Poulton Lancelyn

Maths

Long Term Plan

Y5

2023/24

	W1- Number: Number and Place Value	W2 -Number: Number and Place Value	W3 – Number: Number and Place Value Number: Addition and Subtraction	W4 – Number: Addition and Subtraction	W5 – Number: Addition and Subtraction	W6 – Number: Addition and Subtraction Number: Multiplication and Division	W7 – Number: Multiplication and Division	
A1	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit.	Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 Add and subtract numbers mentally with increasingly large numbers	Add and subtract numbers mentally with increasingly large numbers Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Estimate and use inverse operations to check answers to a calculation Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	
Ready to Progress						5NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice. 5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. 5MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.		
	W1 – Number: Multiplication and Division Number: Fractions (including Decimals and Percentages)	W2 – Number: Fractions (including Decimals and Percentages)	W3 – Number: Fractions (including Decimals and Percentages)	W4 – Number: Fractions (including Decimals and Percentages)	W5 – Number: Fractions (including Decimals and Percentages)	W6 – Number: Addition and Subtraction	W7 - Number: Multiplication and Division	Week 8 - Number: Multiplication and Division
A2	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Identify, name and write equivalent	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	Compare and order fractions whose denominators are all multiples of the same number Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Add and subtract fractions with the same denominator and denominators that are multiples of the same number	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	

	fractions of a given fraction, represented visually, including tenths and hundredths	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5] Compare and order fractions whose denominators are all multiples of the same number	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5]	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5]	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5]	Estimate and use inverse operations to check answers to a calculation Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	
Ready to Progress	5NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. 5F–2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.							
	W1 – Number: Multiplication and Division	W2 – Number: Multiplication and Division	W3 – Number: Multiplication and Division	W4 – Number: Fractions (including Decimals and Percentages)	W5 – Number: Fractions (including Decimals and Percentages)	W6 – Number: Fractions (including Decimals and Percentages)		
Sp1	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5] Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5]	Write decimals up to 2 decimal places – less than 1 Read, write, order and compare numbers with up to three decimal places		
Ready to Progress	5MD–3 Multiply any whole number with up to 4 digits by any onedigit number using a formal written method. 5MD–4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context.		5F–1 Find non-unit fractions of quantities.		5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. 5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2			

					decimal places using standard and non-standard partitioning. 5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. 5F–3 Recall decimal fraction equivalents for1/2, ¼, 1/5, and 1/10for multiples of these proper fractions.			
	W1 – Number: Fractions (including Decimals and Percentages)	W2 – Number: Fractions (including Decimals and Percentages)	W3 – Number: Fractions (including Decimals and Percentages)	W4 – Measurement: Perimeter and Area	W5 – Measurement: Perimeter and Area			
Sp2	Equivalent fractions and decimals – tenths Read and write decimal numbers as fractions [for example, 0.71 = 71/100] Equivalent fractions and decimals – hundredths Equivalent fractions and decimals Thousandths as fractions Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Thousandths as decimals Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Thousandths on a place value grid Read, write, order and compare numbers with up to three decimal places Round decimals with two decimal places to the nearest whole number and to one decimal place	Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4 5 and those fractions with a denominator of a multiple of 10 or 25	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes			
Ready to Progress	5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. 5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning. 5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. 5F–3 Recall decimal fraction equivalents for1/2, ¼, 1/5, and 1/10for multiples of these proper fractions.			5G–2 Compare areas and calculate the area of rectangles (including squares) using standard units.				

	W1 – Statistics	W2 – Statistics (3 days) Geometry: Properties of Shape (2 days)	W3 – Geometry: Properties of Shape	W4 - Geometry: Properties of Shape	W5 – Geometry: Position and Direction (3 days) :	W6- Geometry: Position and Direction **NTS assessments**		
Su1	Solve comparison, sum and difference problems using information presented in a line graph	Complete, read and interpret information in tables, including timetables Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Identify: – angles at a point and one whole turn (total 360°) – angles at a point on a straight line and 1 2 a turn (total 180°) – other multiples of 90°	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Identify: – angles at a point and one whole turn (total 360°) – angles at a point on a straight line and 1 2 a turn (total 180°) – other multiples of 90° Draw given angles, and measure them in degrees (°) Use the properties of rectangles to deduce related facts and find missing lengths and angles	**Recap from Year 3:** Identify horizontal and vertical lines and pairs of perpendicular and parallel lines **Year 5:** Distinguish between regular and irregular polygons based on reasoning about equal sides and angles Identify 3D shapes, including cubes and other cuboids, from 2D representations	**Recap from Year 4:** Describe positions on a 2D grid as coordinates in the first quadrant Plot specified points and draw sides to complete a given polygon **Year 5:** Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not change	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed		
Ready to Progress			5G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.					
	W1 – Number: Fractions including Decimals and Percentages)	W2 – Number: Fractions including Decimals and Percentages)	W3 – Number: Fractions including Decimals and Percentages)	W4 – Number: Number and Place Value	W5 – Measurement: Converting Units	W6 – Measurement: Converting Units	W7 – Measurement: Volume (3 days)	W8 - Fluency
Su 2	Solve problems involving number up to three decimal places	Solve problems involving number up to three decimal places Solve problems involving number up to three decimal places Read, write, order and compare numbers with up to three decimal places	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Solve problems involving number up to three decimal places	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints Solve problems involving converting between units of time Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	

Ready to Progress	5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. 5NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).		NPV–5 Convert between units of measure, including using common decimals and fractions.		

Ready-to-progress criteria

Year 4 conceptual prerequesite	Year 5 ready-to-progress criteria	Future applications
Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.	5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.	Solve multiplication problems that have the scaling structure, such as 'ten times as long'. Understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal fraction.
Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning.	5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.	Compare and order numbers, including those with up to 2 decimal places. Add and subtract using mental and formal written methods.
Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.	5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.	Compare and order numbers, including those with up to 2 decimal places. Estimate and approximate to the nearest 1 or 0.1.
Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.	5NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.	Read scales on graphs and measuring instruments.

Year 4 conceptual prerequesite	Year 5 ready-to-progress criteria	Future applications
Divide 100 and 1,000 into 2, 4, 5 and 10 equal parts. Find unit fractions of quantities using known division facts (multiplication tables fluency).	5NPV–5 Convert between units of measure, including using common decimals and fractions.	Read scales on measuring instruments, and on graphs related to measures contexts. Solve measures problems involving different units by converting to a common unit.
Recall multiplication and division facts up to 12 × 12. Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, for example: 74 ÷ 9 = 8 r 2	5NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.	Use multiplication facts during application of formal written layout. Use division facts during short division and long division.
Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10 or 100), for example: 8 + 6 = 14 80 + 60 = 140 800 + 600 = 1,400 3 × 4 = 12 30 × 4 = 120 300 × 4 = 1,200	5NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth), for example: 8 + 6 = 14 0.8 + 0.6 = 1.4 0.08 + 0.06 = 0.14 3 × 4 = 12 0.3 × 4 = 1.2 0.03 × 4 = 0.12	Recognise number relationships within the context of place value to develop fluency and efficiency in calculation.
Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to scaling a number by 10 or 100.	5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.	Convert between different metric units of measure.

Year 4 conceptual prerequesite	Year 5 ready-to-progress criteria	Future applications
Recall multiplication and division facts up to 12×12, and recognise products in multiplication tables as multiples of the corresponding number. Recognise multiples of 10, 100 and 1,000. Apply place-value knowledge to known additive and multiplicative number facts. Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients).	5MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.	Solve contextual division problems. Simplify fractions. Express fractions in the same denomination.
Recall multiplication facts up to 12×12. Manipulate multiplication and division equations.	5MD–3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.	Solve contextual and non-contextual multiplication problems using a formal written method.
Recall multiplication and division facts up to 12×12. Manipulate multiplication and division equations. Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, for example: $74 \div 9 = 8$ r 2 and interpret remainders appropriately according to the context.	5MD–4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context.	Solve contextual and non-contextual division problems using a formal written method.
Recall multiplication and division facts up to 12×12. Find unit fractions of quantities using known division facts (multiplication-tables fluency). Unitise using unit fractions (for example, understand that there are 3 one-fifths in three-fifths).	5F–1 Find non-unit fractions of quantities.	Solve multiplication problems that have the scaling structure.

Year 4 conceptual prerequesite	Year 5 ready-to-progress criteria	Future applications
Recall multiplication and division facts up to 12×12. Reason about the location of fractions in the linear number system.	5F–2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.	Compare and order fractions. Use common factors to simplify fractions. Use common multiples to express fractions in the same denomination. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
Divide powers of 10 into 2, 4, 5 and 10 equal parts.	5F–3 Recall decimal fraction equivalents for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$, and for multiples of these proper fractions.	Read scales on graphs and measuring instruments. Know percentage equivalents of common fractions.
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. Identify whether the interior angles of a polygon are equal or not.	5G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.	Solve problems involving missing angles.
Compose polygons from smaller shapes. Recall multiplication facts up to 12×12.	5G–2 Compare areas and calculate the area of rectangles (including squares) using standard units.	Calculate the area of compound rectilinear shapes and other 2D shapes, including triangles and parallelograms, using standard units. Use the relationship between side-length and perimeter, and between side-length and area to calculate unknown values.