Power Maths Year 6
Power Up progression

Textbook 6A (Term 1) overview

Strand	Unit		Lesson number	Lesson title	National curriculum objective	Power Up specifics
Number – number and place value	Unit 1	Place value within 10,000,000	1	Numbers to 1,000,000	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Children read and write 6-digit numbers as both numerals and words.
Number – number and place value	Unit 1	Place value within 10,000,000	2	Numbers to 10,000,000 (1)	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Children are given 6-digit numbers in numerals which they write in words; as well as numbers in words which they write in numerals. Children create similar example for a partner to convert.
Number – number and place value	Unit 1	Place value within 10,000,000	3	Numbers to 10,000,000 (2)	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Children are given 7-digit numbers in numerals which they write in words; then 7-digit numbers in words which they match to numbers on a grid.
Number – number and place value	Unit 1	Place value within 10,000,000	4	Number line to 10,000,000	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Children are given a place value grid and two sets of clues to work out 7-digit numbers. Clues are not given in place value order.
Number – number and place value	Unit 1	Place value within 10,000,000	5	Comparing and ordering numbers to 10,000,000	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Children are given a place value grid and two sets of clues to work out 7-digit numbers. Clues are not given in place value order.
Number – number and place value	Unit 1	Place value within 10,000,000	6	Rounding numbers	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	A game to play in pairs. Children generate 7-digit numbers using dice. Children decide in which column to place their digit in order to make the largest/ smallest number possible. Here they practise reading, writing and comparing 7-digit numbers.
Number – number and place value	Unit 1	Place value within 10,000,000	7	Negative numbers	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	A game to play in pairs. Children generate 7-digit numbers using dice. Children decide in which column to place their digit in order to make the largest/ smallest number possible. Here they practise reading, writing and comparing 7-digit numbers.
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	1	Problem solving – using written methods of addition and subtraction (1)	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	A game to play in pairs. Children generate 7-digit numbers using dice. Children decide in which column to place their digit in order to make the largest/ smallest number possible. Here they practise reading, writing and comparing 7-digit numbers.
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	2	Problem solving – using written methods of addition and subtraction (2)	Count forwards or backwards in steps of powers of 10 for any given number up to 10,000,000 (Year 5)	Children require a number line. Start at 0. Count forwards and backwards in steps of 1,000. Children then have a new starting point of 8,000 to count in steps of 10,000 and 100,000 to a given number and then back again.
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	3	Multiplying numbers up to 4 digits by a 1-digit number	Count forwards or backwards in steps of powers of 10 for any given number up to 10,000,000 (Year 5)	Children count up in steps of 1,000 from 8,000 and back again. New starting points are given from which to count in steps of 10,000 and 100,000 both forwards and backwards. Children use or draw a number line if helpful.

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Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	4	Multiplying numbers up to 4 digits by a 2-digit number	Count forwards or backwards in steps of powers of 10 for any given number up to 10,000,000 (Year 5)	Children count up in steps of 1,000 from 19,000 and back again. New starting points are given from which to count in steps of 10,000 and 100,000 both forwards and backwards. Children use or draw a number line if helpful.
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	5	Dividing numbers up to 4 digits by a 2-digit number (1)	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	A game to play in 3s or 4s. Children generate numbers using dice and decide in which column in a place value grid to place their digit in order to make the largest number possible. Children order the numbers in descending order.
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	6	Dividing numbers up to 4 digits by a 2-digit number (2)	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	A game to play in 3s or 4s. Children generate numbers using dice and decide in which column in a place value grid to place their digit in order to make the smallest number possible. Children order the numbers in ascending order.
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	7	Dividing numbers up to 4 digits by a 2-digit number (3)	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	In pairs, children start at 84,817 and have a target number of 37,426. Children choose a digit card from 1 to 9, e.g. 5. They then decide whether to add or subtract 5, 50, 500 or 5,000. Children make the target number by adding and subtracting until they reach it.
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	8	Dividing numbers up to 4 digits by a 2-digit number (4)	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	In pairs, children start at 254,618 and have a target number of 769,522. Children choose a digit card from 1 to 9, e.g. 5. They then decide whether to add or subtract 5, 50, 500, 5,000 or 50,000. Children make the target number by adding and subtracting until they reach it.
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	9	Dividing numbers up to 4 digits by a 2-digit number (5)	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	In pairs, children start at 3,205,672 and have a target number of 6,344,720. Children choose a digit card from 1 to 9, e.g. 5. They then decide whether to add or subtract 5, 50, 500, 5,000, 50,000 or 500,000. Children make the target number by adding and subtracting until they reach it, ideally within 20 turns.
Number – addition, subtraction, multiplication and division	Unit 2	Four operations (1)	10	Dividing numbers up to 4 digits by a 2-digit number (6)	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Children are given calculations, including both multiplication and addition of numbers up to 1,000,000. When the calculations are completed children place the answers in ascending order.
Number – addition, subtraction, multiplication and division	Unit 3	Four operations (2)	1	Common factors	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Children find the missing number in addition calculations with numbers up to 10,000,000.
Number – addition, subtraction, multiplication and division	Unit 3	Four operations (2)	2	Common multiples	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	Children find the missing number in subtraction calculations with numbers up to 10,000,000.
Number – addition, subtraction, multiplication and division	Unit 3	Four operations (2)	3	Recognising prime numbers up to 100	Count forwards or backwards in steps of powers of 10 for any given number up to 10,000,000 (Year 5)	Using a number line, children start at 8,000 and count in steps of 1,000 to reach a target number. Children count both backwards and forwards in steps of both 10,000 and 100,000 to work out how many steps to other given target numbers.
Number – addition, subtraction, multiplication and division	Unit 3	Four operations (2)	4	Squares and cubes	Round any whole number to a required degree of accuracy	Children round 5- and 6-digit numbers to the nearest 10, 100 and 1,000.
Number – addition, subtraction, multiplication and division	Unit 3	Four operations (2)	5	Order of operations	Round any whole number to a required degree of accuracy	Children round 6- and 7-digit numbers to the nearest 100, 1,000, 10,000 and 100,000.

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Number – addition, subtraction, multiplication and division	Unit 3	Four operations (2)	6	Brackets	Round any whole number to a required degree of accuracy	Children round numbers with up to three decimal places to the nearest whole number, tenth or hundredth. Children can use a number line if helpful.
Number – addition, subtraction, multiplication and division	Unit 3	Four operations (2)	7	Mental calculations (1)	Round any whole number to a required degree of accuracy	Children round numbers with up to three decimal places to the nearest whole number, tenth or hundredth. Children can use a number line if helpful.
Number – addition, subtraction, multiplication and division	Unit 3	Four operations (2)	8	Mental calculations (2)	Round any whole number to a required degree of accuracy	Children solve word problems to round answers to the nearest 100 and 10,000.
Number – addition, subtraction, multiplication and division	Unit 3	Four operations (2)	9	Reasoning from known facts	Round any whole number to a required degree of accuracy	Children solve word problems to round answers to the nearest 100, 1,000 and 10,000.
Number – fractions	Unit 4	Fractions (1)	1	Simplifying fractions (1)	Use negative numbers in context, and calculate intervals across 0	Children solve three word problems to find the difference between a positive and negative number.
Number – fractions	Unit 4	Fractions (1)	2	Simplifying fractions (2)	Use negative numbers in context, and calculate intervals across 0	Children solve three word problems to find the difference between a positive and negative number. Children cross 0 to find the answers.
Number – fractions	Unit 4	Fractions (1)	3	Fractions on a number line	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	Children practise formal long multiplication, up to 4 digits by 2-digit numbers.
Number – fractions	Unit 4	Fractions (1)	4	Comparing and ordering fractions (1)	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	Children practise formal long multiplication, up to 4 digits by 2-digit numbers, in context of word problems.
Number – fractions	Unit 4	Fractions (1)	5	Comparing and ordering fractions (2)	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	Children practise formal long multiplication, up to 4 digits by 2-digit numbers, in context of word problems.
Number – fractions	Unit 4	Fractions (1)	6	Adding and subtracting fractions (1)	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	Children create own word problem that involves multiplication of a 4-digit number by a 2-digit number. Children solve each other's.
Number – fractions	Unit 4	Fractions (1)	7	Adding and subtracting fractions (2)	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	Children create own word problems that involve multiplication of a 4-digit number by a 2-digit number. They choose numbers to use from those given in boxes.
Number – fractions	Unit 4	Fractions (1)	8	Adding fractions	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	Children practise formal long division, up to 4 digits by 2-digit numbers, and write remainders in three ways.
Number – fractions	Unit 4	Fractions (1)	9	Subtracting fractions	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	Children practise formal long division, up to 4 digits by 2-digit numbers, in context of word problems. Children interpret remainders appropriately.
Number – fractions	Unit 4	Fractions (1)	10	Problem solving – adding and subtracting fractions (1)	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	Children practise formal long division, up to 4 digits by 2-digit numbers, in context of word problems. Children interpret remainders appropriately.
Number – fractions	Unit 4	Fractions (1)	11	Problem solving – adding and subtracting fractions (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	Children create own word problem that involves division of a 4-digit number by a 2-digit number. They choose numbers by throwing darts at a dart board. Children's context needs to account for any remainders.

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Number – fractions	Unit 5	Fractions (2)	1	Multiplying a fraction by a whole number	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	Children create own word problem that involves division of a 4-digit number by a 2-digit number. They choose numbers by throwing darts at a dart board. Children's context needs to account for any remainders.
Number – fractions	Unit 5	Fractions (2)	2	Multiplying a fraction by a fraction (1)	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	Children answer long division questions from three potential answers, then show the answer as a decimal, a fraction and a whole number.
Number – fractions	Unit 5	Fractions (2)	3	Multiplying a fraction by a fraction (2)	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	Children solve word problems involving long division. Children give the remainder as a decimal, a fraction and a whole number.
Number – fractions	Unit 5	Fractions (2)	4	Dividing a fraction by a whole number (1)	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	Children practise formal short division up to 4 digits by 2-digit numbers in context of word problem. Children interpret remainders appropriately.
Number – fractions	Unit 5	Fractions (2)	5	Dividing a fraction by a whole number (2)	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	Children find the missing digits in a formal short division then create a similar problem for their partner to solve.
Number – fractions	Unit 5	Fractions (2)	6	Dividing a fraction by a whole number (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	Children find the missing digits in a formal short division, where the remainder is given as a fraction. Children then create a similar problem for their partner to solve.
Number – fractions	Unit 5	Fractions (2)	7	Four rules with fractions	Perform mental calculations, including with mixed operations and large numbers	Children add numbers with up to 6 digits to 99, 999, 9,999, etc. mentally, finding the addition pattern.
Number – fractions	Unit 5	Fractions (2)	8	Calculating fractions of amounts	Perform mental calculations, including with mixed operations and large numbers	Children add numbers with up to 6 digits to 101, 1,001, 10,001, etc. (without exchange), using mental methods of adjustment.
Number – fractions	Unit 5	Fractions (2)	9	Problem solving – fractions of amounts	Perform mental calculations, including with mixed operations and large numbers	Children subtract numbers with up to 6 digits with 99, 999, 9,999, etc., using mental methods of compensation and adjustment.
Geometry – position and direction	Unit 6	Geometry – position and direction	1	Plotting coordinates in the first quadrant	Perform mental calculations, including with mixed operations and large numbers	Children check subtractions of numbers with up to 7 digits with 999, 9,999, 99,999, etc. mentally, and decide whether they are true or false.
Geometry – position and direction	Unit 6	Geometry – position and direction	2	Plotting coordinates	Perform mental calculations, including with mixed operations and large numbers	Children start with the number 5,836,429 and follow instructions to add and/or subtract different powers of 10 (without exchange) to work out what number is left at the end.
Geometry – position and direction	Unit 6	Geometry – position and direction	3	Plotting translations and reflections	Perform mental calculations, including with mixed operations and large numbers	Children start with 6,219,477 and follow instructions to add and/or subtract different powers of 10 (including at least one exchange) to work out what number is left at the end.
Geometry – position and direction	Unit 6	Geometry – position and direction	4	Reasoning about shapes with coordinates	Perform mental calculations, including with mixed operations and large numbers	Children use mental calculations and pattern spotting to work out long multiplication questions with an 'I know..., so...' format.

Textbook 6B (Term 2) overview

Strand	Unit		Lesson number	Lesson title	National curriculum objective	Power Up specifics
Number – fractions (including decimals)	Unit 7	Decimals	1	Multiplying by 10, 100 and 1,000	Perform mental calculations, including with mixed operations and large numbers	Children use mental calculations and pattern spotting to work out long multiplication questions with minus 99, minus 999 or add 999 using an 'I know..., so...' format.
Number – fractions (including decimals)	Unit 7	Decimals	2	Dividing by multiples of 10, 100 and 1,000	Perform mental calculations, including with mixed operations and large numbers	Children use mental calculations and pattern spotting to work out long division questions with add 101, add 109 or add 999 using an 'I know..., so...' format.
Number – fractions (including decimals)	Unit 7	Decimals	3	Decimals as fractions	Perform mental calculations, including with mixed operations and large numbers	Children work out calculations with mixed operations and up to 5-digit numbers.
Number – fractions (including decimals)	Unit 7	Decimals	4	Fractions as decimals (1)	Identify common factors, common multiples and prime numbers	A game to play in pairs. Children generate a 2-digit number using 0–9 digit cards. Children decide how to arrange their number and then find factors of their number. They score a point for each common factor found (excluding 1). The pair with the most common factors in the class after five rounds wins.
Number – fractions (including decimals)	Unit 7	Decimals	5	Fractions as decimals (2)	Identify common factors, common multiples and prime numbers	A game to play in pairs. Children generate a 2-digit number using 0–9 digit cards. Children decide how to arrange their number and then find factors of their number. They score a point for each common factor found (excluding 1). The pair with the most common factors in the class after five round wins.
Number – fractions (including decimals)	Unit 7	Decimals	6	Multiplying decimals (1)	Use their knowledge of the order of operations to carry out calculations involving the 4 operations	Children complete mixed-operation calculations, using the correct order of operations.
Number – fractions (including decimals)	Unit 7	Decimals	7	Multiplying decimals (2)	Use their knowledge of the order of operations to carry out calculations involving the 4 operations	Children complete mixed-operation calculations, using the correct order of operations. Calculations include brackets and square numbers.
Number – fractions (including decimals)	Unit 7	Decimals	8	Dividing decimals (1)	Use their knowledge of the order of operations to carry out calculations involving the 4 operations	Children correct errors in mixed-operation calculations, using knowledge of the order of operations.
Number – fractions (including decimals)	Unit 7	Decimals	9	Dividing decimals (2)	Use their knowledge of the order of operations to carry out calculations involving the 4 operations	Children insert brackets into mixed-operation calculations to make the calculation correct.
Number – fractions (including decimals and percentages)	Unit 8	Percentages	1	Percentage of (1)	Identify common factors, common multiples and prime numbers	A game to play in pairs. Children generate a 2-digit number using 0–9 digit cards. Children find all factors of their number. The factors are deducted from 10.
Number – fractions (including decimals and percentages)	Unit 8	Percentages	2	Percentage of (2)	Identify common factors, common multiples and prime numbers	A game to play in pairs. Children generate a 2-digit number using 0–9 digit cards. Children find all factors of their number. The factors are deducted from 10.
Number – fractions (including decimals and percentages)	Unit 8	Percentages	3	Percentage of (3)	Identify common factors, common multiples and prime numbers	A game to play in pairs. Children generate a 2-digit number using 0–9 digit cards then find the lowest common multiple.
Number – fractions (including decimals and percentages)	Unit 8	Percentages	4	Percentage of (4)	Identify common factors, common multiples and prime numbers	A game to play in pairs. Children generate a 2-digit number using 0–9 digit cards then find the lowest common multiple.
Number – fractions (including decimals and percentages)	Unit 8	Percentages	5	Finding missing values	Use their knowledge of the order of operations to carry out calculations involving the 4 operations	Children insert brackets into mixed-operation calculations to make the calculation correct.
Number – fractions (including decimals and percentages)	Unit 8	Percentages	6	Converting fractions to percentages	Use their knowledge of the order of operations to carry out calculations involving the 4 operations	Children insert brackets into mixed-operation calcualtions to make the calculation correct.

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Number – fractions (including decimals and percentages)	Unit 8	Percentages	7	Equivalent fractions, decimals and percentages (1)	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Children solve word problems involving addition and subtraction with up to 6-digit numbers. Bar models can be used to solve these.
Number – fractions (including decimals and percentages)	Unit 8	Percentages	8	Equivalent fractions, decimals and percentages (2)	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Children solve word problems involving addition and subtraction with up to 6-digit numbers. Bar models can be used to solve these.
Number – fractions (including decimals and percentages)	Unit 8	Percentages	9	Mixed problem solving	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Children solve word problems involving addition and subtraction with up to 6-digit numbers. Bar models can be used to solve these.
Algebra	Unit 9	Algebra	1	Finding a rule (1)	Solve problems involving addition, subtraction, multiplication and division	Children complete multi-step word problems involving combinations of the four operations.
Algebra	Unit 9	Algebra	2	Finding a rule (2)	Solve problems involving addition, subtraction, multiplication and division	Children complete multi-step word problems involving combinations of the four operations. Includes decimals.
Algebra	Unit 9	Algebra	3	Using a rule (1)	Solve problems involving addition, subtraction, multiplication and division	Children complete a puzzle to find out what value a square, triangle and circle have by using given calculations at the start. Includes decimals along with the four operations.
Algebra	Unit 9	Algebra	4	Using a rule (2)	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Children are given word problems including numbers up to 7-digits and use rounding to the nearest 1,000, 10,000 and 100,000.
Algebra	Unit 9	Algebra	5	Using a rule (3)	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Children estimate answers to word problems including up to 5-digit numbers.
Algebra	Unit 9	Algebra	6	Formulae	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Children solve word problems to find simplified fractions.
Algebra	Unit 9	Algebra	7	Solving equations (1)	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Children use their knowledge of factors and multiples to complete equivalent fractions.
Algebra	Unit 9	Algebra	8	Solving equations (2)	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Children solve word problems and estimate answers to the nearest 100. Includes money.
Algebra	Unit 9	Algebra	9	Solving equations (3)	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination	Children use their knowledge of factors to simplify fractions.
Algebra	Unit 9	Algebra	10	Solving equations (4)	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Children estimate the difference between two large numbers, using up to 7-digit numbers.
Algebra	Unit 9	Algebra	11	Solving equations (5)	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	Children estimate the answer to simple multiplication word problems, and are encouraged to use rounding.
Measurement	Unit 10	Measure – imperial and metric measures	1	Metric measures	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination	Children are given a combination of fractions to simplify or find equivalent fractions.
Measurement	Unit 10	Measure – imperial and metric measures	2	Converting metric measures	Compare and order fractions, including fractions >1	Children compare and order a list of four fractions, including fractions >1 (where denominators are multiples of each other). Children are encouraged to find equivalent fractions to help them order correctly.
Measurement	Unit 10	Measure – imperial and metric measures	3	Problem solving – metric measures	Compare and order fractions, including fractions >1	Children draw number lines for a variety of fractions, including mixed numbers and improper fractions.

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Measurement	Unit 10	Measure – imperial and metric measures	4	Miles and km	Compare and order fractions, including fractions >1	Children compare and order a list of four fractions, including fractions >1 (where denominators are multiples of each other). Children are encouraged to find equivalent fractions to help them order correctly.
Measurement	Unit 10	Measure – imperial and metric measures	5	Imperial measures	Compare and order fractions, including fractions >1	Children compare fractions using <, > and =.
Measurement	Unit 11	Measure – perimeter, area and volume	1	Shapes with the same area	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Children solve fraction addition and subtraction calculations by finding common denominators.
Measurement	Unit 11	Measure – perimeter, area and volume	2	Area and perimeter (1)	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Children correct fraction addition and subtraction calculations, using equivalent fractions to help them.
Measurement	Unit 11	Measure – perimeter, area and volume	3	Area and perimeter (2)	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Children solve fraction addition and subtraction calculations.
Measurement	Unit 11	Measure – perimeter, area and volume	4	Area of a parallelogram	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Children solve fraction addition and subtraction calculations, using equivalent fractions to help them. Includes mixed numbers and improper fractions.
Measurement	Unit 11	Measure – perimeter, area and volume	5	Area of a triangle (1)	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Children convert mixed numbers to improper fractions to solve fraction additions and subtractions.
Measurement	Unit 11	Measure – perimeter, area and volume	6	Area of a triangle (2)	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Children correct fraction addition and subtraction calculations which include improper fractions and mixed numbers.
Measurement	Unit 11	Measure – perimeter, area and volume	7	Area of a triangle (3)	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Children solve addition and subtraction fraction questions within a context.
Measurement	Unit 11	Measure – perimeter, area and volume	8	Problem solving – area	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Children create a word problem around $\frac{4}{7} - \frac{1}{3}$ for a partner to solve.
Measurement	Unit 11	Measure – perimeter, area and volume	9	Problem solving – perimeter	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]	Children complete fraction multiplications, simplifying answers where possible.
Measurement	Unit 11	Measure – perimeter, area and volume	10	Volume of a cuboid (1)	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]	Children complete fraction multiplications, simplifying answers where possible.
Measurement	Unit 11	Measure – perimeter, area and volume	11	Volume of a cuboid (2)	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]	Children complete word problems containing fraction multiplications, simplifying answers where possible.
Ratio and proportion	Unit 12	Ratio and proportion	1	Ratio (1)	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]	Children create a word problem for $\frac{3}{5} \times \frac{5}{6}$ and ask their partner to solve it.
Ratio and proportion	Unit 12	Ratio and proportion	2	Ratio (2)	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]	Children create a word problem for $\frac{2}{3} \times \frac{4}{5}$ and ask their partner to solve it.
Ratio and proportion	Unit 12	Ratio and proportion	3	Ratio (3)	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	Children complete division fraction questions, using multiplication facts to help them divide.
Ratio and proportion	Unit 12	Ratio and proportion	4	Ratio (4)	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	Children use equivalence to complete fraction divisions and therefore make the numerator a multiple of the divisor.
Ratio and proportion	Unit 12	Ratio and proportion	5	Scale drawings	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	Children correct the errors in divisions with fractions.

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Ratio and proportion	Unit 12	Ratio and proportion	6	Scale factors	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	Children solve fraction division questions set as word problems where the numerator is a multiple of the divisor. Bar models can be used to help solve.
Ratio and proportion	Unit 12	Ratio and proportion	7	Similar shapes	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	Children solve fraction division questions set as word problems where the numerator is not a multiple of the divisor.
Ratio and proportion	Unit 12	Ratio and proportion	8	Problem solving – ratio and proportion (1)	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	Children choose a calculation by throwing a dart and make up their own worded problem around this calculation. Solve each other's problems in context.
Ratio and proportion	Unit 12	Ratio and proportion	9	Problem solving – ratio and proportion (2)	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	Children choose a fraction division calculation by throwing a dart and make up their own worded problem around this calculation. Solve each other's problems in context.

Textbook 6C (Term 3) overview

Strand	Unit		Lesson number	Lesson title	National curriculum objective	Power Up specifics
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	1	Measuring with a protractor	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	Children make a word problem for a calculation where a fraction is divided by a whole number.
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	2	Drawing shapes accurately	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]	Children use division to find the decimal equivalents of given fractions.
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	3	Angles in triangles (1)	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]	Children use place value to find the fraction equivalents of given decimals.
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	4	Angles in triangles (2)	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]	Children find the decimal equivalents for each fraction, then sort the decimals into families to find patterns.
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	5	Angles in triangles (3)	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]	Children explore the recurring nature of decimal fraction equivalents of thirds and sixths. They explain how $\frac{2}{3}$ relates to $\frac{1}{3}$, how $\frac{2}{6}$ relates to $\frac{1}{6}$ etc.
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	6	Angles in polygons (1)	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]	Children work out equivalent fractions of given decimals with up to three decimal places to find the odd one out.
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	7	Angles in polygons (2)	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]	Children explore equivalence between quarters and eighths through looking at decimal fractions on a number line.
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	8	Vertically opposite angles	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]	Children compare fraction and decimal equivalence in word problems.
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	9	Equal distance	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]	Children compare fraction and decimal equivalence in word problems. A number line can be used.
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	10	Parts of a circle	Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places	Children use clues to work out a decimal number to recap columns to the thousandths column. Can use place value grids if helpful.
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	11	Nets (1)	Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places	Children use clues to work out a decimal number to recap columns to the thousandths column. Can use place value grids if helpful.

Strand	Unit		Lesson number	Lesson title	National curriculum objective	Power Up specifics
Geometry – properties of shapes	Unit 13	Geometry – properties of shapes	12	Nets (2)	Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places	Children identify which calculations are incorrect from a list of whole number and decimal number calculations. Children to multiply or divide by 10, 100 or 1,000.
Number – number and place value	Unit 14	Problem solving	1	Problem solving – place value	Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places	Children insert decimals with up to three decimal places into function machines which multiply and divide by 10, 100 and 1,000.
Number – number and place value	Unit 14	Problem solving	2	Problem solving – negative numbers	Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places	Children multiply and divide decimal numbers by 10, 100 or 1,000 in the context of word problems.
Number – addition, subtraction, multiplication and division	Unit 14	Problem solving	3	Problem solving – addition and subtraction	Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places	Children multiply and divide decimal numbers by 10, 100 or 1,000 in the context of word problems.
Number – addition, subtraction, multiplication and division	Unit 14	Problem solving	4	Problem solving – four operations (1)	Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places	Children create own worded problem multiplying a decimal number by 10, 100 or 1,000. Solve each other's problems in context.
Number – addition, subtraction, multiplication and division	Unit 14	Problem solving	5	Problem solving – four operations (2)	Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places	Children create own worded problem dividing a decimal number by 10, 100 or 1,000. Solve each other's problems in context.
Number – fractions (including decimals and percentages)	Unit 14	Problem solving	6	Problem solving – fractions	Multiply one-digit numbers with up to 2 decimal places by whole numbers	Children solve decimal multiplications then place answers into ascending order.
Number – fractions (including decimals and percentages)	Unit 14	Problem solving	7	Problem solving – decimals	Multiply one-digit numbers with up to 2 decimal places by whole numbers	Children practise estimating decimal multiplications by completing inequality statements.
Number – fractions (including decimals and percentages)	Unit 14	Problem solving	8	Problem solving – percentages	Multiply one-digit numbers with up to 2 decimal places by whole numbers	Children explore why $1{\cdot}42 \times 4 = 2{\cdot}84 \times 2$ and are encouraged to come up with their own pairs of calculations that equal.
Ratio and proportion	Unit 14	Problem solving	9	Problem solving – ratio and proportion	Multiply one-digit numbers with up to 2 decimal places by whole numbers	Children answer three word problems which involve multiplying a 1-digit decimal (up to two decimal places) with a 1-digit whole number. Children are encouraged to estimate before calculating.
Measurement	Unit 14	Problem solving	10	Problem solving – time (1)	Multiply one-digit numbers with up to 2 decimal places by whole numbers	Children are given this calculation: $4{\cdot}06 \times 6$ and asked to create their own word problem using this calculation in context.
Measurement	Unit 14	Problem solving	11	Problem solving – time (2)	Use written division methods in cases where the answer has up to 2 decimal places	Children practise the written short division method with a 1-digit divisor.
Geometry – position and direction	Unit 14	Problem solving	12	Problem solving – position and direction	Use written division methods in cases where the answer has up to 2 decimal places	Children practise the written short division method with a 2-digit divisor.
Geometry – properties of shapes	Unit 14	Problem solving	13	Problem solving – properties of shapes (1)	Use written division methods in cases where the answer has up to 2 decimal places	Children solve divisions given as word problems where answers have two decimal places.
Geometry – properties of shapes	Unit 14	Problem solving	14	Problem solving – properties of shapes (2)	Use written division methods in cases where the answer has up to 2 decimal places	Children solve divisions given as word problems where answers have two decimal places.
Statistics	Unit 15	Statistics	1	The mean (1)	Use written division methods in cases where the answer has up to two decimal places	Children pick a 3-digit number to divide by a 2-digit number and create their own worded problem around this calculation.
Statistics	Unit 15	Statistics	2	The mean (2)	Use written division methods in cases where the answer has up to 2 decimal places	Children create a word problem for the calculation $148 \div 32$.
Statistics	Unit 15	Statistics	3	The mean (3)	Solve problems which require answers to be rounded to specified degrees of accuracy	Children practise rounding numbers, including decimal numbers, to the nearest hundredth, tenth, 1, 10, or 100.

Strand	Unit		Lesson number	Lesson title	National curriculum objective	Power Up specifics
Statistics	Unit 15	Statistics	4	Introducing pie charts	Solve problems which require answers to be rounded to specified degrees of accuracy	Children practise rounding numbers, including decimal numbers to the nearest hundredth, tenth, 1, 10, and 100. Includes decimals with three decimal places, units of measurement and 7-digit numbers.
Statistics	Unit 15	Statistics	5	Reading and interpreting pie charts	Solve problems which require answers to be rounded to specified degrees of accuracy	Children solve word problems concerning decimals which need to be rounded to the nearest metre/ pound/centimetre.
Statistics	Unit 15	Statistics	6	Fractions and pie charts (1)	Solve problems which require answers to be rounded to specified degrees of accuracy	Children round numbers in real-life contexts, including rounding to the nearest tenth of a kilogram.
Statistics	Unit 15	Statistics	7	Fractions and pie charts (2)	Solve problems which require answers to be rounded to specified degrees of accuracy	Children create a word problem for the calculation: 1,000 – 842·695. Children ask their partner to provide answers rounded to the nearest hundredth.
Statistics	Unit 15	Statistics	8	Percentages and pie charts	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	Children find and colour fraction, decimal and percentage equivalents.
Statistics	Unit 15	Statistics	9	Interpreting line graphs	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	Children convert percentages to fractions and decimals to solve word problems.
Statistics	Unit 15	Statistics	10	Constructing line graphs	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	Children find fraction, decimal and percentage equivalents of common numbers in word problems.