

Mathematics Planning Framework

KEY Number Sense Additive Reasoning Multiplicative Reasoning Geometric Reasoning



| | YEAR 3 | 3 |
|----------------------|--|--|
| Sequence 1 | count from 0 in multiples of 100; find 10 or 100 more or less than a given number recognise the place value of each digit in a three-digit number (hundreds, tens, ones) compare and order numbers up to 1000 identify, represent and estimate numbers using different representations read and write numbers to at least 1000 in numerals and in words solve number problems and practical problems involving these ideas | |
| Sequence 2 | add and subtract numbers mentally, including: a three-digit number and ones a three-digit number and tens a three-digit number and hundreds add and subtract numbers with up to three digits estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) add and subtract amounts of money to give change, using both £ and p in practical contexts 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 |
| Sequence 3 | count from 0 in multiples of 4, 8, 50 and 100 recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables write and calculate mathematical statements for multiplication and division using the multiplication tables that they know solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which <i>n</i> objects are connected to <i>m</i> objects | |
| Sequence | draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them recognise that angles are a property of shape or a description of a turn identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. | |
| Sequence 5 | count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number recognise the place value of each digit in a three-digit number (hundreds, tens, ones) compare and order numbers up to 1000 identify, represent and estimate numbers using different representations read and write numbers up to 1000 in numerals and in words solve number problems and practical problems involving these ideas tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks | measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 |
| Sequence 6 | add and subtract numbers mentally, including: a three-digit number and ones a three-digit number and tens a three-digit number and hundreds add and subtract numbers with up to three digits estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) add and subtract amounts of money to give change, using both £ and p in practical contexts 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 |



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identify, represent and estimate numbers using different representations • count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 Sequence · recognise and use fractions as numbers: unit fractions and nonunit fractions with small denominators • add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] compare and order unit fractions with the same denominator · solve problems that involve all of the above count from 0 in multiples of 4, 8, 50 and 100 count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit recall and use multiplication and division facts for the 3, 4 and numbers or quantities by 10 8 multiplication tables recognise, find and write fractions of a discrete set of objects: Sequence · write and calculate mathematical statements for multiplication unit fractions and non-unit fractions with small denominators and division using the multiplication tables that they know, 8 · solve problems that involve all of the above including for two-digit numbers times one-digit numbers · solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects • draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them recognise that angles are a property of shape or a description Sequence · identify right angles, recognise that two right angles make a halfturn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • identify horizontal and vertical lines and pairs of perpendicular and parallel lines • count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes more or less than a given number and hours; use vocabulary such as o'clock, a.m./p.m., morning, · recognise the place value of each digit in a three-digit number afternoon, noon and midnight (hundreds, tens, ones) know the number of seconds in a minute and the number of compare and order numbers up to 1000 Sequence days in each month, year and leap year · identify, represent and estimate numbers using different compare durations of events [for example, to calculate the time representations taken by particular events or tasks] • read and write numbers up to 1000 in numerals and in words interpret and present data using bar charts, pictograms and solve number problems and practical problems involving these tables tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks · add and subtract numbers mentally, including: · know the number of seconds in a minute and the number of > a three-digit number and ones days in each month, year and leap year > a three-digit number and tens compare durations of events [for example, to calculate the time taken by particular events or tasks] > a three-digit number and hundreds interpret and present data using bar charts, pictograms and • add and subtract numbers with up to three digits using formal tables written methods of columnar addition and subtraction solve one-step and two-step questions [for example, 'How estimate the answer to a calculation and use inverse operations many more?' and 'How many fewer?'] using information Sequence to check answers presented in scaled bar charts and pictograms and tables solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • add and subtract amounts of money to give change, using both £ and p in practical contexts 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



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Sequence

- identify, represent and estimate numbers using different representations
- count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
- 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
- add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]
- compare and order unit fractions and fractions with the same denominator
- solve problems that involve all of the above

Sequence

- count from 0 in multiples of 4, 8, 50 and 100
- recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods
- solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects
- count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10

- · recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- solve problems that involve all of the above
- know the number of seconds in a minute and the number of days in each month, year and leap year

Sequence 14

- recognise that angles are a property of shape or a description of a turn
- · identify right angles, recognise that two right angles make a halfturn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a
- · identify horizontal and vertical lines and pairs of perpendicular and parallel lines
- measure the perimeter of simple 2-D shapes