Pearson Primary Progress and Assess Maths Progression Map (1 of 2)

Child's Name _____

Year 4 Autumn

Outcome	Number and Place Value (NPV)	Addition and Subtraction (AS)	Multiplication and Division (MD)	Fractions, Decimals, Ratio and Percentages (FDRP)	Measures (MEA)	Geometry (GEO)	Statistics (STA)
	Recognise the place value of each digit in a 4-digit number (1000s, 100s, 10s, and 1s); order and compare numbers with up to 4 digits. *Week 2* *Autumn 1 PSR*	Know bonds to the next 100. Example: 54 + 46 653 + 47 *Week 1* *Autumn 1 PSR*	Use the distributive law to **multiply 2-digit numbers by a 1-digit number using formal written layout** or mental methods**.** Example: 4 × 65 94 × 7 *Week 3* *Autumn 1 Arithmetic*	Find unit fractions of amounts. Example: $\frac{1}{4}$ of 24 $\frac{1}{8}$ of 32 *Week 3* *Autumn 1 PSR*	**Read, write and convert time between analogue and digital 12-hour clocks.** Example: 6:05 = five minutes past six *Week 4* *Autumn 1 PSR*		Use mathematical reasoning to answer a question by collecting, displaying and interpreting data in a frequency table and bar chart, choosing an appropriate scale. *Week 8* *Autumn 2 PSR*
	Begin to place 4-digit numbers on number lines and **round** these **to the nearest 10, 100 or 1000**. Example: 4782 rounds to 4780, 4800, 5000 *Week 2; 9* *Autumn 2 PSR*	Use place value and number facts to **add numbers with up to 4 digits**, including fluency in adding any pair of 2-digit numbers. Example: 147 + 36 4286 + 199 *Week 1; 2; 5; 7* *Autumn 1 PSR*	**Use** table facts and **commutativity** to perform multiplications involving multiples of 10. Example: 40 × 6 300 × 8 *Week 3* *Autumn 2 Arithmetic*	Begin to **recognise and show families of common equivalent fractions.** *Week 6* *Autumn 2 PSR*	**Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.** Example: 1 minute 23 seconds = 83 seconds 231 minutes = 3 hours 51 minutes *Week 4* *Autumn 1 PSR*		
		Use counting up to subtract numbers with up to 3 digits crossing one multiple of 100. Example: 134 – 88 809 – 742 *Week 1; 2; 9* *Autumn 1 PSR*	**Recall multiplication and division facts for multiplication tables,** for 2, 5, 10, 3, 4, 8, 6 and 9 times tables. *Week 3; 9 (S); 10 (S)* *Autumn 1 Arithmetic* *Autumn 1 PSR*	Count in fractions, expressing each fraction in its simplest form. *Week 6*	Read scales to the nearest 100 g and draw a bar chart where one step represents 100. *Week 4*		
		Choose a method to subtract that is appropriate to the numbers in the calculation. Example: 456 – 199 134 – 88 134 – 6 *Week 2; 7; 9*	Use the distributive law to **multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout** (grid). Example: 3 × 34 7 × 145 *Week 3; 10* *Autumn 2 Arithmetic* *Autumn 2 PSR*	**Recognise and write decimal and fraction equivalents of tenths and a $\frac{1}{2}$.** *Week 7* *Autumn 2 PSR*	Solve simple measures problems and **convert between different units of measure** – mm, cm, m; ml, l; g, kg. Example: 0·7 L = ☐ ml Write 1250 g in kilograms. *Week 4; 8* *Autumn 1 & 2 PSR*		

Skill area

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Pearson Primary Progress and Assess
Maths Progression Map (2 of 2)

Child's Name _____

Outcome

(NPV)	(AS)	(MD)	(FDRP)	(MEA)	(GEO)	(STA)
	Solve addition and subtraction problems for numbers with up to 3-digits, including **in contexts** of word problems**, deciding which** written or mental **operations and methods to use and why.** Example: 354 + 205 402 – 378 *Week 2; 7; 9* *Autumn 2 PSR*	Double and halve 3-digit numbers using partitioning and be able to describe, explain and predict patterns. Example: Halve 684. Write a doubles chain past 1000 and write about the pattern in the units digits. *Week 6* *Autumn 2 PSR*	**Find the effect of dividing a 1-digit or 2-digit number by 10**, and recognise that the first place after the decimal point is a tenth. Example: 5 ÷ 10 = 5/10 = 0·5 36 ÷ 10 = 36/10 = 3·6 *Week 7* *Autumn 2 PSR*			
	Use column addition to add 3-digit numbers; begin to add 4-digit numbers. *Week 5; 7* *Autumn 1 & 2 Arithmetic* *Autumn 1 PSR*	Begin to **use place value** and **known and derived facts to divide** numbers above tables facts. Example: 56 ÷ 4 176 ÷ 8 *Week 10* *Autumn 2 Arithmetic* *Autumn 2 PSR*				
	Use expanded **column subtraction to subtract** 3-digit numbers. Example: 376 – 263 838 – 556 *Week 5; 9* *Autumn 1 & 2 Arithmetic* *Autumn 1 PSR*	Work systematically and predict patterns. *Week 10*				
	Use logical thinking to look for patterns in numbers. Example: 1234 + 7890 8765 + 3210 *Week 7*					

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Pearson Primary Progress and Assess Maths Progression Map (1 of 2)

Child's Name _____

Year 4 Spring

Outcome	Skill area						
	Number and Place Value (NPV)	**Addition and Subtraction (AS)**	**Multiplication and Division (MD)**	**Fractions, Decimals, Ratio and Percentages (FDRP)**	**Measures (MEA)**	**Geometry (GEO)**	**Statistics (STA)**
	Count on and back **in multiples of 6, 7, 9, 25 and 1000** and work systematically, predicting and explaining patterns. *Week 3; 11; 12* *Spring 1 PSR*	**Add and subtract** 1s, 10s or 100s from **numbers with up to 4 digits** crossing multiples of 10, 100, or 1000. Example: 8417 + 66 3460 – 403 *Week 1; 11* *Spring 1 Arithmetic* *Spring 1 & 2 PSR*	**Recognise and use factor pairs and commutativity in mental calculations**, to solve multiplications and divisions involving 2-digit and 3-digit multiples of 10. Example: 4 × 60 240 ÷ 6 *Week 3; 15; 16* *Spring 1 PSR*	**Recognise and show families of common equivalent fractions** and begin to compare fractions with non-like denominators. *Week 6; 13* *Spring 1 PSR*	Begin to convert between metric units of length, e.g. kilometres to metres, and solve problems involving different measures. Example: Fred has run 645 m of a 2 km race when he slips. How far does he have to go? *Week 4; 8; 18*	**Identify acute and obtuse angles and compare and order angles up to 2 right angles by size.** *Week 14* *Spring 1 PSR*	
	Place 4-digit numbers on number lines, **recognise the place value of each digit and round these to the nearest 10, 100 or 1000**. Example: 7236 rounds to 7240, 7200, 7000 *Week 11* *Spring 1 & 2 PSR*	Use counting up subtraction to subtract 3-digit numbers and 4-digit numbers from multiples of 1000 and describe and explain patterns in digit sums. Example: 1000 – 347 4000 – 2693 *Week 9; 15* *Spring 1 PSR*	**Recall multiplication and division facts for multiplication tables**, for 2, 3, 4, 5, 6, 7, 8, 9 and 10 times tables. *Week 12; 15 (S); 19 (S)* *Spring 1 & 2 Arithmetic*	Begin to multiply and divide numbers by 10 and 100, understanding that this involves a shift of the digits on a place-value grid and **identify the value of the digits in the answer as ones, tenths and hundredths**. *Week 7; 16* *Spring 2 Arithmetic* *Spring 2 PSR*	**Estimate, compare and calculate different measures,** including solving simple money problems involving decimals to 2 decimal places. Example: The Smiths have £30 to buy games. They buy 6 jigsaws, each costing £4·39. Roughly how much would that be? *Week 12* *Spring 2 PSR*	Draw shapes with given properties and explain reasoning. Example: - Acute/obtuse angles - Parallel sides *Week 14* *Spring 1 PSR*	
	Explain and justify reasoning about what happens when numbers are multiplied and divided by 10. Example: Explain rules and patterns when dividing 2-digit numbers and 3-digit multiples of 10 × 10. *Week 16*	Use compact column subtraction to subtract 3-digit numbers. Example: 642 – 326 951 – 647 *Week 12; 17* *Spring 1 & 2 Arithmetic*	Use doubling and halving to multiply and divide by 4, and to multiply by 5 and 20. Example: 636 ÷ 4 246 × 20 *Week 13* *Spring 1 PSR*	**Solve simple problems involving fractions** and find **non-unit fractions** of amounts **where the answer is a whole number**. Example: $\frac{3}{4}$ of 48 $\frac{4}{5}$ of 30 *Week 13* *Spring 1 Arithmetic* *Spring 1 PSR*	Solve simple problems involving finding the perimeter of rectilinear shapes. Example: 8 + 4 + 8 + 4 = 24 cm or double 12 = 24 cm 9 + 11 + 9 + 11 = 40 cm or 18 cm + 22 cm = 40 cm *Week 18* *Spring 2 PSR*	**Identify lines of symmetry in 2D shapes presented in different orientations.** *Week 14* *Spring 1 PSR*	
	Add amounts of money mentally using place value and number facts. *Week 17*	Read and interpret addition word problems. *Week 16*	**Multiply 2-digit and 3-digit numbers by a 1-digit number using a formal written layout** (vertical algorithm – ladder). Example: 3 × 154 6 × 257 *Week 20* *Spring 1 & 2 Arithmetic* *Spring 1 & 2 PSR*	Compare two 1-place decimals, place on a line and **round decimals with 1 decimal place to the nearest whole number.** Example: 3·05 < 3·45 < 3·54 < 3·7 5·9 rounds to 6 *Week 16* *Spring 2 PSR*	**Read, write and convert time between analogue and digital 12- and 24-hour clocks.** Example: 1 o'clock = 13:00 3:45 pm = 15:45 = quarter to 4 in the afternoon *Week 18* *Spring 2 PSR*	**Complete a simple symmetric figure with respect to a specific line of symmetry.** *Week 14* *Spring 1 PSR*	

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Pearson Primary Progress and Assess Maths Progression Map (2 of 2)

Child's Name _____

Outcome	(NPV)	(AS)	(MD)	(FDRP)	(MEA)	(GEO)	(STA)
		Add 2 **numbers with up to 4 digits using the formal written method of columnar addition**, including answers that are greater than 10 000. Example: 3416 + 756 2370 + 7630 *Week 16; 17; 27* *Spring 2 Arithmetic*	Notice patterns; make and test predictions. Example: 234 × 9 456 × 9 Predict and explain the patterns. *Week 20*				
		Use column addition to add several 2-digit numbers. Example: 24 + 76 + 58 *Week 17*	**Use place value** and **known and derived facts to divide** numbers above table facts. *Spring 1 & 2 Arithmetic* *Spring 2 PSR*				
		Investigate and reason methodically and systematically. *Week 17*					
		Add and subtract numbers with up to 4 digits using formal columnar addition and subtraction methods. Example: 603 + 526 4001 – 3675 *Week 17; 19* *Spring 1 & 2 PSR* *Spring 2 Arithmetic*					
		Identify the calculation(s) needed to solve a word problem. Example: Amy wins 4214 points in a game. She finds 6 trophies worth 250 points each. What is her new score? *Week 20* *Spring 1 PSR*					
		Solve addition and subtraction 2-step problems in context. Example: 345 people were on a ride. If 128 get off and 143 get on, how many are on the ride now? *Week 18, 20*					

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Pearson Primary Progress and Assess Maths Progression Map (1 of 3)

Child's Name _____

Year 4 Summer

Outcome	Number and Place Value (NPV)	Addition and Subtraction (AS)	Multiplication and Division (MD)	Fractions, Decimals, Ratio and Percentages (FDRP)	Measures (MEA)	Geometry (GEO)	Statistics (STA)
	Skill area						
	Find 1, 10, 100 and **1000 more or less than a given number**. Example: 5720 – 1000 8065 + 10 *Week 21* *Summer 1 Arithmetic*	Confidently **add numbers with up to 4 digits** using place value and number facts, including fluency in adding any pairs of 2-digit numbers. Example: 38 + 45 2649 + 741 *Week 11; 17; 26* *Summer 2 Arithmetic*	**Use place value** and **known and derived facts to multiply 2-digit and 3-digit numbers by a 1-digit number (including multiplying by 0 and 1)** and to multiply three 1-digit numbers. Example: 199 × 3 2 × 3 × 5 *Week 10; 23; 30*	Use equivalent fractions to simplify and compare fractions with non-like denominators. Example: $\frac{4}{6} = \frac{2}{3}$ $\frac{8}{10} = \frac{4}{5}$ *Week 13; 25* *Summer 1 PSR*	Convert between **different** metric **units of measure**, e.g. km to m; solve problems involving different measures. Example: True or false? Five 200 g weights are the same as 1 kg. *Week 18* *Summer 1 PSR*	**Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.** *Week 24* *Summer 1 PSR*	**Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.** *Week 24 (S); 28* *Summer 2 PSR*
	Count backwards through zero to include negative numbers; use knowledge of factors and reasoning to solve problems. Example: You have £30 in your bank and then spend £50 on your bank card. How much money is left in your bank? *Week 21* *Summer 1 PSR*	When appropriate, use counting up to **subtract numbers with up to 4 digits**. Example: 2001 – 1865 4010 – 2968 *Week 15; 17; 26* *Summer 2 Arithmetic* *Summer 2 PSR*	Use a written method to multiply amounts of money by 1-digit numbers. Example: 4 × £4·67 7 × £3·27 *Week 12; 23* *Summer 1 PSR*	Find non-unit fractions of amounts and **solve problems involving harder fractions to calculate quantities.** Example: $\frac{4}{5}$ of 85 $\frac{7}{9}$ of 18 *Week 13; 29; 30* *Summer 2 Arithmetic* *Summer 2 PSR*	**Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.** Example: 6 + 6 + 6 + 6 = 24 cm / 4 × 6 = 24 cm *Week 18; 24* *Summer 1 & 2 PSR*	**Describe positions on a 2D grid as coordinates in the first quadrant.** *Week 28* *Summer 2 PSR*	**Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.** *Week 28* *Summer 2 PSR*
	Order and compare numbers beyond 1000. Example: 3421 > 2167 4892 < 9173 *Week 21* *Summer 1 PSR*	Use counting up and subtraction to find change or solve money problems. Example: £10 – £4·25 £38·54 – £15·75 *Week 17; 27*	**Estimate and use inverse operations to check answer to a** multiplication or division **calculation**. Example: 76 ÷ 4 = □, □ × 4 = 76 78 ÷ 3 = □, □ × 3 = 78 *Week 20; 23*	Recognise that tenths and hundredths arise when dividing by 10 and 100; multiply decimal numbers by 10 and 100, understanding that this involves a shift of the digits on a place-value grid. Example: 213 ÷ 100 = 2·13 12·3 ÷ 10 = 2·13 *Week 16; 22; 29* *Summer 1 Arithmetic* *Summer 2 PSR*	Solve problems involving money. Example: $\frac{4}{5}$ of £30 6 × £6·05 *Week 23; 27*	**Describe movements between positions as translations of a unit left/right and up/down.** *Week 28* *Summer 2 PSR*	

Works with Abacus

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Pearson Primary Progress and Assess Maths Progression Map (2 of 3)

Child's Name _____

Outcome

(NPV)	(AS)	(MD)	(FDRP)	(MEA)	(GEO)	(STA)
Identify, represent and estimate numbers using different representations *Week 21*	**Add numbers with up to 4 digits using the formal written method of columnar addition**. Example: 3861 + 4513 *Week 17; 27* *Summer 2 Arithmetic* *Summer 2 PSR*	**Multiply 2- and 3-digit numbers by a 1-digit number using formal written layout** where appropriate. Example: 294 × 6 648 × 7 *Week 20; 23; 29* *Summer 1 & 2 Arithmetic* *Summer 1 PSR*	**Count up and down in** tenths and **hundredths**. Week 22 *Summer 1 Arithmetic* *Summer 1 PSR*	**Find the area of rectilinear shapes.** *Week 24; 26*	**Plot specified points and draw sides to complete a given polygon.** *Week 28*	
Solve number and practical problems with increasingly large positive numbers. Example: It is approximately 4591 km from Istanbul to Delhi, and 1770 km from Delhi to Chennai. Abdul travels from Istanbul to Chennai, via Delhi. How far does he travel altogether? *Week 23; 29*	**Subtract numbers with up to 4 digits using the formal written method** of expanded or compact **columnar subtraction**. Example: 7842 – 3498 6347 – 5192 *Week 19; 27* *Summer 2 Arithmetic* *Summer 2 PSR*	Multiply 2-digit numbers by 2-digit numbers using the distributive law (grid method). *Week 30* *Summer 2 Arithmetic* *Summer 2 PSR*	**Compare numbers with up to 2 decimal places, identify the value of the digits as ones, tenths and hundredths, and round decimal numbers to the nearest whole.** Example: 6 ÷ 10 = 0·6 0·04 × 100 = 4 *Week 22; 25; 29* *Summer 1 PSR*			
Read Roman numerals to 100 (I to C) and know that, over time, the numeral system changed to include the concept of zero and place value. *Week 24* *Summer 1 PSR*	**Use inverse operations to check answers to a calculation**. *Week 26; 27*	**Use place value** and **known and derived facts to divide** larger numbers (answers up to 50) **including dividing by 1**. Example: 83 ÷ 3 432 ÷ 8 *Week 20; 23; 30* *Summer 2 Arithmetic*	**Solve simple measure and money problems using fractions and decimals to 2 decimal places.** Example: One shampoo bottle contains 400 ml and another contains 0·3 L. Which holds more? By how much? *Week 23; 25; 27; 30* *Summer 1 & 2 PSR*			
	Use logical reasoning to create additions of 4-digit numbers to a given total. Example: Write 4-digit + 4-digit column additions that equal 10 000. *Week 27*	Use doubling and halving to **multiply and divide mentally**. Example: 45 × 6 432 ÷ 8 *Week 23; 26; 30*	Add and subtract 0·1 and 0·01. Example: 6·9 + 0·1 9·17 – 0·01 *Week 25*			

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Pearson Primary Progress and Assess Maths Progression Map (3 of 3)

Child's Name _____

Outcome

(NPV)	(AS)	(MD)	(FDRP)	(MEA)	(GEO)	(STA)
		Recall multiplication and division facts for multiplication tables up to 12 × 12 and describe patterns in the tables. *Week 23; 29 (S)* *Summer 1 Arithmetic* *Summer 2 PSR*	**Recognise and write decimal** and fraction **equivalents of tenths, hundredths, $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$.** Example: $\frac{3}{4} = 0{\cdot}75$ $1{\cdot}3 = 1\frac{3}{10}$ *Week 25*			
		Solve problems involving multiplying and adding, including integer scaling and correspondence. Example: The area is of a rectangle is 24 cm². Enlarge the rectangle by a factor of 2 and find its new area. *Week 26* *Summer 2 PSR*	Write additions of fractions with different denominators with a total of 1. Example: $\frac{1}{2} + \frac{3}{6}$ $\frac{1}{4} + \frac{4}{8} + \frac{2}{8}$ *Week 25*			
		Sustain a line of enquiry; make and test a hypothesis. Example: Multiply 356 by 3 (1068); find the digital root of 1068 (6). The digital root of 356 is 5. Multiply 5 by 3 (15); find the digital root of 15 (6). Notice a pattern in the digital roots. *Week 29*	**Add and subtract fractions with the same denominator,** including totals greater than 1. Example: $\frac{3}{8} + \frac{2}{8}$ $\frac{3}{5} + \frac{4}{5}$ *Week 25; 29* *Summer 2 PSR*			
		Look for patterns and write rules. Example: 11 × 34 = 374, 37 = 34 + 3 11 × 47 = 517, 51 = 47 + 4 (The original 2-digit number plus the 10s digit of that number.) *Week 30*				

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