Medium-term plan: spring term 1st half — Year 5

Sequence and Theme	Weeks	Page	Learning objectives Pupils should be taught to:	Notes/Resources/Teaching Activities
5.6 **ADDITIVE REASONING**	14–16	*Planning Framework* p47	**Addition and subtraction** ● *add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)* ● *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* ● *solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why* **Fractions (including decimals and percentages)** ● *solve problems involving number up to three decimal places* **Measurement** ● *use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling* ● *measure and calculate the perimeter* **Statistics** ● *solve comparison, sum and difference problems using information presented in a line graph* ● *complete, read and interpret information in tables, including timetables.*	
ASSESSMENT TASK 5.6		*Assessment Tasks Years 5 and 6* pp18–19	**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.	TASK: Weighing In USE WITH: Groups of 3

Medium-term plan: spring term 1st half (cont.) Year 5

Sequence and Theme	Weeks	Page	Learning objectives Pupils should be taught to:	Notes/Resources/Teaching Activities
5.7 **NUMBER SENSE**	17–18	*Planning Framework* p48	**Multiplication and division** ● *multiply and divide whole numbers and those involving decimals by 10, 100 and 1000* **Fractions (including decimals and percentages)** ● 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, ⅖ + ⅘ = ⅚ = 1⅕] ● *read and write decimal numbers as fractions [for example, 0.71 = 71/100]* ● *recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents* ● 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 ● identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths.	
ASSESSMENT TASK 5.7		*Assessment Tasks Years 5 and 6* pp20–21	**Success criteria** Pupils can represent and explain the relationship between decimals, fractions and percentages. They use this understanding to solve problems.	TASK: Hundredths and Thousandths USE WITH: Groups of 3

Medium-term plan: spring term 2nd half — Year 5

Sequence and Theme	Weeks	Page	Learning objectives Pupils should be taught to:	Notes/Resources/Teaching Activities
5.8 **MULTIPLICATIVE REASONING**	19-21	*Planning Framework* p49	**Multiplication and division** ● *identify multiples and factors, including finding all factor pairs* ● know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers ● *solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates* ● establish whether a number up to 100 is prime and recall prime numbers up to 19 ● *multiply numbers up to 4 digits by a one-digit number using a formal written method* ● *multiply and divide numbers mentally drawing upon known facts* ● *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* ● *multiply and divide whole numbers and those involving decimals by 10, 100 and 1000* ● 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* ● solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign **Fractions (including decimals and percentages)** ● solve problems which require knowing percentage and decimal equivalents of ½, ¼, ⅕, ⅖, ⅘ and those with a denominator of a multiple of 10 or 25 **Measurement** ● *use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling.*	
ASSESSMENT TASK 5.8		*Assessment Tasks Years 5 and 6* pp22–23	**Success criteria** Pupils can explain and show properties of prime, composite, square and cube numbers and explain factor pairs related to these sets of numbers. They understand and can explain the relationship between multiplication, division, fractions and percentages. They use this understanding to derive facts and solve problems.	TASK: Penguin Power USE WITH: Groups of 3

Medium-term plan: spring term 2nd half (cont.) Year 5

Sequence and Theme	Weeks	Page	Learning objectives Pupils should be taught to:	Notes/Resources/Teaching Activities
5.9 **GEOMETRIC REASONING**	22–23	*Planning Framework* p49	**Geometry: properties of shapes** ● *identify 3-D shapes, including cubes and other cuboids, from 2-D representations* ● *know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles* ● *draw given angles, and measure them in degrees (°)* ● *Identify:* – *angles at a point and one whole turn (total 360°)* – *angles at a point on a straight line and ½ a turn (total 180°)* – *other multiples of 90°* ● *use the properties of rectangles to deduce related facts and find missing lengths and angles* ● *distinguish between regular and irregular polygons based on reasoning about equal sides and angles* **Geometry: position and direction** ● 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.	
ASSESSMENT TASK 5.9		*Assessment Tasks Years 5 and 6* pp24–25	**Success criteria** Pupils can explain how to reflect and translate shapes on a grid in the first quadrant and use this knowledge and understanding to solve problems.	TASK: Transforming Triangles USE WITH: Groups of 3

Medium-term plan: spring term 2nd half (cont.) Year 5

Sequence and Theme	Weeks	Page	Learning objectives Pupils should be taught to:	Notes/Resources/Teaching Activities
5.10 **NUMBER SENSE**	24–25	*Planning Framework* p50	**Number and place value** ● *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* ● *interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero* ● *round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000* ● *solve number problems and practical problems that involve all of the above* **Multiplication and division** ● *multiply and divide whole numbers and those involving decimals by 10, 100 and 1000* **Fractions (including decimals and percentages)** ● *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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]* ● *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* ● *round decimals with two decimal places to the nearest whole number and to one decimal place* ● *read, write, order and compare numbers with up to three decimal places* ● *solve problems involving number up to three decimal places* **Measurement** ● *convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimeter and millimetre; kilogram and gram; litre and millilitre)* ● *solve problems involving converting between units of time.*	
ASSESSMENT TASK 5.10		*Assessment Tasks Years 5 and 6* pp26–27	**Success criteria** Pupils can use their understanding of the multiplicative nature of the number system to convert between different units of measures, using how to multiply and divide by 10, 100 and 1000. Pupils make appropriate decisions about when to use their understanding of counting (including in fractions), place value and rounding for solving problems including adding and subtracting.	TASK: Florida Fruit USE WITH: Groups of 3