



Mathematics Long Term Plan

Ibis 2021-2022

Autumn

	National Curriculum Objectives	Small Steps
<p>Number: Place Value</p> <p>4 weeks</p>	<ul style="list-style-type: none"> • Count in multiples of 6, 7, 9, 25 and 1000. • Find 1000 more or less than a given number. • Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones) • Order and compare numbers beyond 1000 • Identify, represent and estimate numbers using different representations. • Round any number to the nearest 10, 100 or 1000 • Solve number and practical problems that involve all of the above and with increasingly large positive numbers. • Count backwards through zero to include negative numbers. • 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. 	<ul style="list-style-type: none"> • Represent numbers to 1,000 • 100s, 10s and 1s • Number line to 1,000 • Round to the nearest 10 • Round to the nearest 100 • Count in 1,000s • 1,000s, 100s, 10s and 1s • Partitioning • Number line to 10,000 • Find 1, 10, 100 more or less • 1,000 more or less • Compare numbers • Order numbers • Round to the nearest 1,000 • Count in 25s • Negative numbers • Roman numerals to 100
<p>Number: Addition and Subtraction</p> <p>3 weeks</p>	<ul style="list-style-type: none"> • Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. • Estimate and use inverse operations to check answers to a calculation. • Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why. 	<ul style="list-style-type: none"> • Add and subtract 1s, 10s, 100s and 1000s • Add two 3-digit numbers – not crossing 10 or 100 • Add two 4-digit numbers – no exchange • Add two 3-digit numbers – crossing 10 or 100 • Add two 4-digit numbers – one exchange • Add two 4-digit numbers – more than one exchange • Subtract a 3-digit number from a 3-digit number – no exchange

		<ul style="list-style-type: none"> • Subtract two 4-digit numbers – no exchange • Subtract a 3-digit number from a 3-digit number - exchange • Subtract two 4-digit numbers – one exchange • Subtract two 4-digit numbers – more than one exchange • Efficient subtraction • Estimate answers • Checking strategies
Measurement: Length and Perimeter 2 weeks	<ul style="list-style-type: none"> • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • Convert between different units of measure [for example, kilometre to metre] 	<ul style="list-style-type: none"> • Equivalent lengths – m and cm • Equivalent lengths – mm and cm • Kilometres • Add lengths • Subtract lengths • Measure perimeter • Perimeter on a grid • Perimeter of a rectangle • Perimeter of rectilinear shapes
Number: Multiplication and Division 3 weeks	<ul style="list-style-type: none"> • Recall and use multiplication and division facts for multiplication tables up to 12×12. • Count in multiples of 6, 7, 9, 25 and 1000 • 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. • 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. 	<ul style="list-style-type: none"> • Multiply by 10 • Multiply by 100 • Divide by 10 • Divide by 100 • Multiply by 1 and 0 • Divide by 1 and itself • Multiply and divide by 3 • The 3 times-table • Multiply and divide by 6 • 6 times-table and division facts • Multiply and divide by 9 • 9 times-table and division facts • Multiply and divide by 7 • 7 times-table and division facts

Spring

	National Curriculum Objectives	Small Steps
Number: Multiplication and Division 3 weeks	<ul style="list-style-type: none"> Recall and use multiplication and division facts for multiplication tables up to 12×12. Count in multiples of 6, 7, 9, 25 and 1000 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. 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. 	<ul style="list-style-type: none"> 11 and 12 times-table Multiply 3 numbers Factor pairs Efficient multiplication Written methods Multiply 2-digits by 1-digit (1) Multiply 2-digits by 1-digit (2) Multiply 3-digits by 1-digit Divide 2-digits by 1-digit (1) Divide 2-digits by 1-digit (2) Divide 3-digits by 1-digit Correspondence problems
Measurement: Area 1 week	<ul style="list-style-type: none"> Find the area of rectilinear shapes by counting squares. 	<ul style="list-style-type: none"> What is area? Counting squares Making shapes Comparing area
Number: Fractions 4 weeks	<ul style="list-style-type: none"> Recognise and show, using diagrams, families of common equivalent fractions. Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. 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. Add and subtract fractions with the same denominator. 	<ul style="list-style-type: none"> Unit and non-unit fractions What is a fraction? Tenths Count in tenths Equivalent fractions (1) Equivalent fractions (2) Fractions greater than 1 Count in fractions Add fractions Add 2 or more fractions Subtract fractions Subtract 2 fractions Subtract from whole amounts Fractions of a set of objects (1) Fractions of a set of objects (2) Calculate fractions of a quantity Problem solving – calculate quantities
Number: Decimals 3 weeks	<ul style="list-style-type: none"> Recognise and write decimal equivalents of any number of tenths or hundredths. Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the 	<ul style="list-style-type: none"> Recognise tenths and hundredths Tenths as decimals Tenths on a place value grid Tenths on a number line

	<p>digits in the answer as ones, tenths and hundredths</p> <ul style="list-style-type: none"> • Solve simple measure and money problems involving fractions and decimals to two decimal places. • Convert between different units of measure [for example, kilometre to metre] 	<ul style="list-style-type: none"> • Divide 1 digit by 10 • Divide 2 digits by 10 • Hundredths • Hundredths as decimals • Hundredths on a place value grid • Divide 1 or 2 digits by 100
<p>Consolidation</p> <p>1 week</p>		

Summer

	National Curriculum Objectives	Small Steps
Number: Decimals 2 weeks	<ul style="list-style-type: none"> Compare numbers with the same number of decimal places up to two decimal places. Round decimals with one decimal place to the nearest whole number. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$. Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths 	<ul style="list-style-type: none"> Bonds to 10 and 100 Make a whole Write decimals Compare decimals Order decimals Round decimals Halves and quarters
Measurement: Money 2 weeks	<ul style="list-style-type: none"> Estimate, compare and calculate different measures, including money in pounds and pence. Solve simple measure and money problems involving fractions and decimals to two decimal places. 	<ul style="list-style-type: none"> Pounds and pence Ordering money Estimating money Convert pounds and pence Add money Subtract money Find change Four operations
Measurement: Time 2 weeks	<ul style="list-style-type: none"> Convert between different units of measure [for example, kilometre to metre; hour to minute] Read, write and convert time between analogue and digital 12- and 24-hour clocks. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. 	<ul style="list-style-type: none"> Telling the time to 5 minutes Telling the time to the minute Using a.m. and p.m. 24-hour clock Hours, minutes and seconds Years, months, weeks and days Analogue to digital – 12 hour Analogue to digital – 24 hour
Statistics 1 week	<ul style="list-style-type: none"> Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. 	<ul style="list-style-type: none"> Interpret charts Comparison, sum and difference Introducing line graphs Line graphs
Geometry: Properties of Shape 2 weeks	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Turns and angles Right angles in shapes Compare angles Identify angles Compare and order angles Recognise and describe 2-D shapes Triangles Quadrilaterals Horizontal and vertical

	<ul style="list-style-type: none"> • Complete a simple symmetric figure with respect to a specific line of symmetry. 	<ul style="list-style-type: none"> • Lines of symmetry • Complete a symmetric figure
Geometry: Position and Direction 2 week	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Describe position • Draw on a grid • Move on a grid • Describe a movement on a grid
Consolidation 1 week		