## PlanBee. ${ }^{(9),}$ PlanBee Primary Maths Curriculum | Year 3 and Year 4

|  | Autumn Term Y3 | Autumn Term Y4 | Spring Term Y3 | Spring Term Y4 | Summer Term Y3 | Summer Term Y4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Week 1 | Understanding Place Value <br> - recognise the place value of each digit in a three-digit number (hundreds, tens, ones) <br> - compare and order numbers up to 1000 <br> - read and write numbers up to 1000 in numerals and in words <br> - solve number problems and practical problems involving these ideas <br> - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction <br> - count from 0 in multiples of 4, 8, 50 and 100 ; find 10 or 100 more or less than a given number | Place Value and <br> Ordering <br> - count in multiples of 6, <br> 7, 9, 25 and 1000 <br> - find 1000 more or less than a given number <br> - recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) <br> - order and compare numbers beyond 1000 <br> - 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 | Using Place Value <br> - recognise the place value of each digit in a three-digit number (hundreds, tens, ones) <br> - compare and order numbers up to 1000 <br> - read and write numbers up to 1000 in numerals and in words <br> - solve number problems and practical problems involving these ideas <br> - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | Comparing Numbers <br> - find 1000 more or less than a given number <br> - count backwards through zero to include negative numbers <br> - recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) <br> - order and compare numbers beyond 1000 <br> - identify, represent and estimate numbers using different representations <br> - solve number and practical problems that involve all of the above and with increasingly large positive numbers | Rounding and <br> Estimating <br> - recognise the place value of each digit in a three-digit number (hundreds, tens, ones) <br> - compare and order numbers up to 1000 <br> - identify, represent and estimate numbers using different representations | Rounding and Ordering Numbers <br> - count in multiples of 6, <br> 7, 9, 25 and 1000 <br> - recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) <br> - order and compare numbers beyond 1000 <br> - identify, represent and estimate numbers using different representations <br> - round any number to the nearest 10, 100 or 1000 <br> - solve number and practical problems that involve all of the above and with increasingly large positive numbers |


| Week <br> 2 | Investigating Number <br> Facts <br> - add and subtract numbers mentally, including: <br> - a three-digit number and ones <br> - a three-digit number and tens <br> - a three-digit number and hundreds <br> - estimate the answer to a calculation and use inverse operations to check answers <br> - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | Exploring Addition <br> - add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <br> - solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why | Doubling and Halving <br> - add and subtract numbers mentally, including a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds <br> - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | Methods of Addition <br> - add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <br> - estimate and use inverse operations to check answers to a calculation <br> - solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why | Knowing Number Facts <br> - count from 0 in <br> multiples of $4,8,50$ and 100; find 10 or 100 more or less than a given number <br> - add and subtract numbers mentally, including: <br> - a three-digit number and ones <br> - a three-digit number and tens <br> - a three-digit number and hundreds <br> - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | Using Addition and <br> Subtraction 1 <br> - add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <br> - estimate and use inverse operations to check answers to a calculation <br> - solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Week <br> 3 | Mental Addition <br> - add and subtract numbers mentally, including: <br> - a three-digit number and ones <br> - a three-digit number and tens <br> - a three-digit number and hundreds <br> - estimate the answer to <br> a calculation and use inverse operations to check answers <br> - solve problems, including missing | Seeing Doubles <br> - use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers - multiply two-digit and three-digit numbers by a one-digit number using formal written layout | Partition Addition <br> - add and subtract numbers mentally, including a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds <br> - estimate the answer to a calculation and use inverse operations to check answers <br> - solve problems, including missing number problems, using number facts, place | Methods of Subtraction <br> - add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <br> - solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why | Let's Add and Subtract <br> - add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction <br> - estimate the answer to a calculation and use inverse operations to check answers <br> - solve problems, including missing number problems, using number facts, place value, and more | Using Addition and Subtraction 2 <br> - add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <br> - estimate and use inverse operations to check answers to a calculation <br> - solve addition and subtraction two-step problems in contexts, |


|  | number problems, using number facts, place value, and more complex addition and subtraction <br> - add and subtract amounts of money to give change, using both f and p in practical contexts |  | value, and more complex addition and subtraction |  | complex addition and subtraction | deciding which operations and methods to use and why |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Week <br> 4 | Mental Subtraction <br> - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction <br> - add and subtract amounts of money to give change, using both £ and p in practical contexts | Exploring Subtraction <br> - add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <br> - estimate and use inverse operations to check answers to a calculation <br> - solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why | Solving Subtraction <br> - add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction <br> - solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction <br> - add and subtract numbers mentally, including: <br> - a three-digit number and ones <br> - a three-digit number and tens <br> - a three-digit number and hundreds | Shape Angles <br> - compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes <br> - identify acute and obtuse angles and compare and order angles up to two right angles by size <br> - identify lines of symmetry in 2-D shapes presented in different orientations <br> - complete a simple symmetric figure with respect to a specific line of symmetry | Using Times Tables <br> - recall and use <br> multiplication and division facts for the 3, 4 and 8 multiplication tables <br> - 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 <br> - solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which $n$ | Multiplying Doubles and Digits <br> - use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers <br> - multiply two-digit and three-digit numbers by a one-digit number using formal written layout <br> - recognise and use factor pairs and commutativity in mental calculations |


|  |  |  |  |  | objects are connected to m objects |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Week <br> 5 | 2D Shape <br> - measure the perimeter of simple 2-D shapes <br> - draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them | Properties of 2D Shapes <br> - measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres <br> - find the area of rectilinear shapes by counting squares <br> - compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes | Space and 3D Shape <br> - draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them | Measuring Weight <br> - convert between different units of measure <br> - estimate, compare and calculate different measures, including money in pounds and pence | Shapes and Angles <br> - draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them <br> - recognise angles as a property of shape or a description of a turn <br> - 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 <br> - identify horizontal and vertical lines and pairs of perpendicular and parallel lines | Position and Direction <br> - describe positions on a <br> 2-D grid as coordinates in the first quadrant <br> - describe movements between positions as translations of a given unit to the left/right and up/down <br> - plot specified points and draw sides to complete a given polygon <br> - interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs |
| Week <br> 6 | What is length? <br> - measure, compare, add and subtract: lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ) | Recording Length <br> - convert between different units of measure [for example, kilometre to metre; hour to minute] <br> - estimate, compare and calculate different measures, including money in pounds and pence | What is weight? <br> - measure, compare, add and subtract: mass (kg/g) | Presenting Data <br> - interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs <br> - solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs | Multiplication Problems <br> - recall and use <br> multiplication and division facts for the 3,4 and 8 multiplication tables <br> - write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, | Times Table Facts <br> - recall multiplication and division facts for multiplication tables up to $12 \times 12$ |


|  |  |  |  |  | including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods <br> - 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 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Week <br> 7 | Time <br> - tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24hour clocks <br> - 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, <br> a.m./p.m., morning, afternoon, noon and midnight <br> - know the number of seconds in a minute and the number of days in each month, year and | Data Handling <br> - interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs <br> - solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs | Organising Data <br> - interpret and present data using bar charts, pictograms and tables - solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables | Using Multiplication and Division <br> - recall multiplication and division facts for multiplication tables up to $12 \times 12$ <br> - use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers | Clock Watching <br> - tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 -hour and 24hour clocks <br> - estimate and read time with increasing accuracy to the nearest minute; record and <br> - compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight <br> - know the number of seconds in a minute and the number of days in each month, year and | Dividing and <br> Multiplying <br> - recall multiplication and division facts for multiplication tables up to $12 \times 12$ <br> - use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers <br> - recognise and use factor pairs and commutativity in mental calculations <br> - solve problems involving multiplying and adding, including using the distributive |


|  | leap year <br> - compare durations of events |  |  |  | leap year <br> - compare durations of events | law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Week <br> 8 | Multiplication Facts <br> - recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables <br> - 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 | Multiplication and Division Facts <br> - count in multiples of 6 , <br> 7, 9, 25 and 1000 <br> - recall multiplication and division facts for multiplication tables up to $12 \times 12$ <br> - use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers <br> - solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects | Linking Multiplication <br> and Division <br> - recall and use <br> multiplication and division facts for the 3,4 and 8 multiplication tables <br> - 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 <br> - 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 | Multiplication and Division Methods <br> - recall multiplication and division facts for multiplication tables up to $12 \times 12$ <br> - multiply two-digit and three-digit numbers by a one-digit number using formal written layout <br> - use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers | What is Capacity? <br> - measure, compare, add and subtract: volume/capacity (l/ml) | Measuring Capacity <br> - convert between different units of measure [for example, kilometre to metre; hour to minute] <br> - estimate, compare and calculate different measures, including money in pounds and pence |


| Week <br> 9 | Multiplying and <br> Dividing <br> - recall and use <br> multiplication and <br> division facts for the 3,4 <br> and 8 multiplication <br> tables <br> - write and calculate <br> mathematical <br> statements for <br> multiplication and <br> division using the <br> multiplication tables <br> that they know, <br> including for two-digit <br> numbers times one-digit <br> numbers, using mental <br> and progressing to <br> formal written methods <br> - solve problems, <br> including missing <br> number problems, involving multiplication <br> and division, including <br> positive integer scaling <br> problems and <br> correspondence <br> problems in which $n$ <br> objects are connected to <br> m objects | Revising Multiplication and Division <br> - recall multiplication and division facts for multiplication tables up to $12 \times 12$ <br> - use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers <br> - recognise and use factor pairs and commutativity in mental calculations | Using Division and <br> Multiplication <br> - recall and use <br> multiplication and <br> division facts for the 3, 4 <br> and 8 multiplication <br> tables <br> - write and calculate <br> mathematical <br> statements for <br> multiplication and <br> division using the <br> multiplication tables <br> that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods <br> - 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 | Telling the Time <br> - convert between different units of measure <br> - read, write and convert time between analogue and digital 12and 24-hour clocks <br> - solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days | Collecting and Sorting Data <br> - interpret and present data using bar charts, pictograms and tables <br> - solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables | Handling Data <br> - interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs <br> - solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Week $10$ | Finding Fractions <br> - 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 <br> - recognise, find and write fractions of a discrete set of objects: unit fractions and nonunit fractions with small denominators <br> - recognise and show, using diagrams, equivalent fractions with small denominators <br> - compare and order unit fractions, and fractions with the same denominators <br> - solve problems that involve all of the above | Fractions and Time <br> - recognise and show, using diagrams, families of common equivalent fractions <br> - recognise and write decimal equivalents of any number of tenths or hundredths <br> - find the effect of dividing a one- or twodigit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths <br> - read, write and convert time between analogue and digital 12and 24 -hour clocks |
| :---: | :---: | :---: |

## What's the time?

 - tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 -hour and 24hour clocks- 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
- compare durations of events

Fractions and Decimals

- count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten
- add and subtract fractions with the same denominator
- recognise and write decimal equivalents of any number of tenths or hundredths
- recognise and write decimal equivalents to $1 / 4,1 / 2$ and $3 / 4$ - compare numbers with the same number of decimal places up to two decimal places

Fractions in Action

- recognise and use fractions as numbers: unit fractions and nonunit 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
- compare and order unit fractions, and fractions with the same denominators
- solve problems that involve all of the above


## Proportion Problems

 - recognise and show, using diagrams, equivalent fractions with small denominators- solve problems that involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, include nonunit fractions where the answer is a whole number
- add and subtract fractions with the same denominator
- round decimals with one decimal place to the nearest whole number - solve simple measure and money problems involving fractions and decimals to two decimal places

