Year 5	Summer 1
Prior Learning	**Key Vocabulary**

Objectives:	**When else will objective be covered**
Number and Place Value	
1. Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	Core Objective
2. Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000	Autumn 1, Summer 2
3. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero	Autumn 2, Spring 2
4. Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000, 100,000	Core Objective
5. Solve number problems and practical problems that involve all of the above	Core Objective
Addition and Subtraction	
6. Add and subtract whole numbers with more than 4 digits, including using efficient methods (columnar addition and subtraction)	Core Objective
7. Add and subtract numbers mentally with increasingly large numbers	Core Objective
8. Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	Core Objective
9. Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why	Core Objective
Multiplication and Division	
10. Identify multiples and factors including finding all factor pairs	Core Objective
11. Solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors	Core Objective
12. Know and use the vocabulary of prime number, prime factors and composite (non-prime) numbers	Core Objective
13. Establish whether a number up to 100 is prime and recall prime numbers up to 19	Core Objective
14. Multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two digit numbers	Core Objective
15. Multiply and divide numbers mentally drawing upon known facts	Core Objective
16. Divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context	Core Objective
17. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	Core Objective
18. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equal sign	Core Objective
19. Solve problems involving multiplication and division	Core Objective
Fractions	
20. Recognise mixed numbers and improper fractions and convert from one form to the other	Spring 1, Summer 2
21. Add and subtract fractions with the same denominator and related fractions; write mathematical statements >1 as a mixed number (e.g. 2/5 + 4/5 = 6/5 = 1 1/5)	Spring 1, Summer 2
22. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Spring 1, Summer 2
Decimals and Fractions	
23. Read and write decimal numbers as fractions (e.g. 0.71 = 71/100)	Core Objective
24. Recognise and use thousandths and relate them to the tenths, hundredths and decimal equivalents	Spring 1
25. Read, write, order and compare numbers with up to three decimal places	Core Objective
26. Solve problems involving numbers up to three decimal places.	Core Objective

<u>Percentages, decimals and fractions</u> 27. 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 hundred, and as a decimal fraction	Core Objective
<u>Measures</u> 28. Convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre) 29. Understand and use basic equivalences between metric and common imperial units express them in approximate terms 30. Solve problems involving converting between units of time 31. Solve problems involving addition and subtraction of units of measure (e.g. length, mass, volume, money) using decimal notation.	Core Objective Core Objective Summer 1 Core Objective
<u>Data</u> 32. Solve comparison, sum and difference problems using information presented in line graph 33. Complete, read and interpret information in tables, including timetables.	Core Objective Core Objective

Year 5	Summer 2
Prior Learning	**Key Vocabulary**

Objectives:	**When else will objective be covered**
Number and Place Value	
1. Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	Core Objective
2. Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000	Autumn 1, Summer 1
3. Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000, 100,000	Core Objective
4. Solve number problems and practical problems that involve all of the above	Core Objective
Addition and Subtraction	
5. Add and subtract whole numbers with more than 4 digits, including using efficient methods (columnar addition and subtraction)	Core Objective
6. Add and subtract numbers mentally with increasingly large numbers	Core Objective
7. Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	Core Objective
8. Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why	Core Objective
Multiplication and Division	
9. Identify multiples and factors including finding all factor pairs	Core Objective
10. Solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors	Core Objective
11. Know and use the vocabulary of prime number, prime factors and composite (non-prime) numbers	Core Objective
12. Establish whether a number up to 100 is prime and recall prime numbers up to 19	Core Objective
13. Multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two digit numbers	Core Objective
14. Multiply and divide numbers mentally drawing upon known facts	Core Objective
15. Divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context	Core Objective
16. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	Core Objective
17. Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	Autumn 2, Spring 1
18. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equal sign	Core Objective
19. Solve problems involving multiplication and division	Autumn 2, Spring 1
20. Solve problems including scaling by simple fractions and problems involving simple rates	
Fractions	
21. Recognise mixed numbers and improper fractions and convert from one form to the other	Spring 1, Summer 1
22. Add and subtract fractions with the same denominator and related fractions; write mathematical statements >1 as a mixed number (e.g. 2/5 + 4/5 = 6/5 = 1 1/5)	Spring 1, Summer 1
23. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Spring 1, Summer 1

<u>Decimals and Fractions</u> 24. Read and write decimal numbers as fractions (e.g. 0.71 = 71/100) 25. Read, write, order and compare numbers with up to three decimal places 26. Solve problems involving numbers up to three decimal places.	 Core Objective Core Objective Core Objective
<u>Percentages, decimals and fractions</u> 27. 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 hundred, and as a decimal fraction	 Core Objective
<u>Measures</u> 28. Convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre) 29. Understand and use basic equivalences between metric and common imperial units express them in approximate terms 30. Solve problems involving converting between units of time 31. Solve problems involving addition and subtraction of units of measure (e.g. length, mass, volume, money) using decimal notation.	 Core Objective Core Objective Summer 1 Core Objective
<u>Geometry : properties of shapes</u> 32. Know angles are measured in degrees; estimate and measure them and draw a given angle, writing it size in degrees (^{o}) 33. Identify multiples of 90° 34. Identify angles at a point on a straight line and ½ a turn (total 180°) 35. Identify angles at a point and one whole turn (total 360°) 36. Identify reflex angles and compare different angles 37. Draw a shape using given dimensions and angles 38. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	 Spring 2 Spring 2 Spring 2 Spring 2 Spring 2 Spring 2
<u>Data</u> 39. Solve comparison, sum and difference problems using information presented in line graph 40. Complete, read and interpret information in tables, including timetables.	 Core Objective Core Objective