	Factor pairs Derived facts Distributive law Formal written layout Remainders Dividend Divisor Quotient Operations	Factor pairs Derived facts Distributive law Formal written layout Remainders Dividend Divisor Quotient Operations	Convert Proper fractions Improper fractions Decimal Equivalence Hundredth Unit fractions Non-unit fractions	Convert Proper fractions Improper fractions Decimal Equivalence Hundredth Unit fractions Non-unit fractions		Decimal equivalence Hundredths
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Spring 2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Units	Decimals and percentages	Decimals and percentages	Measurement: Perimeter and area	Mental Maths Week	Statistics	Statistics and Assessment Week
Lesson objectives (Small steps)	6) Thousands as decimals (NPV-2) 7) Thousandths on a place value chart (NPV-3) 8) Order and compare decimals (same number of decimal places) (NPV-3) 9) Order and compare any decimals with up to 3 decimal places (NPV-3) 10) Round to the nearest whole number (NPV-3)	11) Round to 1 decimal place (NPV-3) 12) Understand percentages 13) Percentages as fractions 14) Percentages as decimals 15) Equivalent fractions, decimals and percentages (F-3) Mini assessment (end of unit assessment)	1) Perimeter of rectangles 2) Perimeter of rectilinear shapes 3) Perimeter of polygons 4) Area of rectangles (G-2) 5) Area of Compound Shapes (G-2) 6) Estimates area (G-2) 7) Mini assessment (end of unit assessment)	Monday use factors partition to carry out multiplication Tuesday – number bonds of 1 using decimals Wednesday -Use knowledge of number facts and place value to multiply or divide Thursday – Add or subtract 9, 19, 11, 21 or 31 by rounding and compensating	1) Draw line graphs (NPV-4) 2) Read and interpret line graphs (NPV-4) 3) Read and interpret tables	4) Two-way tables 5) Read and interpret tables 6) Mini assessment (end of unit assessment)

				Friday Equivalency (decimal, percentage and fractions)		
Vocabulary (Year group specific)	Thousandths Percent %	Thousandths Percent %	Composite rectilinear shape Irregular shapes Square centimetres Square metres		Timetables Two-way tables	
Previous years' Vocabulary	Decimal equivalence Hundredths	Decimal equivalence Hundredths	Rectilinear figure Area Kilometres		Line graph Discrete data Continuous data Comparison problem Sum problem Difference problem Calculate Interpret	Monday Multiply any two digit multiple of 10 by a single-digit e.g 60x7, 90x6 Tuesday – make 10 and then some $5+8 = 56+4 = 60$, $60+4=64$ for addition and subtraction Wednesday - Add or subtract 9, 19, 11, 21 or 31 by rounding and compensating Thursday - Equivalency (decimal, percentage and fractions) Friday - Use knowledge of number facts and place value to add or subtract any pair of 2

Summer 1	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Units	Geometry: Properties of shapes	Geometry: Properties of shapes	Geometry: Properties of shapes	Geometry: Position and direction	Geometry: Position and direction Mental Maths (3days)	Number: Decimals

Lesson objectives (Small steps)	1) Understand and use degrees (G-1) 2) Classify angles (G-1) 3) Estimate angles (G-1) 4) Measure angles up to 180 (G-1)	5) Draw lines and angles accurately (G-1) 6) Calculate angles around a point (G-1) 7) Calculate angles on straight line (G-1)	8) Lengths and angles in shapes 9) Regular and irregular polygons 10) 3D shapes 11) Mini assessment (End of unit assessment)	1) Read and plot coordinates 2) Problem solving with coordinates 3) Translation 4) Translation with coordinates	5) Lines of symmetry 6) Reflection in horizontal and vertical lines Mental Maths – 3 Days	1) Use known facts to add and subtract decimals within 1 2) Complements to 1 3) Add and subtract decimals across 1 4) Add decimals with the same number of decimal places
Vocabulary (Year group specific)	Reflex angles Degrees One whole turn Angles on straight line Angles around a point Regular polygon Irregular polygon Vertically opposite Missing angles	Reflex angles Degrees One whole turn Angles on straight line Angles around a point Regular polygon Irregular polygon Vertically opposite Missing angles	Reflex angles Degrees One whole turn Angles on straight line Angles around a point Regular polygon Irregular polygon Vertically opposite Missing angles	Reflection Axis	Reflection Axis	Thousandths Complements Exchanging
Previous years' Vocabulary	Acute angle Obtuse angle Geometric shapes Quadrilaterals Trapezium Rhombus Parallelogram Kite	Acute angle Obtuse angle Geometric shapes Quadrilaterals Trapezium Rhombus Parallelogram Kite	Acute angle Obtuse angle Geometric shapes Quadrilaterals Trapezium Rhombus Parallelogram Kite	Co-ordinates First quadrant Translation Grid Plot Polygon	Co-ordinates First quadrant Translation Grid Plot Polygon	Decimal equivalence Hundredths

Summer 2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Units	Number: Decimals	Number: Decimals	Mental Maths Week	Measurement: Converting units	Measurement: Converting units	Geometry: Volume	Number: Negative Numbers
Lesson objectives (Small steps)	5) Subtract decimals with the same number of decimal places 6) Add decimals with a different number of decimal places 7) Subtract decimals with a different number of decimal places	9) Decimal sequences 10) Multiply by 10, 100 and 1,000 (MD-1) 11) Divide by 10, 100 and 1,000 (MD-1) 12) Multiply and divide decimals – missing values	Monday Multiply any two digit multiple of 10 by a single-digit e.g 60x7, 90x6 Tuesday – make 10 and then some 5+8 = 56+4 =60, 60+4=64 for addition and subtraction Wednesday - Add	1) Kilograms and kilometres (NPV-6) 2) Milligrams and millilitres (NPV-6) 3) Convert units of length	4) Convert between metric and imperial units 5) Convert units of time (NPV-6) 6) Calculate with timetables 7) Mini assessment/problem	1) Cubic centimetres 2) Compare volume 3) Estimate volume 4) Estimate capacity 5) Mini assessment/problem solving (End of unit assessment)	1) Understand negative numbers 2) Count through zero in 1s 3) Count through zero in multiples 4) Compare and order negative numbers 5) Find the difference

	8) Efficient strategies for adding and subtracting decimals	13) Mini assessment (End of unit assessment)	or subtract 9, 19, 11, 21 or 31 by rounding and compensating Thursday - Equivalency (decimal, percentage and fractions) Friday - Use knowledge of number facts and place value to add or subtract any pair of 2		solving (End of unit assessment)		
Vocabulary (Year group specific)	Thousandths Complements Exchanging	Thousandths Complements Exchanging		Decimal notation Scaling Metric units Imperial units Inches Pounds Pints	Decimal notation Scaling Metric units Imperial units Inches Pounds Pints Timetables	Volume Cubic centimetre	Consolidate language taught previously. Refer below
Previous years' Vocabulary	Decimal equivalence Hundredths	Decimal equivalence Hundredths		Consolidate metric units language already learnt from previous years	Consolidate metric units language already learnt from previous years	Consolidate metric units already learnt from previous years	Negative numbers Multiples Compare and order Difference

