

# Power Maths Year 5, yearly overview

| Textbook                                 | Strand  | Unit |                                     | Number of Lessons |
|--|---|------|-------------------------------------|-------------------|
| Textbook A / Practice Book A<br>(Term 1) | Number – number and place value                         | 1    | Place value within 100,000          | 8                 |
|  | Number – number and place value                         | 2    | Place value within 1,000,000        | 8                 |
|  | Number – addition and subtraction                       | 3    | Addition and subtraction            | 10                |
|  | Statistics  | 4    | Graphs and tables                   | 5                 |
|  | Number – multiplication and division                    | 5    | Multiplication and division (1)     | 10                |
|  | Measurement   | 6    | Measure – area and perimeter        | 7                 |
| Textbook B / Practice Book B<br>(Term 2) | Number – multiplication and division                    | 7    | Multiplication and division (2)     | 11                |
|  | Number – fractions (including decimals and percentages) | 8    | Fractions (1)                       | 8                 |
|  | Number – fractions (including decimals and percentages) | 9    | Fractions (2)                       | 12                |
|  | Number – fractions (including decimals and percentages) | 10   | Fractions (3)                       | 7                 |
|  | Number – fractions (including decimals and percentages) | 11   | Decimals and percentages            | 12                |
| Textbook C / Practice Book C<br>(Term 3) | Number – fractions (including decimals and percentages) | 12   | Decimals                            | 15                |
|  | Geometry – properties of shapes                         | 13   | Geometry – properties of shapes (1) | 7                 |
|  | Geometry – properties of shapes                         | 14   | Geometry – properties of shapes (2) | 5                 |
|  | Geometry – position and direction                       | 15   | Geometry – position and direction   | 4                 |
|  | Measurement   | 16   | Measure – converting units          | 10                |
|  | Measurement   | 17   | Measure – volume and capacity       | 4                 |

## Power Maths Year 5, Textbook 5A (Term I) Overview

| Strand 1                        | Strand 2 | Unit   |                            | Lesson number | Lesson title                              | NC Objective 1   | NC Objective 2  | NC Objective 3 |
|---------------------------------|----------|--------|----------------------------|---------------|---|--|---|----------------|
| Number – number and place value |          | Unit 1 | Place value within 100,000 | 1             | Numbers to 10,000                         | Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit | Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 |                |
| Number – number and place value |          | Unit 1 | Place value within 100,000 | 2             | Rounding to the nearest 10, 100 and 1,000 | Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000                 |   |                |
| Number – number and place value |          | Unit 1 | Place value within 100,000 | 3             | 10,000s, 1,000s, 100s, 10s and 1s (1)     | Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit |   |                |
| Number – number and place value |          | Unit 1 | Place value within 100,000 | 4             | 10,000s, 1,000s, 100s, 10s and 1s (2)     | Solve number problems and practical problems that involve all of the above                         |   |                |
| Number – number and place value |          | Unit 1 | Place value within 100,000 | 5             | The number line to 100,000                | Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit |   |                |
| Number – number and place value |          | Unit 1 | Place value within 100,000 | 6             | Comparing and ordering numbers to 100,000 | Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit |   |                |

| Strand 1                          | Strand 2 | Unit   |                              | Lesson number | Lesson title  | NC Objective 1   | NC Objective 2   | NC Objective 3 |
|-----------------------------------|----------|--------|------------------------------|---------------|---|--|--|----------------|
| Number – number and place value   |          | Unit 1 | Place value within 100,000   | 7             | Rounding numbers within 100,000                       | Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000   |  |                |
| Number – number and place value   |          | Unit 1 | Place value within 100,000   | 8             | Roman numerals to 10,000                              | Read roman numerals to 1,000 (m) and recognise years written in roman numerals   |  |                |
| Number – number and place value   |          | Unit 2 | Place value within 1,000,000 | 1             | 100,000s, 10,000s, 1,000s, 100s, 10s and 1s (1)       | Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit                                   |  |                |
| Number – number and place value   |          | Unit 2 | Place value within 1,000,000 | 2             | 100,000s, 10,000s, 1,000s, 100s, 10s and 1s (2)       | Solve number problems and practical problems that involve all of the above   |  |                |
| Number – number and place value   |          | Unit 2 | Place value within 1,000,000 | 3             | Number line to 1,000,000                              | Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit                                   |  |                |
| Number – number and place value   |          | Unit 2 | Place value within 1,000,000 | 4             | Comparing and ordering numbers to 1,000,000           | Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit                                   |  |                |
| Number – number and place value   |          | Unit 2 | Place value within 1,000,000 | 5             | Rounding numbers to a 1,000,000                       | Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000   |  |                |
| Number – number and place value   |          | Unit 2 | Place value within 1,000,000 | 6             | Negative numbers                                      | Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero |  |                |
| Number – number and place value   |          | Unit 2 | Place value within 1,000,000 | 7             | Counting in 10s, 100s, 1,000s, 10,000s                | Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000  |  |                |
| Number – number and place value   |          | Unit 2 | Place value within 1,000,000 | 8             | Number sequences                                      | Solve number problems and practical problems that involve all of the above   |  |                |
| Number – addition and subtraction |          | Unit 3 | Addition and subtraction     | 1             | Adding whole numbers with more than 4 digits (1)      | Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)   |  |                |
| Number – addition and subtraction |          | Unit 3 | Addition and subtraction     | 2             | Adding whole numbers with more than 4 digits (2)      | Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)   |  |                |
| Number – addition and subtraction |          | Unit 3 | Addition and subtraction     | 3             | Subtracting whole numbers with more than 4 digits (1) | Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)   |  |                |
| Number – addition and subtraction |          | Unit 3 | Addition and subtraction     | 4             | Subtracting whole numbers with more than 4 digits (2) | Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)   |  |                |
| Number – addition and subtraction |          | Unit 3 | Addition and subtraction     | 5             | Using rounding to estimate and check answers          | Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy                         |  |                |
| Number – addition and subtraction |          | Unit 3 | Addition and subtraction     | 6             | Mental addition and subtraction (1)                   | Add and subtract numbers mentally with increasingly large numbers  |  |                |
| Number – addition and subtraction |          | Unit 3 | Addition and subtraction     | 7             | Mental addition and subtraction (2)                   | Add and subtract numbers mentally with increasingly large numbers  | Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why |                |

| Strand 1                             | Strand 2 | Unit   |                                 | Lesson number | Lesson title                                   | NC Objective 1   | NC Objective 2   | NC Objective 3   |
|--------------------------------------|----------|--------|---------------------------------|---------------|--|--|--|--|
| Number – addition and subtraction    |          | Unit 3 | Addition and subtraction        | 8             | Using inverse operations                       | Estimate and use inverse operations to check answers to a calculation  |  |  |
| Number – addition and subtraction    |          | Unit 3 | Addition and subtraction        | 9             | Problem solving – addition and subtraction (1) | Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why             |  |  |
| Number – addition and subtraction    |          | Unit 3 | Addition and subtraction        | 10            | Problem solving – addition and subtraction (2) | Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why             |  |  |
| Statistics                           |          | Unit 4 | Graphs and tables               | 1             | Interpreting tables                            | Complete, read and interpret information in tables, including timetables   |  |  |
| Statistics                           |          | Unit 4 | Graphs and tables               | 2             | Two-way tables                                 | Complete, read and interpret information in tables, including timetables   |  |  |
| Statistics                           |          | Unit 4 | Graphs and tables               | 3             | Interpreting line graphs (1)                   | Solve comparison, sum and difference problems using information presented in a line graph  |  |  |
| Statistics                           |          | Unit 4 | Graphs and tables               | 4             | Interpreting line graphs (2)                   | Solve comparison, sum and difference problems using information presented in a line graph  |  |  |
| Statistics                           |          | Unit 4 | Graphs and tables               | 5             | Drawing line graphs                            | Solve comparison, sum and difference problems using information presented in a line graph  |  |  |
| Number – multiplication and division |          | Unit 5 | Multiplication and division (1) | 1             | Multiples                                      | Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers                | Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes |  |
| Number – multiplication and division |          | Unit 5 | Multiplication and division (1) | 2             | Factors  | Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers                |  |  |
| Number – multiplication and division |          | Unit 5 | Multiplication and division (1) | 3             | Prime numbers                                  | Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers                                    | Establish whether a number up to 100 is prime and recall prime numbers up to 19  |  |
| Number – multiplication and division |          | Unit 5 | Multiplication and division (1) | 4             | Using factors                                  | Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes |  |  |
| Number – multiplication and division |          | Unit 5 | Multiplication and division (1) | 5             | Squares  | Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)                                | Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes |  |
| Number – multiplication and division |          | Unit 5 | Multiplication and division (1) | 6             | Cubes  | Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)                                | Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers                | Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes |
| Number – multiplication and division |          | Unit 5 | Multiplication and division (1) | 7             | Inverse operations                             | Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates  |  |  |

| Strand 1                             | Strand 2 | Unit   |                                 | Lesson number | Lesson title   | NC Objective 1  | NC Objective 2  | NC Objective 3 |
|--------------------------------------|----------|--------|---------------------------------|---------------|--|---|---|----------------|
| Number – multiplication and division |          | Unit 5 | Multiplication and division (1) | 8             | Multiplying whole numbers by 10, 100 and 1,000             | Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000   |   |                |
| Number – multiplication and division |          | Unit 5 | Multiplication and division (1) | 9             | Dividing whole numbers by 10, 100 and 1,000                | Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000   | Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates |                |
| Number – multiplication and division |          | Unit 5 | Multiplication and division (1) | 10            | Multiplying and dividing by multiples of 10, 100 and 1,000 | Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000   |   |                |
| Measurement                          |          | Unit 6 | Measure – area and perimeter    | 1             | Measuring perimeter  | Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres   |   |                |
| Measurement                          |          | Unit 6 | Measure – area and perimeter    | 2             | Calculating perimeter (1)                                  | Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres   |   |                |
| Measurement                          |          | Unit 6 | Measure – area and perimeter    | 3             | Calculating perimeter (2)                                  | Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres   |   |                |
| Measurement                          |          | Unit 6 | Measure – area and perimeter    | 4             | Calculating area (1)                                       | Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm <sup>2</sup> ) and square metres (m <sup>2</sup> ) and estimate the area of irregular shapes |   |                |
| Measurement                          |          | Unit 6 | Measure – area and perimeter    | 5             | Calculating area (2)                                       | Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm <sup>2</sup> ) and square metres (m <sup>2</sup> ) and estimate the area of irregular shapes |   |                |
| Measurement                          |          | Unit 6 | Measure – area and perimeter    | 6             | Comparing area   | Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm <sup>2</sup> ) and square metres (m <sup>2</sup> ) and estimate the area of irregular shapes |   |                |
| Measurement                          |          | Unit 6 | Measure – area and perimeter    | 7             | Estimating area  | Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm <sup>2</sup> ) and square metres (m <sup>2</sup> ) and estimate the area of irregular shapes |   |                |

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| Textbook  | Strand  | Unit |                                     | Number of Lessons |
|---|---|------|-------------------------------------|-------------------|
| Textbook A /<br>Practice Book A<br><br>(Term 1) | Number – number and place value                         | 1    | Place value within 100,000          | 8                 |
|   | Number – number and place value                         | 2    | Place value within 1,000,000        | 8                 |
|   | Number – addition and subtraction                       | 3    | Addition and subtraction            | 10                |
|   | Statistics  | 4    | Graphs and tables                   | 5                 |
|   | Number – multiplication and division                    | 5    | Multiplication and division (1)     | 10                |
|   | Measurement   | 6    | Measure – area and perimeter        | 7                 |
| Textbook B /<br>Practice Book B<br><br>(Term 2) | Number – multiplication and division                    | 7    | Multiplication and division (2)     | 11                |
|   | Number – fractions (including decimals and percentages) | 8    | Fractions (1)                       | 8                 |
|   | Number – fractions (including decimals and percentages) | 9    | Fractions (2)                       | 12                |
|   | Number – fractions (including decimals and percentages) | 10   | Fractions (3)                       | 7                 |
|   | Number – fractions (including decimals and percentages) | 11   | Decimals and percentages            | 12                |
| Textbook C /<br>Practice Book C<br><br>(Term 3) | Number – fractions (including decimals and percentages) | 12   | Decimals                            | 15                |
|   | Geometry – properties of shapes                         | 13   | Geometry – properties of shapes (1) | 7                 |
|   | Geometry – properties of shapes                         | 14   | Geometry – properties of shapes (2) | 5                 |
|   | Geometry – position and direction                       | 15   | Geometry – position and direction   | 4                 |
|   | Measurement   | 16   | Measure – converting units          | 10                |
|   | Measurement   | 17   | Measure – volume and capacity       | 4                 |

## Power Maths Year 5, Textbook 5B (Term 2) Overview

| Strand 1                             | Unit   |                                 | Lesson number | Lesson title  | NC Objective 1   | NC Objective 2 |
|--------------------------------------|--------|---------------------------------|---------------|---|--|----------------|
| Number – multiplication and division | Unit 7 | Multiplication and division (2) | 1             | Multiplying numbers up to 4 digits by a 1-digit number  | 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             |                |
| Number – multiplication and division | Unit 7 | Multiplication and division (2) | 2             | Multiplying 2-digit numbers (1)                         | Multiply and divide numbers mentally drawing upon known facts  |                |
| Number – multiplication and division | Unit 7 | Multiplication and division (2) | 3             | Multiplying 2-digit numbers (2)                         | Multiply and divide numbers mentally drawing upon known facts  |                |
| Number – multiplication and division | Unit 7 | Multiplication and division (2) | 4             | Multiplying 2-digit numbers (3)                         | 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             |                |
| Number – multiplication and division | Unit 7 | Multiplication and division (2) | 5             | Multiplying a 3-digit number by a 2-digit number        | 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             |                |
| Number – multiplication and division | Unit 7 | Multiplication and division (2) | 6             | Multiplying a 4-digit number by a 2-digit number        | 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             |                |
| Number – multiplication and division | Unit 7 | Multiplication and division (2) | 7             | Dividing up to a 4-digit number by a 1-digit number (1) | 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 |                |
| Number – multiplication and division | Unit 7 | Multiplication and division (2) | 8             | Dividing up to a 4-digit number by a 1-digit number (2) | 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 |                |

| Strand 1  | Unit   |                                 | Lesson number | Lesson title   | NC Objective 1   | NC Objective 2   |
|---|--------|---------------------------------|---------------|--|--|--|
| Number – multiplication and division                    | Unit 7 | Multiplication and division (2) | 9             | Division with remainders (1)                               | 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   |  |
| Number – multiplication and division                    | Unit 7 | Multiplication and division (2) | 10            | Division with remainders (2)                               | 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   |  |
| Number – multiplication and division                    | Unit 7 | Multiplication and division (2) | 11            | Problem solving – division with remainders                 | 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   |  |
| Number – fractions (including decimals and percentages) | Unit 8 | Fractions (1)                   | 1             | Equivalent fractions                                       | Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths   |  |
| Number – fractions (including decimals and percentages) | Unit 8 | Fractions (1)                   | 2             | Converting improper fractions to mixed numbers             | 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |  |
| Number – fractions (including decimals and percentages) | Unit 8 | Fractions (1)                   | 3             | Converting mixed numbers to improper fractions             | 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |  |
| Number – fractions (including decimals and percentages) | Unit 8 | Fractions (1)                   | 4             | Number sequences   | Compare and order fractions whose denominators are all multiples of the same number  |  |
| Number – fractions (including decimals and percentages) | Unit 8 | Fractions (1)                   | 5             | Comparing and ordering fractions (1)                       | Compare and order fractions whose denominators are all multiples of the same number  |  |
| Number – fractions (including decimals and percentages) | Unit 8 | Fractions (1)                   | 6             | Comparing and ordering fractions (2)                       | 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 8 | Fractions (1)                   | 7             | Fractions as division (1)                                  | 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |  |
| Number – fractions (including decimals and percentages) | Unit 8 | Fractions (1)                   | 8             | Fractions as division (2)                                  | 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |  |
| Number – fractions (including decimals and percentages) | Unit 9 | Fractions (2)                   | 1             | Adding and subtracting fractions with the same denominator | Add and subtract fractions with the same denominator and denominators that are multiples of the same number  |  |
| Number – fractions (including decimals and percentages) | Unit 9 | Fractions (2)                   | 2             | Adding and subtracting fractions (1)                       | Add and subtract fractions with the same denominator and denominators that are multiples of the same number  |  |
| Number – fractions (including decimals and percentages) | Unit 9 | Fractions (2)                   | 3             | Adding and subtracting fractions (2)                       | Add and subtract fractions with the same denominator and denominators that are multiples of the same number  |  |
| Number – fractions (including decimals and percentages) | Unit 9 | Fractions (2)                   | 4             | Adding fractions (1)                                       | Add and subtract fractions with the same denominator and denominators that are 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 9 | Fractions (2)                   | 5             | Adding fractions (2)                                       | Add and subtract fractions with the same denominator and denominators that are 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |

| Strand 1  | Unit    |                          | Lesson number | Lesson title                              | NC Objective 1  | NC Objective 2   |
|---|---------|--------------------------|---------------|---|---|--|
| Number – fractions (including decimals and percentages) | Unit 9  | Fractions (2)            | 6             | Adding fractions (3)                      | Add and subtract fractions with the same denominator and denominators that are 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 9  | Fractions (2)            | 7             | Subtracting fractions (1)                 | Add and subtract fractions with the same denominator and denominators that are 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 9  | Fractions (2)            | 8             | Subtracting fractions (2)                 | Add and subtract fractions with the same denominator and denominators that are 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 9  | Fractions (2)            | 9             | Subtracting fractions (3)                 | Add and subtract fractions with the same denominator and denominators that are 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 9  | Fractions (2)            | 10            | Subtracting fractions (4)                 | Add and subtract fractions with the same denominator and denominators that are 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 9  | Fractions (2)            | 11            | Problem solving – mixed word problems (1) | Add and subtract fractions with the same denominator and denominators that are multiples of the same number |  |
| Number – fractions (including decimals and percentages) | Unit 9  | Fractions (2)            | 12            | Problem solving – mixed word problems (2) | Add and subtract fractions with the same denominator and denominators that are multiples of the same number |  |
| Number – fractions (including decimals and percentages) | Unit 10 | Fractions (3)            | 1             | Multiplying fractions (1)                 | 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 10 | Fractions (3)            | 2             | Multiplying fractions (2)                 | 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 10 | Fractions (3)            | 3             | Multiplying fractions (3)                 | 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 10 | Fractions (3)            | 4             | Multiplying fractions (4)                 | 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 10 | Fractions (3)            | 5             | Calculating fractions of amounts          | Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams           |  |
| Number – fractions (including decimals and percentages) | Unit 10 | Fractions (3)            | 6             | Using fractions as operators              | 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ ] |
| Number – fractions (including decimals and percentages) | Unit 10 | Fractions (3)            | 7             | Problem solving – mixed word problems     | Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams           |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 1             | Writing decimals (1)                      | Read, write, order and compare numbers with up to three decimal places                                      |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 2             | Writing decimals (2)                      | Read, write, order and compare numbers with up to three decimal places                                      |  |

| Strand 1  | Unit    |                          | Lesson number | Lesson title                                   | NC Objective 1  | NC Objective 2   |
|---|---------|--------------------------|---------------|--|---|--|
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 3             | Decimals as fractions (1)                      | Read and write decimal numbers as fractions [for example, $= \frac{71}{100}$ ]  |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 4             | Decimals as fractions (2)                      | Read and write decimal numbers as fractions [for example, $= \frac{71}{100}$ ]  |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 5             | Understanding thousandths                      | Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents   |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 6             | Writing thousandths as decimals                | Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents   |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 7             | Ordering and comparing decimals (1)            | Read, write, order and compare numbers with up to three decimal places  |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 8             | Ordering and comparing decimals (2)            | Read, write, order and compare numbers with up to three decimal places  |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 9             | Rounding decimals                              | Round decimals with two decimal places to the nearest whole number and to one decimal place   |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 10            | Understanding percentages                      | 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                           |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 11            | Percentages as fractions and decimals          | 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                           |  |
| Number – fractions (including decimals and percentages) | Unit 11 | Decimals and percentages | 12            | Equivalent fractions, decimals and percentages | Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 | Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths |



# Power Maths Year 5, yearly overview

| Textbook                                 | Strand  | Unit |                                     | Number of Lessons |
|--|---|------|-------------------------------------|-------------------|
|  |   | Unit | Unit                                |                   |
| Textbook A / Practice Book A<br>(Term 1) | Number – number and place value                         | 1    | Place value within 100,000          | 8                 |
|  | Number – number and place value                         | 2    | Place value within 1,000,000        | 8                 |
|  | Number – addition and subtraction                       | 3    | Addition and subtraction            | 10                |
|  | Statistics  | 4    | Graphs and tables                   | 5                 |
|  | Number – multiplication and division                    | 5    | Multiplication and division (1)     | 10                |
|  | Measurement   | 6    | Measure – area and perimeter        | 7                 |
| Textbook B / Practice Book B<br>(Term 2) | Number – multiplication and division                    | 7    | Multiplication and division (2)     | 11                |
|  | Number – fractions (including decimals and percentages) | 8    | Fractions (1)                       | 8                 |
|  | Number – fractions (including decimals and percentages) | 9    | Fractions (2)                       | 12                |
|  | Number – fractions (including decimals and percentages) | 10   | Fractions (3)                       | 7                 |
|  | Number – fractions (including decimals and percentages) | 11   | Decimals and percentages            | 12                |
| Textbook C / Practice Book C<br>(Term 3) | Number – fractions (including decimals and percentages) | 12   | Decimals                            | 15                |
|  | Geometry – properties of shapes                         | 13   | Geometry – properties of shapes (1) | 7                 |
|  | Geometry – properties of shapes                         | 14   | Geometry – properties of shapes (2) | 5                 |
|  | Geometry – position and direction                       | 15   | Geometry – position and direction   | 4                 |
|  | Measurement   | 16   | Measure – converting units          | 10                |
|  | Measurement   | 17   | Measure – volume and capacity       | 4                 |

## Power Maths Year 5, Textbook 5C (Term 3) Overview

| Strand 1  | Strand 2 | Unit    | Lesson number | Lesson title | NC Objective 1                      | NC Objective 2   | NC Objective 3 | NC Objective 3 |
|---|----------|---------|---------------|--------------|-------------------------------------|--|----------------|----------------|
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals      | 1            | Adding and subtracting decimals (1) | Solve problems involving number up to three decimal places |                |                |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals      | 2            | Adding and subtracting decimals (2) | Solve problems involving number up to three decimal places |                |                |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals      | 3            | Adding and subtracting decimals (3) | Solve problems involving number up to three decimal places |                |                |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals      | 4            | Adding and subtracting decimals (4) | Solve problems involving number up to three decimal places |                |                |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals      | 5            | Adding and subtracting decimals (5) | Solve problems involving number up to three decimal places |                |                |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals      | 6            | Adding and subtracting decimals (6) | Solve problems involving number up to three decimal places |                |                |

| Strand 1  | Strand 2 | Unit    | Lesson number                       | Lesson title | NC Objective 1                            | NC Objective 2   | NC Objective 3  | NC Objective 3                                     |
|---|----------|---------|-------------------------------------|--------------|---|--|---|--|
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals                            | 7            | Adding and subtracting decimals (7)       | Solve problems involving number up to three decimal places   |   |  |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals                            | 8            | Adding and subtracting decimals (8)       | Solve problems involving number up to three decimal places   |   |  |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals                            | 9            | Decimal sequences                         | Read, write, order and compare numbers with up to three decimal places   |   |  |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals                            | 10           | Problem solving – decimals (1)            | Solve problems involving number up to three decimal places   |   |  |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals                            | 11           | Problem solving – decimals (2)            | Solve problems involving number up to three decimal places   |   |  |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals                            | 12           | Multiplying decimals by 10                | Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents  | Solve problems involving number up to three decimal places                                |  |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals                            | 13           | Multiplying decimals by 10, 100 and 1,000 | Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents  | Solve problems involving number up to three decimal places                                |  |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals                            | 14           | Dividing decimals by 10                   | Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents  | Solve problems involving number up to three decimal places                                |  |
| Number – fractions (including decimals and percentages) |          | Unit 12 | Decimals                            | 15           | Dividing decimals by 10, 100 and 1,000    | Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents  | Solve problems involving number up to three decimal places                                |  |
| Geometry – properties of shapes                         |          | Unit 13 | Geometry – properties of shapes (1) | 1            | Measuring angles in degrees               | Identify:<br>–angles at a point and one whole turn (total 360°)<br>–angles at a point on a straight line and <stacked fraction> $\frac{1}{2}$ a turn (total 180°)<br>–other multiples of 90° | Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles |  |
| Geometry – properties of shapes                         |          | Unit 13 | Geometry – properties of shapes (1) | 2            | Measuring with a protractor (1)           | Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles  | Draw given angles, and measure them in degrees (°)  |  |
| Geometry – properties of shapes                         |          | Unit 13 | Geometry – properties of shapes (1) | 3            | Measuring with a protractor (2)           | Identify:<br>–angles at a point and one whole turn (total 360°)<br>–angles at a point on a straight line and <stacked fraction> $\frac{1}{2}$ a turn (total 180°)<br>–other multiples of 90° | Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles | Draw given angles, and measure them in degrees (°) |
| Geometry – properties of shapes                         |          | Unit 13 | Geometry – properties of shapes (1) | 4            | Drawing lines and angles accurately       | Draw given angles, and measure them in degrees (°)   |   |  |
| Geometry – properties of shapes                         |          | Unit 13 | Geometry – properties of shapes (1) | 5            | Calculating angles on a straight line     | Identify:<br>–angles at a point and one whole turn (total 360°)<br>–angles at a point on a straight line and <stacked fraction> $\frac{1}{2}$ a turn (total 180°)<br>–other multiples of 90° |   |  |
| Geometry – properties of shapes                         |          | Unit 13 | Geometry – properties of shapes (1) | 6            | Calculating angles around a point         | Identify:<br>–angles at a point and one whole turn (total 360°)<br>–angles at a point on a straight line and <stacked fraction> $\frac{1}{2}$ a turn (total 180°)<br>–other multiples of 90° |   |  |

| Strand 1                          | Strand 2 | Unit    | Lesson number                       | Lesson title | NC Objective 1                                   | NC Objective 2   | NC Objective 3   | NC Objective 3 |
|-----------------------------------|----------|---------|-------------------------------------|--------------|--|--|--|----------------|
| Geometry – properties of shapes   |          | Unit 13 | Geometry – properties of shapes (1) | 7            | Calculating lengths and angles in shapes         | Use the properties of rectangles to deduce related facts and find missing lengths and angles   |  |                |
| Geometry – properties of shapes   |          | Unit 14 | Geometry – properties of shapes (2) | 1            | Recognising and drawing parallel lines           | Use the properties of rectangles to deduce related facts and find missing lengths and angles   | Identify:<br>–angles at a point and one whole turn (total 360°)<br>–angles at a point on a straight line and <stacked fraction> $\frac{1}{2}$ a turn (total 180°)<br>–other multiples of 90° |                |
| Geometry – properties of shapes   |          | Unit 14 | Geometry – properties of shapes (2) | 2            | Recognising and drawing perpendicular lines      | Use the properties of rectangles to deduce related facts and find missing lengths and angles   | Identify:<br>–angles at a point and one whole turn (total 360°)<br>–angles at a point on a straight line and <stacked fraction> $\frac{1}{2}$ a turn (total 180°)<br>–other multiples of 90° |                |
| Geometry – properties of shapes   |          | Unit 14 | Geometry – properties of shapes (2) | 3            | Reasoning about parallel and perpendicular lines | Draw given angles, and measure them in degrees (o)   | Identify:<br>–angles at a point and one whole turn (total 360°)<br>–angles at a point on a straight line and <stacked fraction> $\frac{1}{2}$ a turn (total 180°)<br>–other multiples of 90° |                |
| Geometry – properties of shapes   |          | Unit 14 | Geometry – properties of shapes (2) | 4            | Regular and irregular polygons                   | Distinguish between regular and irregular polygons based on reasoning about equal sides and angles   |  |                |
| Geometry – properties of shapes   |          | Unit 14 | Geometry – properties of shapes (2) | 5            | Reasoning about 3D shapes                        | Identify 3D shapes, including cubes and other cuboids, from 2D representations   |  |                |
| Geometry – position and direction |          | Unit 15 | Geometry – position and direction   | 1            | Reflection                                       | 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        |  |                |
| Geometry – position and direction |          | Unit 15 | Geometry – position and direction   | 2            | Reflection with coordinates                      | 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        |  |                |
| Geometry – position and direction |          | Unit 15 | Geometry – position and direction   | 3            | Translation                                      | 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        |  |                |
| Geometry – position and direction |          | Unit 15 | Geometry – position and direction   | 4            | Translation with coordinates                     | 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        |  |                |
| Measurement                       |          | Unit 16 | Measure – converting units          | 1            | Metric units (1)                                 | Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) |  |                |
| Measurement                       |          | Unit 16 | Measure – converting units          | 2            | Metric units (2)                                 | Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) |  |                |
| Measurement                       |          | Unit 16 | Measure – converting units          | 3            | Metric units (3)                                 | Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling                               | Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)               |                |

| Strand 1    | Strand 2 | Unit    | Lesson number                 | Lesson title | NC Objective 1             | NC Objective 2   | NC Objective 3   | NC Objective 3 |
|-------------|----------|---------|-------------------------------|--------------|----------------------------|--|--|----------------|
| Measurement |          | Unit 16 | Measure – converting units    | 4            | Metric units (4)           | Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling | Convert between different units of metric measure (for example, kilometre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) |                |
| Measurement |          | Unit 16 | Measure – converting units    | 5            | Imperial units of length   | Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints                      |  |                |
| Measurement |          | Unit 16 | Measure – converting units    | 6            | Imperial units of mass     | Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints                      |  |                |
| Measurement |          | Unit 16 | Measure – converting units    | 7            | Imperial units of capacity | Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints                      |  |                |
| Measurement |          | Unit 16 | Measure – converting units    | 8            | Converting units of time   | Solve problems involving converting between units of time  |  |                |
| Measurement |          | Unit 16 | Measure – converting units    | 9            | Timetables                 | Solve problems involving converting between units of time  |  |                |
| Measurement |          | Unit 16 | Measure – converting units    | 10           | Problem solving – measure  | Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling |  |                |
| Measurement |          | Unit 17 | Measure – volume and capacity | 1            | What is volume?            | Estimate volume [for example, using 1 cm <sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]         |  |                |
| Measurement |          | Unit 17 | Measure – volume and capacity | 2            | Comparing volumes          | Estimate volume [for example, using 1 cm <sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]         |  |                |
| Measurement |          | Unit 17 | Measure – volume and capacity | 3            | Estimating volume          | Estimate volume [for example, using 1 cm <sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]         |  |                |
| Measurement |          | Unit 17 | Measure – volume and capacity | 4            | Estimating capacity        | Estimate volume [for example, using 1 cm <sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]         |  |                |