

Year 6 learning coverage – Autumn

Writing genres	Setting description, stories with a flash back, instructions, first person narrative, fairy tales with a twist, Newspaper report.
Maths objectives	<p>Number: Place value Read numbers up to 10 000 000 and determine the value of each digit. Write numbers up to 10 000 000 and determine the value of each digit. Compare numbers up to 10 000 000 and determine the value of each digit. Order numbers up to 10 000 000 and determine the value of each digit. Round any whole number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero. Solve number and practical problems that involve Y6 place value objectives</p> <p>Number: Four operations (addition subtraction, multiplication and division) Perform mental calculations, including with mixed operations. Perform mental calculations, including with large numbers for all four operations. 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, multiplication and division. Multiply multi-digit number up to 4 digits by a 2 digit number using the formal written method of long multiplication. Divide numbers up to 4 digits by a 2 digit whole number using the formal written method of long division Divide numbers up to 4 digits by a 2 digit number using the formal written method of short division Interpret remainders as whole number remainders, fractions or by rounding as appropriate for the context. Identify common factors, multiples and prime numbers. Use estimation to check answers to calculations Determine, in the context of a problem, an appropriate degree of accuracy.</p> <p>Number: Fractions Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions >1 Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form Divide proper fractions by whole numbers Associate a fraction with division and calculate decimal fraction equivalents</p> <p>Number: Decimals Identify the value of each digit in numbers given to 3 decimal places Multiply & divide numbers by 10, 100 and 1000 giving answers up to 3 decimal places Multiply one digit numbers with up to 2dp by whole numbers Use written division methods in cases where the answer has up to two decimal places. Solve problems which require answers to be rounded to specified degrees of accuracy.</p> <p>Number: Percentages Solve problems involving the calculation of percentages and the use of percentages for comparison. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</p>
Non-core objectives	<p>Geography: Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied History: Study an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066, including a significant turning point in British history (e.g. Battle of Britain) Develop a chronologically secure knowledge and understanding of British, local and world history, establishing clear narratives within and across the periods they study. Develop appropriate use of historical terms Address and devise historically valid questions about change, cause, similarity and difference, and significance. Construct informed responses to questions that involve the thoughtful selection and organisation of relevant historical information. Understand how our knowledge of the past is constructed from a range of sources</p> <p>Design technology: Use research and develop design criteria to inform the design of functional products that are fit for purpose, aimed at particular individuals or groups</p>

	<p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>Science: Identify scientific evidence that has been used to support or refute ideas or arguments Make predictions Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</p>
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Year 6 learning coverage – spring

Writing genres	Short stories, dual narratives, persuasive speeches, persuasive leaflets, formal letters, adventure stories.
Maths objectives	<p>Measures Use, read, write and convert between standard units for length, mass and capacity, converting measurements of length from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp. Convert between miles and kilometres. Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. Recognise that shapes with the same areas can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume of shapes. Calculate the area of triangles and parallelograms. Calculate, estimate and compare volume of cubes and cuboids using standard units</p> <p>Number: Algebra Use simple formulae Generate and describe linear number sequences (including with fractions). Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables.</p> <p>Number: Ratio & proportion Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. Solve problems involving similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</p> <p>Statistics Interpret and construct line graphs and use these to solve problems Interpret and construct pie charts and use these to solve problems Calculate and interpret the mean as an average.</p> <p>Geometry: Properties of Shapes Draw 2D shapes using given dimensions and angles. Compare and classify geometric shapes based on their properties and sizes. Find unknown angles in any triangles, quadrilaterals and regular polygons. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Recognise, describe and build simple 3D shapes based on their properties and sizes. Illustrate and name parts of circles, including radius, diameter and circumference Know that the diameter is twice the radius.</p> <p>Geometry: Position & direction Describe positions on the full coordinate grid (all four quadrants). Draw and translate simple shapes on the coordinate plane. Reflect shapes in axes on full coordinate's grid.</p>
Non-core objectives	<p>Science: To be able to recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function To be able to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p>

To be able to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat reading when appropriate.

To be able to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs

To be able to use test results to make predictions to set up further comparative and fair tests.

To be able to report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results in oral and written forms

To identify scientific evidence that has been used to support or refute ideas or arguments

Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms

Art and design:

Learn about great artists, architects and designers in history.

To create sketch books to record observations.

To improve their mastery of art and design techniques, including drawing and painting with a range of materials.

History:

Learn about the Roman Empire and its impact on Britain, including the Roman Empire by AD 42 and the power of its army; the successful invasion by Claudius and conquest, including Hadrian's Wall; British resistance (e.g. Boudicca); and the Romanisation of Britain, including the impact of technology, culture and beliefs including early Christianity.

Develop a chronologically secure knowledge and understanding

Identify connections, contrasts and trends over time

Develop the appropriate use of historical terms

Devise and answer historically valid questions about change, cause, similarity and difference and significance.

Construct informed responses that involve thoughtful selection and organisation of relevant historical information

Understand how our knowledge of the past is constructed from a range of sources.