Maths Progression Map - KS2

	Y3	Y4	Y5	Y6
Autumn	Number – Number and place value Numbers to 1000	Number – Number and place value Numbers to 10 000	Number – Number and place value Numbers to 1 000 000	Number – Number and place value Numbers to 10 Million
	Ch1 (9) ▪ **Count from 0 in multiples of 100; find 10 or 100 more or less than a given number.** ▪ **Read and write numbers up to 1000 in numerals and in words.** ▪ **Recognise the place value of each digit in a 3-digit number (hundreds, tens, ones).** ▪ **Identify, represent and estimate numbers using different representations.** ▪ **Compare and order numbers up to 1000.** ▪ **Count from 0 in multiples of 50.** ▪ **Find 10 more or less than a given number.** ▪ **Find 100 more or 100 less than a given number.** ▪ **Count from 0 in multiples of 4 and 8.** ▪ **Solve number problems and practical problems involving number and place value.**	Ch1 (15) ▪ **Count in multiples of 25.** ▪ **Count in multiples of 1000.** ▪ **Order and compare numbers beyond 1000.** ▪ **Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens and ones).** ▪ **Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens and ones).** ▪ **Identify, represent and estimate numbers using different representations.** ▪ **Order and compare numbers beyond 1000.** ▪ **Identify, represent and estimate numbers using different representations.** ▪ **Find 1000 more or less than a given number.** ▪ **Count in multiples of 6, 7 and 9.** ▪ **Round any number to the nearest 10, 100 or 1000.** ▪ **Identify, represent and estimate numbers using different representations.**	Ch1 (13) ▪ **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.** ▪ **Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.**	Ch1 (8) ▪ **Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.** ▪ **Round any whole number to a required degree of accuracy.** ▪ **Solve number and practical problems that involve all of the above**
	● To be able to count in hundreds to 1000. ● To be able to count in hundreds, tens and ones. ● To be able to compare and order numbers up to 1000. ● To be able to count from 0 in multiples of 50. ● To be able to find 10 more or less than a given number using number patterns. ● To be able to find 100 more or less than a given number using number patterns. ● To be able to count in fours and eights. ● To be able to apply knowledge of numbers to solve problems.	● To be able to count in hundreds and twenty-fives. ● To be able to count in thousands. ● To be able to count in thousands, hundreds, tens and ones. ● To be able to understand and use place value to count. ● To be able to recognise the place value of each digit in a 4-digit number. ● To be able to compare and order numbers. ● To be able to compare and order 4-digit numbers. ● To be able to make number patterns (using 100, 10, 1 more and less).	● To be able to read and represent numbers to 100 000. ● To be able to read and represent numbers to 1 000 000. ● To be able to compare numbers to 1 000 000 using place value. ● To be able to compare numbers to 1 000 000 using pictorial representations and proportionality. ● To be able to compare numbers to 1 000 000 from pictorial representations, using lists and number lines.	● To be able to read and write numbers up to 10 000 000 ● To construct and record numbers to 10 000 000 ● To recognise the value of digits to 10 000 000 ● To be able to compare numbers up to 10 000 000 ● To be able to order numbers up to 10 000 000 ● To be able to round numbers up to 10 000 000 to the nearest million, hundred thousand and ten thousand.

		● To be able to make number patterns (4-digit numbers). ● To be able to count in sixes, sevens and nines. ● To be able to round numbers to the nearest 1000. ● To be able to round numbers to the nearest 10, 100 or 1000. ● To be able to round numbers to estimate. ● To be able to use knowledge of numbers to solve problems.	● To be able to make and identify patterns in numbers using knowledge of place value. ● To be able to make number patterns that decrease in multiples of 10 000 or 100 000. ● To be able to round numbers to the nearest 10 000 using number lines and bar graphs. ● To be able to round numbers to the nearest 100, 1000, 10 000 and 100 000 using number lines. ● To be able to apply knowledge of numbers to 1 000 000 to solve problems.	● To be able to round numbers up to 10 000 000. ● To be able to use knowledge of numbers to solve problems.
Autumn	Number Calculations – Addition and Subtraction	Number Calculations – Addition and Subtraction within 10 000	Number Calculations – Addition and Subtraction	Number Calculations – Four Operations on Whole Numbers

	Ch2 (24)
	
	▪ **Add and subtract numbers mentally, including**
	  ○ **a 3-digit number and ones.**
	  ○ **a 3-digit number and tens.**
	  ○ **a 3-digit number and hundreds.**
	▪ **Add numbers with up to 3 digits, using formal written methods of columnar addition.**
	▪ **Solve problems, including missing number problems, using number facts, place value and more complex addition.**
	▪ **Estimate the answer to a calculation.**
	▪ **Subtract numbers with up to 3 digits, using formal written methods of columnar subtraction.**
	▪ **Solve problems using number facts, place value and more complex subtraction.**
		Ch2 (18)
		
		▪ **Add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate.**
		▪ **Estimate and use inverse operations to check answers to a calculation.**
		▪ **Subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate.**
		▪ **Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.**
			Ch2 (12)
			
			▪ **Add and subtract whole numbers with more than 4 digits.**
			▪ **Add and subtract numbers mentally with increasingly large numbers.**
			▪ **Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.**
			▪ **Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).**
			▪ **Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.**
			▪ **Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.**
				Ch2 (23)
				
				▪ **Use their knowledge of the order of operations to carry out calculations involving the four operations.**
				▪ **Multiply multi-digit numbers up to 4 digits by a 2-digit whole number using the formal written method of long multiplication.**
				▪ **Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.**
				▪ **Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division.**
				▪ **Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.**
				▪ **Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.**
				▪ **Divide numbers up to 4 digits by a 2-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.**

				Solve problems involving addition, subtraction, multiplication and division.
	- To be able to understand the commutative law of addition and form a family of addition and subtraction facts. - To be able to add a 3-digit number to ones without renaming. - To be able to add a 3-digit number to multiples of 10 without renaming. - To be able to add a 3-digit number to multiples of 100 without renaming. - To be able to add two 3-digit numbers without regrouping, using the column method of addition. - To be able to add a 3-digit number to ones with renaming. - To be able to add a 3-digit number to multiples of 10 with renaming. - To be able to add two 3-digit numbers with renaming the ones. - To be able to add two 3-digit numbers with renaming the tens. - To be able to add two 3-digit numbers with renaming the ones and tens. - To be able to subtract ones from a 2-digit number without renaming. - To be able to subtract ones from a 3-digit number without renaming. - To be able to subtract multiples of 10 from a 3-digit number without renaming. - To be able to subtract multiples of 100 from a 3-digit number without renaming. - To be able to subtract two 3-digit numbers without renaming. - To be able to subtract from a 3-digit number with the regrouping of 1 ten into 10 ones. - To be able to subtract two 3-digit numbers with the regrouping of 1 hundred into 10 tens. - To be able to subtract two 3-digit numbers with renaming. - To be able to subtract from a multiple of 100 with renaming. - To be able to solve word problems using addition and subtraction.	- To be able to find the sum of two numbers. - To be able to add two numbers without renaming. - To be able to add two numbers with renaming in the ones column. - To be able to add two numbers with renaming in the tens and ones columns. - To be able to add two numbers with renaming in the hundreds, tens and ones columns. - To be able to add using mental strategies (making tens, hundreds and thousands). - To be able to add two numbers using mental strategies. - To be able to find the difference between two numbers. - To be able to subtract without renaming (using columnar subtraction). - To be able to subtract with renaming in the tens and ones columns. - To be able to subtract with renaming in the hundreds, tens and ones columns. - To be able to subtract with renaming in the thousands, hundreds, tens and ones columns. - To be able to subtract using mental strategies. - To be able to solve word problems involving addition and subtraction. - To be able to solve two-step word problems involving addition and subtraction. - To be able to use knowledge of addition and subtraction to solve problems.	- To be able to add using the 'counting on' strategy with concrete materials and number lines - To be able to subtract using the 'counting backwards' strategy with concrete materials. - Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). - To be able to add numbers within 1 000 000 using rounding and concrete materials. - To be able to use addition and subtraction to solve comparison problems with numbers to 1 000 000. - To be able to add numbers within 1 000 000 using the column method of addition. - To be able to add numbers within 1 000 000 using the column method of addition. - To be able to add and subtract using number bonds as a key strategy and numbers within 1 000 000. - To be able to consolidate and refine addition skills and place-value knowledge to solve addition problems. - To be able to subtract numbers to 1 000 000 using concrete materials, the column method and number bonds. - To be able to consolidate and refine subtraction skills and place-value knowledge to solve subtraction problems. - To be able to apply knowledge of addition and subtraction of whole numbers to solve problems.	- To be able to understand the order of operations to carry out calculations involving the four operations. - To be able to use knowledge of the order of operations to carry out calculations involving the four operations. - To be able to multiply numbers up to 4 digits by a multiple of 10. - To be able to multiply numbers up to 4 digits by a 2-digit whole number. - To be able to multiply numbers up to 4 digits by a 2-digit whole number. - To be able to divide numbers up to 4 digits by a 2-digit whole number. - Divide numbers up to 4 digits by a 2-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. - To be able to divide numbers up to 4 digits by a 2-digit whole number. - Divide numbers up to 4 digits by a 2-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. - To divide 3-digit numbers by 2-digit numbers giving rise to remainders; to use number bonds, long and short division as key strategies to solve division problems. - To be able to divide numbers up to 4 digits by a 2-digit whole number, with remainder. - To be able to use knowledge of the 4 operations of numbers to solve problems. - To be able to solve word problems involving addition, subtraction, multiplication and division.

	• To be able to solve 'more than' and 'fewer than' word problems using addition and subtraction. • To be able to apply knowledge of addition and subtraction to solve problems.		
Autumn				Number – Factors, Multiple and Prime Numbers
				▪ **Identify common factors, common multiples and prime numbers.**
				• To be able to identify common multiples. • To be able to identify common factors. • To be able to identify prime numbers
Autumn	Number Calculations – Multiplication and Division	Number Calculations – Multiplication and Division	Number Calculations – Multiplication and Division	Number – Fractions (including decimals and percentages) Number – Fractions (start A1)
	Ch3 (16) ▪ **Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.** ▪ **Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods.** ▪ **Solve problems, including missing number problems, involving multiplication.**	Ch3: (20) ▪ **Recall multiplication and division facts for multiplication tables up to 12 × 12.** ▪ **Recognise and use commutativity in mental calculations.** ▪ **Use place value, known and derived facts to multiply and divide mentally.** ▪ **Solve problems involving multiplication and addition.** ▪ **Use known and derived facts to multiply and divide mentally.** ▪ **Solve problems involving multiplication.**	Ch3 (20) ▪ **Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.** ▪ **Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.** ▪ **Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.** ▪ **Establish whether a number up to 100 is prime and recall prime numbers up to 19.** ▪ **Recognise and use square numbers and cube numbers, and the notation for squared ^{2} and cubed ^{3}.** ▪ **Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Multiply and divide numbers mentally drawing upon known facts.** ▪ **Multiply numbers up to 4 digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers.** ▪ **Multiply numbers up to 4 digits by a 1- or 2-digit number using a formal written method, including long multiplication for**	Ch3 (17) ▪ **Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.** ▪ **Compare and order fractions, including fractions greater than 1.** ▪ **Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.** ▪ **Multiply simple pairs of proper fractions, writing the answer in its simplest form (for example $1/4 \times 1/2 = 1/8$).** ▪ **Divide proper fractions by whole numbers (for example, $1/3 \div 2 = 1/6$).**

		2-digit numbers. Solve problems involving multiplication. ▪ **Multiply numbers up to 4 digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers. Multiply and divide numbers mentally drawing upon known facts. Solve problems involving multiplication.** ▪ **Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.** ▪ **Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context.** ▪ **Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context;** ▪ **Solve problems involving multiplication and division.**	
	● To be able to understand and learn the 3 times table. ● To be able to recall and use the 3 times table. ● To be able to understand and learn the 4 times table. ● To be able to recall and use the 4 times table. ● To be able to recognise the pattern in the 4 and 8 times tables. ● To be able to recall and use the 8 times table. ● To be able to recall and use the 8 times table. ● To be able to use the 3 times table for division. ● To be able to use the 4 times table for division. ● To be able to understand the relationship between multiplication and division. ● Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know. Solve problems, including missing	● To be able to multiply by 6. ● To be able to multiply by 7. ● To be able to multiply by 9. ● To be able to multiply by 9 using relational understanding. ● To be able to multiply by 11. ● To be able to multiply by 11 by counting in tens. ● To be able to multiply by 12. ● To be able to divide by 6. ● To be able to divide by 7. ● To be able to divide by 9. ● To be able to multiply and divide by 11 and 12. ● To be able to divide with a remainder. ● To be able to solve word problems involving multiplication and division. ● To be able to solve word problems involving multiplication and division. ● To be able to solve multi-step word problems involving multiplication and division (in the context of measures).	● To be able to consolidate and review multiplication; to be able to find the result of multiplying by a number. ● To be able to consolidate and review multiplication; to be able to find the factors of a given number. ● To be able to define and find common factors of numbers to 100. ● To be able to identify and name the prime numbers; to be able to recognise prime numbers as numbers that only have two factors. ● To be able to define and determine prime numbers to 100. ● To be able to create and determine square and cube numbers. ● To be able to multiply 1- and 2-digit numbers by 10, 100 and 1000. ● To be able to multiply 2- and 3-digit numbers by a 1-digit number using multiple strategies. ● To be able to multiply 4-digit numbers by 1-digit numbers.	● To be able to use common factors to simplify fractions. ● To be able to compare and order fractions. ● To be able to compare and order fractions, including fractions greater than 1. ● To be able to add and subtract fractions with different denominators. ● To be able to add and subtract fractions with different denominators and mixed numbers. ● To be able to multiply simple pairs of proper fractions and write the answer in its simplest form. ● To be able to divide fractions by whole numbers. ● To be able to use knowledge of fractions to solve problems.

	number problems, involving multiplication and division. ● To be able to divide by 4 and 8. ● Solve problems, including missing number problems, involving multiplication. ● To be able to solve word problems involving multiplication. ● Solve problems, including missing number problems, involving division. ● To be able to solve word problems involving division. ● Solve problems, including missing number problems, involving multiplication and division. ● To be able to solve word problems involving multiplication and division. ● To be able to solve problems using a variety of strategies. ● To be able to use knowledge of multiplication and division to solve problems.	● To be able to solve word problems involving multiplication and division (all possibilities). ● To be able to solve multi-step word problems involving multiplication and division. ● To be able to solve word problems involving multiplication and division (scaling and comparison). ● To be able to use knowledge of multiplication and division to solve problems.	● To be able to multiply 4-digit numbers by 1-digit numbers with regrouping, using a variety of strategies. ● To be able to multiply a 4-digit number by a 1-digit number, with regrouping from the ones, tens and hundreds, using multiple methods. ● To be able to multiply 2-digit numbers by 2-digit numbers using multiple methods. ● To be able to multiply a 2-digit number by a 2-digit number using multiple methods, including the grid method, number bonds and column method, with regrouping. ● To be able to multiply a 3-digit number by a 2-digit number, using the grid method and column method as key strategies. ● To be able to multiply a 3-digit number by a 2-digit number with regrouping, using the column method as the key strategy. ● To be able to find thousands, hundreds and tens in a 4-digit number using concrete materials. ● To be able to divide 3- and 4-digit numbers by 1-digit numbers, using number bonds and long division as the key methods. ● To be able to divide 4-digit numbers by 1-digit numbers, using number bonds and long division as the key methods. ● To be able to divide 3-digit numbers by 1-digit numbers, using long division, short division and mental methods that give rise to remainders. ● To be able to apply knowledge of multiplication and division of whole numbers to solve problems.	
Autumn	Number Calculations – Further Multiplication and Division	Number Calculations – Further Multiplication and Division	Number Calculations – Word problems	Number – fractions (including decimals and percentages) Number - Decimals
	Ch4 (12) ▪ **Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods.** ▪ **Solve problems, including missing number problems, involving multiplication.**	**Ch4 (19)** ▪ **Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1.** ▪ **Use place value, known and derived facts to multiply and divide mentally, including: dividing by 1.**	Ch4(5) ▪ **Solve problems involving multiplication and division.**	Ch4 (15) ▪ **Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.** ▪ **Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3⁄8].**

	▪ **Solve problems, including missing number problems, involving division.** ▪ **Solve problems, including missing number problems, involving multiplication and division.**	▪ **Recognise and use factor pairs and commutativity in mental calculations.** ▪ **Use place value, known and derived facts to mentally multiply and divide, including multiplying together three numbers.** ▪ **Multiply 2-digit and 3-digit numbers by a 1-digit number.** ▪ **Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout.** ▪ **Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1 digit.**		▪ **Use written division methods in instances where the answer has up to two decimal places.** ▪ **Multiply 1-digit numbers with up to two decimal places by whole numbers.**
	● To be able to multiply multiples of 10 by a 1-digit number. ● To be able to multiply a 2-digit number by a 1-digit number without regrouping. ● To be able to multiply a 2-digit number by a 1-digit number without regrouping, using the standard algorithm. ● To be able to multiply a 2-digit number by a 1-digit number with regrouping, using the standard algorithm. ● To be able to multiply a 2-digit number by a 1-digit number with regrouping, using the standard algorithm. ● To be able to divide a 2-digit number by a 1-digit number without regrouping. ● To be able to divide a 2-digit number by a 1-digit number with regrouping. ● To be able to divide a 2-digit number by a 1-digit number with regrouping, using the standard algorithm. ● To be able to solve word problems involving multiplication. ● To be able to solve word problems involving division. ● To be able to solve multi-step word problems involving division. ● To be able to use knowledge of multiplication and division to solve problems.	● To be able to multiply by 0 and 1. ● To be able to divide by 1. ● To be able to understand commutativity. ● To be able to multiply three numbers. ● To be able to multiply with multiples of 10. ● To be able to multiply 2-digit numbers without renaming. ● To be able to multiply 2-digit numbers with renaming. ● To be able to multiply multiples of 100. ● To be able to multiply 3-digit numbers without renaming. ● To be able to multiply 3-digit numbers with renaming. ● To be able to multiply 3-digit numbers with renaming. ● To be able to divide 2-digit numbers. ● To be able to divide 3-digit numbers. ● To be able to divide 2-digit numbers with a remainder. ● To be able to divide 3-digit numbers with renaming. ● To be able to divide 3-digit numbers with a remainder. ● To be able to solve word problems involving multiplication and division. ● To be able use knowledge of multiplication and division to solve problems.	● To be able to solve word problems involving multiple operations; to be able to identify the operation needed to carry out the plan. ● To be able to solve word problems involving multiplication and division using bar models as the main heuristic. ● To be able to solve word problems involving multiple operations, identifying key information and representing information using bar model diagrams. ● To be able to solve word problems involving multiple operations, using bar models as the main heuristic to represent key information. ● To be able to apply knowledge of whole numbers to solve problems.	● To be able to identify the value of each digit in numbers up to three decimal places. ● To be able to multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places. ● To be able to associate a fraction with division and calculate decimal fraction equivalents for a simple fraction. ● To be able to multiply 1-digit numbers with up to two decimal places by 1-digit whole numbers, without regrouping. ● To be able to multiply 1-digit numbers with up to two decimal places by 1-digit whole numbers, with regrouping. ● To be able to divide a 1-digit number with up to two decimal places by 1-digit whole numbers, without regrouping. ● To be able to divide a 1-digit number with up to two decimal places by 1-digit whole numbers, with regrouping. ● To be able to multiply 1-digit numbers with up to two decimal places by 2-digit whole numbers, with regrouping. ● To be able to divide a 1-digit number with up to two decimal places by 2-digit whole numbers. ● To be able to use knowledge of decimals to solve problems.
Autumn			Statistics - Graph	Measurement - Measurements
			Ch5 (8) ▪ **Complete, read and interpret information in tables, including timetables.**	Ch5 (7) ▪ **Use, read, write and convert between standard units, converting measurements of**

			Solve comparison, sum and difference problems using information presented in a line graph.	length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.
				▪ Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
			● To be able to read the information presented in a table and interpret its meaning. ● To be able to read and respond to information presented in a table. ● To be able to read and respond to tables that have a variety of data sets. ● To be able to read and interpret information provided in a line graph where a single line represents the data. ● To be able to read and interpret information presented on a line graph where the data is represented by more than one line. ● To be able to read and interpret information presented in a table and turn it into a line graph; to be able to determine relationships between data sets. ● To be able to apply knowledge of tables and line graphs to solve problems.	● To be able to convert between centimetres and millimetres. ● To be able to convert between centimetres and metres. ● To be able to convert between metres and kilometres. ● To be able to convert between grams and kilograms. ● To be able to convert between litres and millilitres. ● To be able to convert between seconds, minutes and hours. ● To be able to use knowledge of measurements to solve problems.
Spring	Measurement - Length	Number Calculations – Further Multiplication and Division (contd)	Number – Fractions (including decimals and percentages) Number - Fractions	Word Problems
	Ch5 (11) ▪ Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit, using rulers. ▪ Choose and use appropriate standard units to estimate and measure length/height in any direction to the nearest appropriate unit. ▪ Compare and order lengths. ▪ Add and subtract lengths.	**Ch4 (19)** ▪ **Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1.** ▪ **Use place value, known and derived facts to multiply and divide mentally, including: dividing by 1.** ▪ **Recognise and use factor pairs and commutativity in mental calculations.** ▪ **Use place value, known and derived facts to mentally multiply and divide, including multiplying together three numbers.**	Ch6 (19) ▪ **Recognise mixed numbers and improper fractions and convert from one form to the other.** ▪ **Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.** ▪ **Compare and order fractions whose denominators are all multiples of the same number.** ▪ **Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.**	Ch 6 (7) ▪ **Solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication and division facts.** ▪ **Solve problems involving similar shapes where the scale factor is known or can be found.** ▪ **Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.**

	▪ **Solve problems, including missing number problems, involving multiplication and division.** ▪ **Solve problems involving addition, subtraction, multiplication and division.**	▪ **Multiply 2-digit and 3-digit numbers by a 1-digit number.** ▪ **Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout.** ▪ **Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1 digit.**	▪ **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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$].** ▪ **Add and subtract fractions with the same denominator and denominators that are multiples of the same number.** ▪ **Add and subtract fractions with the same denominator and denominators that are multiples of the same number.** ▪ **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, 2⁄25 + 4⁄5 = 6⁄5 = 1 1⁄5].** ▪ **Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.** ▪ **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, 2⁄5 + 4⁄5 = 6⁄5 =1 1⁄5].** ▪ **Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.**	
	● To be able to read and write length and height in metres and centimetres. ● To be able to read and write length and height in centimetres. ● To be able to read and write length in metres.	● To be able to multiply by 0 and 1. ● To be able to divide by 1. ● To be able to understand commutativity. ● To be able to multiply three numbers. ● To be able to multiply with multiples of 10. ● To be able to multiply 2-digit numbers without renaming.	● To be able to divide whole numbers to create fractions; to be able to create mixed numbers and improper fractions when dividing whole numbers. ● To be able to write improper fractions and mixed numbers using a number line and pictorial methods.	● To be able to solve problems involving the 4 operations. ● To be able to solve problems involving fractions. ● Solve problems involving the calculation and conversion of units of measure, using

● To be able to read and write length in kilometres and metres. ● To be able to compare lengths. ● To be able to solve word problems involving addition and subtraction of lengths. ● To be able to solve word problems involving multiplication of lengths. ● To be able to solve word problems involving division of lengths. ● To be able to solve word problems on lengths, involving the 4 operations. ● To be able to use knowledge of length to solve problems. ●	● To be able to multiply 2-digit numbers with renaming. ● To be able to multiply multiples of 100. ● To be able to multiply 3-digit numbers without renaming. ● To be able to multiply 3-digit numbers with renaming. ● To be able to multiply 3-digit numbers with renaming. ● To be able to divide 2-digit numbers. ● To be able to divide 3-digit numbers. ● To be able to divide 2-digit numbers with a remainder. ● To be able to divide 3-digit numbers with renaming. ● To be able to divide 3-digit numbers with a remainder. ● To be able to solve word problems involving multiplication and division. ● To be able use knowledge of multiplication and division to solve problems.	● To be able to find equivalent fractions using pictorial methods. ● To be able to compare and order fractions using the pictorial method. ● To be able to compare and order improper fractions using the pictorial method. ● To be able to compare mixed numbers using pictorial representations; to be able to find common denominators where one fraction is already the common denominator for all fractions in the question. ● To be able to make number pairs (number bonds) with fractions with different denominators. ● To be able to add unlike fractions by finding a common denominator using pictorial methods. ● To be able to add unlike fractions where the sum is greater than 1, creating mixed numbers or improper fractions. ● To be able to add unlike fractions, which create improper fractions and mixed numbers that give rise to simplification. ● To be able to subtract fractions with different denominators; to be able to subtract fractions from whole numbers. ● To be able to subtract fractions where the denominators are not the same; to be able to use bar models as a key strategy for subtracting fractions. ● To be able to subtract fractions and mixed numbers from mixed numbers with different denominators. ● To be able to multiply fractions by whole numbers creating other fractions, mixed numbers or improper fractions. ● To be able to multiply fractions by whole numbers where the product is an improper fraction or mixed number. ● To be able to multiply mixed numbers by whole numbers, creating larger mixed numbers. ● To be able to multiply mixed numbers by whole numbers in multi-step word problems. ● To be able to apply knowledge of fractions to solve problems.	decimal notation up to three decimal places where appropriate. ● Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. ● To be able to use knowledge of problem solving to solve complex problems and tasks.

Spring	Measurement - Mass	Statistics - Graph		Number – Fractions (including decimals and percentages) Number - Percentage
	Ch6 (8) - **Measure, compare, add and subtract mass (kg/g).** - **Add and subtract mass.** - **Measure, compare, add and subtract mass (kg/g).** - **Solve problems involving multiplication and division.**	Ch5 (6) - **Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts.** - **Solve comparison problems using information presented in bar charts.**		Ch7 (5) - **Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison.** - **Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.**
	• To be able to read weighing scales to determine mass in grams or kilograms. • To be able to read weighing scales to determine mass in grams. • To be able to read weighing scales to determine mass in kilograms. • To be able to solve word problems involving addition and subtraction of mass. • To be able to solve word problems involving multiplication of mass. • To be able to solve word problems involving division of mass. • To be able to use knowledge of mass to solve problems.	• To be able to draw and read picture graphs and bar graphs. • To be able to draw and read bar graphs. • To be able to draw and read line graphs. • To be able to draw and read line graphs. • To be able to use knowledge of graphs to solve problems.		• To be able to calculate percentages of a whole number. • To be able to calculate percentages of a quantity. • To be able to solve problems involving the calculation of percentages. • To be able to use percentage for comparison. To be able to use equivalences between simple fractions, decimals and percentages in different contexts. • To be able to use knowledge of percentage to solve problems.
Spring	Measurement - Volume	Number – Fractions (including decimals) Number - Fractions		Ratio and proportion Number - Ratio
	Ch7 (11) - **Measure, compare, add and subtract volume (l/ml).** - **Measure, compare, add and subtract capacity (l/ml).** - **Measure, compare, add and subtract volume/capacity (l/ml).** - **Add and subtract volume/capacity (l/ml).** - **Measure, compare, add and subtract volume/capacity (l/ml).**	Ch6 (14) - **Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and by dividing tenths by 10.** - **Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.** - **Recognise and show families of common equivalent fractions using diagrams.**		Ch8 (10) - **Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.** - **Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.**

	▪ **Measure, compare, add and subtract volume/capacity (l/ml). Solve problems involving multiplication and division.**	▪ **Recognise and show, using diagrams, families of common equivalent fractions.** ▪ **Add fractions with the same denominator.** ▪ **Subtract fractions with the same denominator.** ▪ **Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.**		
	• To be able to measure volume in millilitres. • To be able to measure capacity in millilitres. • To be able to measure volume in millilitres and litres. • To be able to measure capacity in millilitres and litres. • To be able to add and subtract volume. • To be able to read and write volume in litres and millilitres. • To be able to solve word problems involving addition and subtraction of volume. • To be able to solve word problems involving multiplication and division of volume. • To be able to solve multi-step word problems involving multiplication and division of volume. • To be able to use knowledge of volume and capacity to solve problems.	• To be able to count in hundredths. • To be able to write mixed numbers. • To be able to show mixed numbers on a number line. • To find equivalent fractions. • To be able to find equivalent fractions (further practise). • To be able to simplify mixed numbers. • To be able to simplify improper fractions. • To be able to add fractions with the same denominator. • To be able to add fractions with the same denominator and record answers as mixed numbers. • To be able to add fractions with the same denominator and record the answers in the simplest form. • To be able to subtract fractions with the same denominator. • To be able to subtract a fraction from a whole number. • To be able to subtract a fraction from a mixed number. • Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. • To be able to solve word problems involving fractions. • To be able to use knowledge of fractions to solve problems.		• To be able to use ratio to compare two quantities. • To be able to use ratio to compare quantities. • To be able to solve problems involving ratio. To be able to use knowledge of ratio to solve problems.
Spring				Algebra
				Ch9 (11)

				Generate and describe linear number sequences. **Express missing number problems algebraically.** **Use simple formulae.** **Enumerate possibilities of combinations of two variables.** **Find pairs of numbers that satisfy an equation with two unknowns.**
				- To be able to generate and describe number patterns. - To be able to generate and describe number patterns. - To be able to express a missing number algebraically. - To be able to express a missing number algebraically. - To be able to express missing number problems algebraically. - To be able to use simple formulae. - To be able to use simple formulae. - Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables. Use simple formulae. - To be able to find pairs of numbers that satisfy an equation with two unknowns, and list all the possible combinations for the two unknowns. - To be able to use knowledge of algebra to solve problems.
Spring				Measurement – Area and Perimeter
				Ch10 (7) **Calculate the area of parallelograms and triangles.** **Recognise that shapes with the same areas can have different perimeters and vice versa.** **Recognise when it is possible to use formulae for area and volume of shapes.**
				To be able to recognise that shapes with the same areas can have different perimeters and vice versa. To be able to use

			formulae for the area and perimeter of rectangles. ● To be able to calculate the area of parallelograms. To be able to calculate the area of triangles. ● To be able to calculate the area of triangles using a formula. ● To be able to calculate the area of parallelograms using a formula. ● To be able to use knowledge of area and perimeter to solve problems.
Spring	**Measurement - Money**	**Measurement - Time**	**Number – Fractions (including decimals and percentages)** **Number - Decimals**	**Measurement – Volume**

	Ch8 (15) ▪ **Add and subtract amounts of money to give change, using both pounds and pence in practical contexts.**	Ch7 (7) ▪ **Read, write and convert time between analogue and digital 12-hour and 24-hour clocks.** ▪ **Convert between different units of measure.** **Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.**	Ch7 (16) ▪ **Read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$].].** ▪ **Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.** ▪ **Read, write, order and compare numbers with up to three decimal places.** ▪ **.Solve problems involving numbers up to three decimal places.** ▪ **Round decimals with two decimal places to the nearest whole number and to one decimal place.**	Ch11 (6) ▪ **Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³).** ▪ **Recognise when it is possible to use formulae for area and volume of shapes.** ▪ **Use, read, write and convert between standard units, converting measurements of volume from a smaller unit of measure to a larger unit, and vice versa.**
	● To be able to add money by counting on. ● To be able to add pence to make 1 pound. ● To be able to add different combinations of coins to make an amount. ● To be able to add pounds and pence without renaming. ● To be able to add pounds and pence with renaming. ● To be able to subtract pounds and pence without renaming. ● To be able to subtract pounds and pence with renaming. ● To be able to solve word problems involving addition and subtraction of money.	● To be able to tell the time on a 24-hour clock. ● To be able to convert time in minutes to seconds. ● To be able to convert time in hours to minutes. ● To be able to solve word problems involving duration of time. ● To be able to convert years to months and weeks to days. ● To be able to solve word problems involving duration of time and conversion. ● To be able to use knowledge of time to solve problems.	● To be able to write decimal numbers. ● To be able to compare tenths and hundredths written as decimals. ● To be able to order and compare decimals. ● To be able to compare and order decimals of amounts. ● To be able to write fractions as decimals. ● To be able to add and subtract amounts in decimals. ● To be able to add and subtract amounts in pounds and pence. ● To be able to add and subtract decimals to find the smallest possible sum and difference. ● To be able to add and subtract decimals. To find number pairs that add up to 1.	● To be able to find the volume of cubes and cuboids. ● To be able to estimate the volume of cubes and cuboids, and calculate volume using a formula. ● To be able to calculate, estimate and compare the volume of cubes and cuboids. ● To be able to use knowledge of volume to solve problems.

	● To be able to solve multi-step word problems involving addition and subtraction of money. ● To be able to use knowledge of money to solve problems.		● To be able to add and subtract the perimeter of an object using decimals. ● To be able to round decimals to the nearest whole number. To be able to round numbers to the nearest tenth. ● To be able to apply knowledge of decimals to solve problems.	
Spring		**Number – Fractions (including decimals)** **Number - Decimals**	**Number – Fractions (including decimals and percentages)** **Number - Percentage**	**Geometry – Properties of shapes** **Geometry**
		Ch8 (18) ▪ **Recognise and write decimal equivalents of any number of tenths or hundredths.** ▪ **Find the effect of dividing a 1- or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.** ▪ **Compare numbers with the same number of decimal places up to 2 decimal places.** ▪ **Round decimals with 1 decimal place to the nearest whole number.** ▪ **Recognise and write decimal equivalents to 1⁄4, 1⁄2, 3⁄4.** ▪ **Solve simple measure and money problems involving fractions and decimals.** ▪ **Solve simple measure and money problems involving fractions and decimals to 2 decimal points.**	Ch8 (4) ▪ **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.** ▪ **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.**	Ch12 (13) ▪ **Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.** ▪ **Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.** ▪ **Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.** ▪ **Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.** ▪ **Draw 2-D shapes using given dimensions and angles. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.** ▪ **Draw 2-D shapes using given dimensions and angles. Solve problems involving similar shapes where the scale factor is known or can be found.** ▪ **Recognise, describe and build simple 3-D shapes, including making nets.**
		● To be able to recognise and write decimal equivalents of any number of tenths. ● To be able to recognise and write decimal equivalents of any number of hundredths. ● To be able to read and write numbers as decimals.	● To be able to compare quantities. To be able to compare fractions, decimals and percentages. To be able to convert fractions to decimals and percentages. ● To be able to convert values of an amount into percentages.	● To be able to recognise vertically opposite angles and find missing angles. ● To be able to solve problems involving angles. ● To be able to find unknown angles in a triangle.

		To be able to compare and order numbers with the same number of decimal places up to 2 decimal places. • To be able to identify numbers, which are 1 tenth or 1 hundredth more/less in a number sequence. • To be able to round numbers with 1 decimal place to the nearest whole number. • To be able to recognise and write decimal equivalents to 1⁄4, 1⁄2, 3⁄4. • To be able to divide 1- or 2-digit numbers by 10. • To be able to divide 1- or 2-digit numbers by 100. • To be able to apply knowledge of decimal numbers to solve problems.	To be able to convert fractions into percentages. • To be able to apply knowledge of percentages to solve problems.	• To be able to find unknown angles in a quadrilateral. • To be able to solve problems involving angles in triangles, quadrilaterals and regular polygons. • To be able to name parts of circles and know that the diameter is twice the radius. • To be able to solve problems involving angles in a circle. • To be able to draw quadrilaterals using given dimensions. • To be able to draw triangles using given dimensions and angles. • To be able to solve problems involving similar shapes where the scale factor is known or can be found. • To be able to recognise and make nets for 3-D shapes. • To be able to use knowledge of angles and shapes to solve problems.
Spring	Measurement - Time		Geometry – Properties of shape Geometry - Angles	Geometry – Position and Movement
	Ch9 (21) • **Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight.** • **Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.** • **Record and compare time in terms of seconds, minutes and hours.** • **Compare durations of events [for example to calculate the time taken by particular events or tasks].** • **Know the number of seconds in a minute and the number of days in each month, year and leap year.**		Ch9 (14) • **Estimate and compare acute, obtuse and reflex angles.** • **Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.** • **Draw given angles, and measure them in degrees (º).** • **Identify angles at a point and one whole turn (total 360º); angles at a point on a straight line and 1⁄2 a turn (total 180º), and other multiples of 90º.** • **Use the properties of rectangles to deduce related facts and find missing lengths and angles.** • **Identify angles at a point and one whole turn (total 360º) and other multiples of 90º.** • **Identify angles at a point on a straight line and 1⁄2 a turn (total 180º), and other multiples of 90º.**	Ch13 (11) • **Use negative numbers in context, and calculate intervals across zero.** • **Describe positions on the full coordinate grid (all four quadrants).** • **Draw and translate simple shapes on the coordinate plane.** • **Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.** • **Describe positions on the full coordinate grid (all four quadrants).**

			▪ **Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.**	
	- To be able to tell time using a.m./p.m. - To be able to tell time to the minute. - To be able to tell time using vocabulary, such as o'clock, a.m/.p.m., morning, afternoon, past and half past. - To be able to tell time using both analogue and digital methods. - To be able to tell time to the minute using vocabulary, such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. - To be able to tell and write the time from 12-hour and 24-hour clocks. - To be able to tell the time on an analogue clock using Roman numerals. - To be able to measure and compare time in seconds. - To be able to measure time in seconds. - To be able to measure time in hours. - To be able to measure time in hours. - To be able to measure time in minutes. - To be able to convert minutes into seconds. - To be able to convert seconds into minutes. - To be able to find the number of days in each month, year and leap year. - To be able to find the duration in terms of number of days. - To be able to use the knowledge of time to solve problems.		- To be able to know the names and qualities of acute, right, obtuse and reflex angles. - To be able to measure angles using a protractor. - To be able to draw, measure and add angles using a protractor. - To be able to measure angles using a protractor. To be able to identify two angles which add up to 180º on a straight line. - To be able to investigate angles that, when combined, make 360º. - To be able to draw angles using a protractor. - To be able to draw lines and angles with a high level of accuracy. - To describe the sides and angles of both rectangles and squares. - To be able to investigate the angles of various quadrilaterals, including squares and rectangles. - To be able to solve problems involving angles in rectangles. - To be able to solve problems involving angles. - To be able to use knowledge of angles to solve problems. - To be able to investigate regular polygons. - To be able to apply knowledge of angles to solve problems.	- To be able to use negative numbers in context and calculate intervals across zero. - To be able to describe positions on a full coordinate grid. - To be able to draw simple shapes on a coordinate plane. - To be able to describe the translation of shapes on a coordinate grid. - To be able to reflect shapes in the axes. - To be able to describe the translation of shapes on a coordinate grid and reflect simple shapes in the axes. - To be able to describe the translation of shapes on a coordinate grid and reflect simple shapes in the axes using algebra. - To be able to describe positions on a full coordinate grid using algebra. - To be able to use knowledge of position and movement to solve problems.
Spring				Statistics – Graphs And Averages
				Ch14 (13) ▪ **Calculate and interpret the mean as an average.** ▪ **Interpret and construct pie charts and use these to solve problems.** ▪ **Interpret and construct pie charts and line graphs and use these to solve problems.** ▪ **Convert between miles and kilometres.**

			● To be able to calculate and interpret the mean as an average. ● To be able to solve problems involving the mean. ● To be able to show information on graphs, including pie charts. ● To be able to read and interpret pie charts. ● To be able to read and interpret pie charts. ● To be able to interpret pie charts and use these to solve problems. ● To be able to read and interpret line graphs. ● To be able to interpret line graphs and use these to solve problems. ● To be able to convert between miles and kilometres. ● To be able to convert between miles and kilometres.
Spring				**Number – Negative Numbers**
				Ch15 (3) ▪ **Use negative numbers in context, and calculate intervals across zero.** ▪ **Solve number and practical problems that involve negative numbers.**
				● To be able to use negative numbers in context, and calculate intervals across zero. ● To be able to use knowledge of negative numbers to solve problems
Summer	Statistics – Picture Graphs and Bar Graphs	Measurement Number - Money	Geometry – Position and Movement	Revisit Topics
	Ch10 (6) ▪ **Interpret and present data using bar charts, pictograms and tables.** ▪ **Interpret and present data using bar charts, pictograms and tables.** ▪ **Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.**	Ch9 (9) ▪ **Calculate different measures, including money in pounds and pence.** ▪ **Estimate, compare and calculate different measures, including money in pounds and pence.**	Ch10 (6) ▪ **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.**	
	● To be able to present data using picture graphs.	● To be able to write amounts of money as decimals. ● To be able to compare amounts of money.	● To be able to name and plot points. ● To be able to describe the position of a shape following a translation.	

	• To be able to interpret and present data using bar charts. • To be able to interpret and present data using scaled bar charts. • To be able to use knowledge of graphs to solve problems.	• To be able to round amounts of money to the nearest £1 and £10. • To be able to solve word problems involving addition and subtraction of money. • To be able to solve word problems involving multiplication of money. • To be able to solve word problems involving division of money. • To be able to estimate amounts of money. • To be able to use knowledge of money to solve problems.	• To be able to describe movements and reflecting shapes. • To be able to describe the movement of a 2-D shape when reflected. • To be able to reflect a shape more than once. • To be able to apply knowledge of position and movement.	
Summer	**Number - Fractions**	**Measurement – Mass, Volume and Length**	**Measurement - Measurements**	SATs
	Ch11 (31) ▪ **Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10.** ▪ **Add and subtract fractions with the same denominator within 1 whole (for example, 5⁄7 + 1⁄7= 6⁄7).** ▪ **Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.** ▪ **Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.** ▪ **Recognise and show, using diagrams, equivalent fractions with small denominators.** ▪ **Compare and order unit fractions, and fractions with the same denominators.** ▪ **Solve problems involving fractions.** ▪ **Solve word problems that involve fractions.**	Ch10 (13) ▪ **Convert between different units of measure. Estimate, compare and calculate different measures.** ▪ **Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.** ▪ **Convert between different units of measure.** ▪ **Convert between different units of measure [for example, kilometre to metre].** ▪ **Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Convert between different units of measure.** ▪ **Estimate, compare and calculate different measures.**	Ch11 (15) ▪ **Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).** ▪ **Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. 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). Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.** ▪ **Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.** ▪ **Solve problems involving converting between units of time.**	**Project**

			■ Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.	
	• To be able to count in tenths. • To be able to add fractions with the same denominator within 1 whole. • To be able to add fractions with the same denominator within 1 whole. • To be able to subtract fractions with the same denominator within 1 whole. • To be able to recognise and show equivalent fractions. • To be able to recognise and show equivalent fractions. • To be able to find equivalent fractions. • To be able to find the simplest form of a fraction. • To be able to find equivalent fractions using multiplication or division. • To be able to compare unit fractions. • To be able to compare fractions with the same denominator. • To be able to compare fractions with different denominators. • To be able to add fractions with the same denominator within 1 whole. • To be able to subtract fractions with the same denominators within 1 whole. • To be able to subtract a fraction from 1 whole. • To be able to recognise, find and write fractions of a discrete set of objects. • To be able to relate fractions to division. • To be able to solve word problems involving addition and subtraction of fractions with the same denominator. • To be able to solve word problems involving fractions. • To be able to solve word problems involving fractions and measurements. • To be able to use knowledge of fractions to solve problems.	• To be able to estimate mass to the nearest kilogram. • To be able to measure mass. • To be able to convert between different units of measure for mass. • To be able to measure volume in litres using decimals. • To be able to measure volume in litres using decimals. • To be able to convert different units of measure for volume. • To be able to measure height in metres using decimals. • To be able to measure length in centimetres. • To be able to convert between centimetres and metres. • To be able to convert between metres and kilometres. • To be able to measure perimeter in centimetres and millimetres and convert between the two units. • To be able to solve word problems involving measurements. • To be able to apply knowledge of mass, volume and length to solve problems	• To be able to convert units of length. • To be able to convert units of length, including centimetres and metres. • To be able to solve problems by converting units of length. • To be able to convert units of mass. • To be able to convert units of mass, including grams into kilograms. • To be able to convert units of mass. • To be able to convert units of mass, including kilograms and pounds. • To be able to convert units of time. • To be able to convert units of time from days into weeks. • To be able to solve problems by converting units of time. • To be able to read the temperature on a thermometer. • To be able to apply knowledge of measurements to solve problems.	
Summer		Measurement – Area of Figures		
		Ch11 (7)		

		▪ **Find the area of rectilinear shapes by counting squares.**	
		● To be able to measure the surface an object covers. ● To be able to find the area of rectilinear shapes by counting squares. ● To be able to use knowledge of area and perimeter to solve problems.	
Summer	**Geometry – Properties of shapes** **Geometry - Angles**	**Geometry – Properties of shapes** **Geometry - Angles**	**Measurement – Area and Perimeter**	**Maths Investigations**
	Ch12 (8) ▪ **Recognise angles as a property of shape or a description of a turn.** ▪ **Recognise angles as a property of shape or a description of a turn.** ▪ **Identify right angles.** ▪ **Recognise angles as a property of shape or a description of a turn.** ▪ **Identify right angles; identify whether angles are greater than or less than a right angle.** ▪ **Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn.**	Ch12 (11) ▪ **Identify acute and obtuse angles and compare and order angles up to two right angles by size.** ▪ **Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.** ▪ **Identify lines of symmetry in 2-D shapes presented in different orientations.** ▪ **Complete a simple symmetric figure with respect to a specific line of symmetry.**	Ch12 (12) ▪ **Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.** ▪ **Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes.** ▪ **Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.**	Maths in the real world - plan your own zoo.
	● To be able to recognise angles as a description of a turn. ● To be able to recognise angles as a property of shape. ● To be able to identify right angles. ● To be able to identify an acute angle as a smaller angle than a right angle. ● To be able to identify an obtuse angle as a greater angle than a right angle. ● To be able to identify right angles and recognise that two right angles make a half-turn, three make three-quarters of a turn and four a complete turn. ● To be able to use knowledge of angles to solve problems.	● To be able to identify right, acute and obtuse angles. ● To be able to compare and order angles by size. ● To be able to compare and classify triangles. ● To be able to compare and classify quadrilaterals. ● To be able to identify lines of symmetry in 2-D shapes. ● To be able to complete a simple symmetric figure with respect to a specific line of symmetry. ● Identify lines of symmetry in 2-D shapes presented in different orientations. ● To be able to draw a line of symmetry for a 2-D shape.	● To be able to find the perimeter of shapes. ● To be able to find shapes with a specific perimeter. ● To be able to find the perimeter of different shapes. ● To be able to use scale diagrams to find the perimeter of a shape. ● To be able to measure the area of shapes by counting squares. ● To be able to measure the area of squares. ● To be able to measure area in square metres. ● To be able to find the area of shapes in square metres. ● To be able to make an estimation of area in kilometres. ● To be able to apply knowledge of area and perimeter to solve problems.	

		• Complete a simple symmetric figure with respect to a specific line of symmetry. • To complete symmetrical figures. • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. • To be able to compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. • To be able to use knowledge of shapes to solve problems.		
Summer	**Geometry – Properties of shapes** **Geometry – Lines and Shapes**	**Geometry – Position and Movement**	**Measurement - Volume**	
	Ch13 (9) ▪ **Identify pairs of perpendicular and parallel lines.** ▪ **Identify horizontal and vertical lines.** ▪ **Draw 2-D shapes.** ▪ **Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.** ▪ **Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.** ▪ **Recognise 3-D shapes in different orientations and describe them.**	Ch13 (6) ▪ **Describe positions on a 2-D grid as coordinates in the first quadrant.** ▪ **Plot specified points and draw sides to complete a given polygon.** ▪ **Describe movements between positions as translations of a given unit to the left/right and up/down.**	Ch13 (11) ▪ **Estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water].** ▪ **Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.** ▪ **Use all four operations to solve problems involving measure [for example, length, mass, volume, money].** ▪ **Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).** ▪ **Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.**	
	• To be able to identify perpendicular lines. • To be able to identify parallel lines. • To be able to identify horizontal and vertical lines. • To be able to describe a 2-D shape using angle and side properties. • To be able to draw 2-D shapes. • To be able to make 3-D shapes. • To be able to describe 3-D shapes. • To be able to use knowledge of lines and shapes to solve problems.	• To be able to describe positions on a 2-D grid as coordinates in the first quadrant. • To be able to plot specified points and draw sides to complete a given polygon. • To be able to describe movements between positions as translations of a given unit to the left/right and up/down. • To be able to use knowledge of position and movement to solve problems.	• To be able to understand the volume of solids. • To be able to find the volume of 3-D shapes. • To be able to find the volume of solids. • To be able to find the capacity of a cuboid. • To be able to find the capacity of rectangular boxes. • To be able to compare and convert units of volume. • To be able to convert units of volume (metric and imperial).	

			- To be able to solve word problems involving volume. - To be able to apply knowledge of volume to solve problems.	
Summer	**Measurement – Perimeter of figures**	**Number and place value – Roman Numerals**	**Number – Roman Numerals**	
	Ch14 (11) ▪ **Measure the perimeter of simple 2-D shapes.**	Ch14 (3) ▪ **Read Roman numerals to 100 (I to C).** ▪ **Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.**	Ch14 (3) ▪ **Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.**	
	- To be able to measure the perimeter of 2-D shapes. - To be able to calculate the perimeter of 2-D shapes. - To be able to solve problems on perimeter. - To be able to use knowledge of perimeter to solve problems.	- To be able to write Roman numerals to 20. - To be able to write Roman numerals to 100. - To be able to use knowledge of Roman numerals to solve problems.	- To be able to write Roman numerals to 1000. - To be able to write numbers in their thousands in Roman numerals. - To be able to apply knowledge of Roman numerals to solve problems.	