Year 6 - Inspire Maths National Curriculum Correlation Chart

NC objective	*Inspire Maths* page reference	Additional activity
Number – number and place value		
Pupils should be taught to:		
• read, write, order and compare numbers up to 10 000 000 and determine the value of each digit	PB5A Unit 1: Whole Numbers (1), 2–19	
• round any whole number to a required degree of accuracy	PB4A Unit 2: Whole Numbers (2), 22–35 PB5A Unit 1: Whole Numbers (1), 20–28	PB5A p256 Let's Practise! Extend the procedure to rounding larger numbers to the nearest ten thousand, etc. and estimating calculations involving these numbers. Use opportunities to discuss questions such as: *"What is the largest whole number that rounds to 400 000 to the nearest hundred thousand?" "Why is there no number that rounds both to 50 000 to the nearest ten thousand and 44 000 to the nearest thousand?"*
• use negative numbers in context, and calculate intervals across zero		NC Activity 6.1
• solve number and practical problems that involve all of the above	PB4A Unit 2: Whole Numbers (2), 22–23, 26–28, 30–35 PB5A Unit 1: Whole Numbers (1), 11–19, 23–28	
Number – addition, subtraction, multiplication and division		
Pupils should be taught to:		

• multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	PB4A Unit 3: Whole Numbers (3), 52–56	NC Activity 6.2
• divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context		NC Activity 6.3
• divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context		NC Activity 6.4
• perform mental calculations, including with mixed operations and large numbers	Mental calculations are integrated throughout all years of *Inspire Maths*.	
• identify common factors, common multiples and prime numbers	PB3B Unit 14: Fractions, 72–74, 84–90 PB4A Unit 2: Whole Numbers (2), 36–44 PB4A Unit 5: Fractions, 91, 96–103, 107–110	NC Activity 6.5

	PB5A Unit 3: Fractions (1), 71–76, 80–81, 87–88, 90–95, 97, 99–101	
• use their knowledge of the order of operations to carry out calculations involving the four operations	PB5A Unit 2: Whole Numbers (2), 50–56	
• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	PB5A Unit 2: Whole Numbers (2), 57–69 PB5B Unit 7: Decimals, 30–36 PB5B Unit 9: Average, 56–63 PB5B Unit 10: Percentage, 83–91 PB5B Unit 11: Angles, 95, 99, 104–105 PB5B Unit 12: Properties of Triangles and 4-sided Figures, 132–135, 140 PB6A Unit 2: Angles in Shapes and Diagrams,28–37 Multi-step problems appear throughout all years of *Inspire Maths*.	
• solve problems involving addition, subtraction, multiplication and division	PB3A Unit 8: Solving Word Problems 2: Multiplication and Division, 111–123 PB4A Unit 3: Whole Numbers (3), 63–70 PB5A Unit 2: Whole Numbers (2), 57–69	
• use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	PB4A Unit 2: Whole Numbers (2), 32–35 PB4A Unit 3: Whole Numbers (3), 48–49, 54–55, 60–62, 70 PB5A Unit 1: Whole Numbers (1), 23–26 PB5A Unit 2: Whole Numbers (2), 40–41, 48–49, 57 PB5B Unit 7: Decimals, 30–31	

Number – fractions (including decimals and percentages)		
Pupils should be taught to:		
• use common factors to simplify fractions; use common multiples to express fractions in the same denomination	PB3B Unit 14: Fractions, 74, 77–90 PB4A Unit 5: Fractions, 91, 95–103, 108–110 PB5A Unit 3: Fractions (1), 71–76, 80–81, 87–88, 90–95, 97, 99–101 PB5B Unit 7: Decimals, 2–3	
• compare and order fractions, including fractions > 1	PB3B Unit 14: Fractions, 75–83 PB4A Unit 5: Fractions, 90, 92, 95	NC Activity 6.6
• add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	PB3B Unit 14: Fractions, 84–90 PB4A Unit 5: Fractions, 101–103, 108–109, 115 PB5A Unit 3: Fractions (1), 71–76, 87–88, 90–95, 97, 99–101 PB6A Unit 4: Fractions, 54–55, 70–72, 75, 76	
• multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]	PB5A Unit 4: Fractions (2), 102–109, 131 PB6A Unit 4: Fractions, 54, 70, 76	
• divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	PB5A Unit 4: Fractions (2), 119–123 PB6A Unit 4: Fractions, 55, 68	
• associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375]	PB5A Unit 3: Fractions (1), 77–86	

for a simple fraction [for example, $\frac{3}{8}$]		
• identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	PB4B Unit 9: Decimals (1), 8–33 PB5B Unit 7: Decimals, 4–25, 35–36	
• multiply one-digit numbers with up to two decimal places by whole numbers	PB4B Unit 10: Decimals (2), 61–65	
• use written division methods in cases where the answer has up to two decimal places	PB4B Unit 10: Decimals (2), 66–72	
• solve problems which require answers to be rounded to specified degrees of accuracy	PB5B Unit 7: Decimals, 31–34 PB5B Unit 8: Measurements, 41 PB5B Unit 10: Percentage, 75 PB5B Unit 14: Volume of Cubes and Cuboids, 183 PB6A Unit 1: Algebra, 21 PB6A Unit 6: Percentage, 115–119, 126, 133, 134, 136, 138, 139 PB6B Unit 7: Speed, 11 PB6B Unit 8: Circles, 33, 34, 40, 46, 48, 49 PB6B Unit 10: Area and Perimeter, 66, 67, 70, 71,	

	PB6B Unit 11: Volume of Solids and Liquids, 77, 78, 84	
• recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	PB5B Unit 10: Percentage, 64–76 PB6A Unit 6: Percentage, 113–115, 118 PB6B Unit 9: Pie Charts, 55, 60	NC Activity 6.7
Ratio and proportion		
Pupils should be taught to:		
• solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	PB5A Unit 6: Ratio, 155–168, 176–178 PB6A Unit 5: Ratio, 87–109	
• solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison	PB5B Unit 10: Percentage, 77–89 PB6A Unit 6: Percentage, 120–134, PB6B Unit 9: Pie Charts, 53, 55, 57, 59–61	
• solve problems involving similar shapes where the scale factor is known or can be found		NC Activity 6.8
• solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	PB5A Unit 4: Fractions (2), 124–130, 132 PB6A Unit 4: Fractions, 56–61, 64–67, 70, 72–78 PB6A Unit 5: Ratio, 82–94, 96–98, 104, 106–108	

Algebra		
Pupils should be taught to:		
• use simple formulae	PB3B Unit 18: Area and Perimeter, 169–173 PB4B Unit 12: Area and Perimeter, 107–108, 110–116 PB5A Unit 5: Area of a Triangle, 137–147 PB5B Unit 14: Volume of Cubes and Cuboids, 174–184 PB6B Unit 7: Speed, 4–28 PB6B Unit 8: Circles, 31, 33, 34, 36–52 PB6B Unit 10: Area and Perimeter, 62–73 PB6B Unit 11: Volume of Solids and Liquids, 74—98	NC Activity 6.9
• generate and describe linear number sequences		NC Activity 6.10
• express missing number problems algebraically	PB6A Unit 1: Algebra, 3–23	
• find pairs of numbers that satisfy an equation with two unknowns		NC Activity 6.11
• enumerate possibilities of combinations of two variables	PB5B Unit 14: Volume of Cubes and Cuboids, 178 PB6A Unit 5: Ratio, 99 PB6B Unit 11: Volume of Solids and Liquids, 81, 82, 91	NC Activity 6.12
Measurement		
Pupils should be taught to:		

• solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	PB4B Unit 10: Decimals (2), 52, 58–60, 63, 64, 66, 68–69, 77–79 PB5B Unit 7:Decimals, 13, 30–36 PB5B Unit 8: Measurements, 40–41, 47–48 PB5B Unit 14: Volume of Cubes and Cuboids, 179–181, 183–184	
• use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places	PB5B Unit 8: Measurements, 37–49	
• convert between miles and kilometres		NC Activity 6.13
• recognise that shapes with the same areas can have different perimeters and vice versa	PB3B Unit 18: Area and Perimeter, 163–165 PB4B Unit 12: Area and Perimeter, 104 PB6B Unit 10: Area and Perimeter, 68	
• recognise when it is possible to use formulae for area and volume of shapes	PB3B Unit 18: Area and Perimeter, 169–173 PB4B Unit 12: Area and Perimeter, 107–108, 110–116 PB5A Unit 2: Whole Numbers (2), 31, 57 PB5A Unit 5: Area of a Triangle, 137–147 PB5B Unit 7: Decimals, 28 PB5B Unit 14: Volume of Cubes and Cuboids, 174–184	

	PB6B Unit 8: Circles, 31–34, 36–52 PB6B Unit 10: Area and Perimeter, 62–73 PB6B Unit 11: Volume of Solids and Liquids, 74–98	
• calculate the area of parallelograms and triangles	PB5A Unit 5: Area of a Triangle, 133–147 PB6B Unit 10: Area and Perimeter, 63, 65–66, 69–73	NC Activity 6.14
• calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3]	PB5B Unit 14: Volume of Cubes and Cuboids, 166–186 PB6B Unit 11: Volume of Solids and Liquids, 74–98	NC Activity 6.15
Geometry – properties of shapes		
Pupils should be taught to:		
• draw 2-D shapes using given dimensions and angles	PB5B Unit 13: Geometrical Construction, 141–154 PB6B Unit 8: Circles, 29–30, 36	
• recognise, describe and build simple 3-D shapes, including making nets	PB5B Unit 14: Volume of Cubes and Cuboids, 155–163 PB6A Unit 3: Nets, 38–53	
• compare and classify geometric shapes based on their properties and sizes and find unknown angles	PB5B Unit 12: Properties of Triangles and 4-sided Figures, 113–140 PB6A Unit 2: Angles in Shapes and Diagrams, 25–37 PB6B Unit 8: Circles, 29–32, 35	NC Activity 6.16

in any triangles, quadrilaterals, and regular polygons		
• illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	PB6B Unit 8: Circles, 29–32	
• recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	PB5B Unit 11: Angles, 92–112 PB6A Unit 2: Angles in Shapes and Diagrams, 24–25, 28–30, 33–36	
Geometry – position and direction		
Pupils should be taught to:		
• describe positions on the full coordinate grid (all four quadrants)		NC Activity 6.17
• draw and translate simple shapes on the coordinate plane, and reflect them in the axes		NC Activity 6.18
Statistics		
Pupils should be taught to:		
• interpret and construct pie charts and line graphs and use these to solve problems	PB4A Unit 4: Tables and Line Graphs, 79–85 PB6B Unit 9: Pie Charts, 53–61	NC Activity 6.19 NC Activity 6.20
• calculate and interpret the mean as an average	PB5B Unit 9: Average, 50–63 PB6B Unit 7: Speed, 12–19, 21–28	