Medium-term plan: autumn term 1st half

Year 6

Sequence and Theme	Weeks	Pages	Learning objectives Pupils should be taught to:	Notes/Resources/Teaching Activities
6.1 **NUMBER SENSE**	1–3	*Planning Framework p54*	**Number and place value** ● 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 **Fractions (including decimals and percentages)** ● 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 **Measurement** ● use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places ● convert between miles and kilometres.	
ASSESSMENT TASK 6.1		*Assessment Tasks Years 5 and 6 pp36–37*	**Success criteria** Pupils can represent and explain the multiplicative nature of the number system, understanding how to multiply and divide by 10, 100 and 1000. Pupils make appropriate decisions about when to use their understanding of counting, place value and rounding for solving problems including adding and subtracting.	TASK: Parcels for Posting USE WITH: Groups of 3

Medium-term plan: autumn term 1st half (cont.) Year 6

Sequence and Theme	Weeks	Pages	Learning objectives Pupils should be taught to:	Notes/Resources/Teaching Activities
6.2 **ADDITIVE REASONING**	4–6	*Planning Framework* p55	**Addition, subtraction, multiplication and division** ● perform mental calculations, including with mixed operations and large numbers ● use their knowledge of the order of operations to carry out calculations involving the four operations ● solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why ● solve problems involving addition, subtraction ● use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy **Fractions (including decimals and percentages)** ● solve problems which require answers to be rounded to specified degrees of accuracy **Algebra** ● use simple formulae ● generate and describe linear number sequences ● express missing number problems algebraically ● find pairs of numbers that satisfy an equation with two unknowns ● enumerate possibilities of combinations of two variables **Measurement** ● solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate ● *use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places* **Statistics** ● interpret and construct pie charts and line graphs and use these to solve problems.	
ASSESSMENT TASK 6.2		*Assessment Tasks Years 5 and 6* pp38–39	**Success criteria** Pupils can solve addition and subtraction problems in different contexts, appropriately choosing and using number facts, understanding of place value and mental and written methods. They can explain their decision making and justify their solutions and levels of accuracy.	TASK: The Greenhouse Effect USE WITH: Groups of 3

Medium-term plan: autumn term 2nd half

Year 6

Sequence and Theme	Weeks	Page	Learning objectives Pupils should be taught to:	Notes/Resources/Teaching Activities
6.3 **MULPLICATIVE REASONING**	7–9	*Planning Framework* p56	**Addition, subtraction, multiplication and division** ● multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication ● divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context ● divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context ● *perform mental calculations, including with mixed operations and large numbers* ● identify common factors, common multiples and prime numbers ● *use their knowledge of the order of operations to carry out calculations involving the four operations* ● *solve problems involving addition, subtraction, multiplication and division* ● *use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy* **Fractions (including decimals and percentages***)* ● multiply one-digit numbers with up to two decimal places by whole numbers ● use written division methods in cases where the answer has up to two decimal places **Ratio and proportion** ● solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison **Algebra** ● *use simple formulae* ● *generate and describe linear number sequences* ● *express missing number problems algebraically* ● *find pairs of numbers that satisfy an equation with two unknowns* ● *enumerate possibilities of combinations of two variables.* **Measurement** ● *solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate* ● *use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places* **Statistics** ● *interpret and construct pie charts and line graphs and use these to solve problems* ● calculate and interpret the mean as an average.	
ASSESSMENT TASK 6.3		*Assessment Tasks Years 5 and 6 pp40–41*	**Success criteria** **Pupils can solve problems involving multiplication and division and fractions and percentages in different contexts, appropriately choosing and using number facts, understanding of place value and mental and written methods. They can explain their decision making and justify their solutions.**	TASK: Swimming Success USE WITH: Groups of 3

Medium-term plan: autumn term 2nd half (cont.)　　　　　　　　　　　　**Year 6**

Sequence and Theme	Weeks	Page	Learning objectives Pupils should be taught to:	Notes/Resources/Teaching Activities
6.4 **GEOMETRIC REASONING**	10–11	*Planning Framework* p57	**Geometry: properties of shapes** ● draw 2-D shapes using given dimensions and angles ● recognise, describe and build simple 3-D shapes, including making nets ● 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 **Algebra** ● *use simple formulae* ● *express missing number problems algebraically* ● *find pairs of numbers that satisfy an equation with two unknowns* ● *enumerate possibilities of combinations of two variables* **Measurement** ● recognise that shapes with the same areas can have different perimeters and vice versa ● calculate the area of parallelograms and triangles ● recognise when it is possible to use the formulae for area and volume of shapes.	
ASSESSMENT TASK 6.4		*Assessment Tasks Years 5 and 6* pp42–43	**Success criteria** Pupils can use their understanding of angle and properties of shapes to solve problems.	TASK: Imagine a Shape USE WITH: Groups of 3

Medium-term plan: autumn term 2nd half (cont.)   **Year 6**

Sequence and Theme	Weeks	Page	Learning objectives Pupils should be taught to:	Notes/Resources/Teaching Activities
6.5 **NUMBER SENSE**	12–13	*Planning Framework p57*	**Number and place value** ● *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* ● <u>*use negative numbers in context, and calculate intervals across zero*</u> ● *solve number problems and practical problems that involve all of the above* **Fractions (including decimals and percentages)** ● *identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 given answers up to three decimal places* **Measurement** ● *use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places.*	
ASSESSMENT TASK 6.5		*Assessment Tasks Years 5 and 6 pp44–45*	**Success criteria** Pupils can make appropriate decisions about when to use their understanding of counting (including counting below zero), place value and rounding for solving problems including adding and subtracting.	TASK: Pumpkin Patch USE WITH: Groups of 3