



CARING, INSPIRING ACHIEVING

### Skills Progression at Holtspur

| Skills                             | Y1                                                                                                                                                                                           | Y2                                                                                                                                                                         | Y3                                                                                                                                         | Y4                                                                                                                                                                                                            | Y5                                                                                                                                                                                            | Y6                                                                                                                                  |
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| Place Value- counting              | Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number<br><br>Count numbers to 100 in numerals; count in multiples of twos, fives and tens         | Count in steps of 2,3, and 5 from 0, and in tens from any number, forward and backward                                                                                     | Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number                                             | Count in multiples of 6, 7,9,25 and 1000<br><br>Count backwards through zero to include negative numbers                                                                                                      | Count forwards or backwards in steps of powers of 10 for any given number up to 1000 000<br><br>Count forwards and backwards with positive and negative whole numbers, including through zero |                                                                                                                                     |
| Place Value: Represent             | Identify and represent numbers using objects and pictorial representations<br><br>Read and write numbers to 100 in numerals<br><br>Read and write numbers from 1 to 20 in numerals and words | Read and write numbers to at least 100 in numerals and in words<br><br>Identify, represent and estimate numbers using different representations, including the number line | Identify, represent and estimate numbers using different representations<br><br>Read and write numbers up to 1000 in numerals and in words | Identify, represent and estimate numbers using different representatives<br><br>Read Roman numerals to 100 and know that over time, the numeral system changed to include the concept of zero and place value | Read, write (order and compare) numbers to at least 1000 000 and determine the value of each digit<br><br>Read Roman numerals to 1000 and recognise years written in Roman numerals           | Read, write (order and compare) numbers up to 10 000 000 and determine the value of each digit                                      |
| Place Value: Use PV and compare    | Given a number; identify one more and one less                                                                                                                                               | Recognise the place value of each digit in a two-digit number (tens, ones)<br><br>Compare and order numbers from 0 up to 100; use < > and = signs                          | Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)<br><br>Compare and order numbers up to 1000         | Find 1000 more or less than a given number<br><br>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones)<br><br>Order and compare numbers beyond 1000            | (Read, write) order and compare numbers to at least 1000 000 and determine the value of each digit                                                                                            | (Read, write), order and compare numbers up to 10 000 000 and determine the value of each digit                                     |
| Place Value: Problems and Rounding |                                                                                                                                                                                              | Use place value and number facts to solve problems                                                                                                                         | Solve number problems and practical problems involving these ideas                                                                         | Round any number to the nearest 10,100 or 1000<br><br>Solve number and practical problems that involve all of the above                                                                                       | Interpret negative numbers in context<br><br>Round any number up to 1000 000 to the nearest 10,100, 1000, 10 000 and 100,000                                                                  | Round any whole number to a required degree of accuracy<br><br>Use negative numbers in context, and calculate intervals across zero |

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|                                                   |                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                | and with increasingly large positive numbers                                                                                         | Solve number problems and practical problems that involve all of the above                                                                                                                                                                                                             | Solve number and practical problems that involve all of the above                                                                                                                            |
| Addition & Subtraction:<br>Recall, Represent, Use | Read, write and interpret mathematical statements involving addition, subtraction and equals signs<br><br>Represent and use number bonds and related subtraction facts within 20 | Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100<br><br>Show that addition of two numbers can be done in any order and subtraction of one number from another cannot<br><br>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems | Estimate the answer to a calculation and use inverse operations to check answers                                                                                                                                                                                               | Estimate and use inverse operations to check answers to a calculation                                                                | Using rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy                                                                                                                                                                         |                                                                                                                                                                                              |
| Addition and Subtraction:<br>Calculations         | Add and subtract one-digit and two-digit numbers to 20, including 0                                                                                                              | Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:<br>A two-digit number and ones<br>A two-digit number and tens<br>Two two-digit numbers<br>Adding three one-digit numbers                                                                                                                                                        | Add and subtract number mentally including:<br>A three-digit number and ones<br>A three-digit number and tens<br>A three-digit number and hundreds<br><br>Add and subtract numbers with up to three digits, using formal written methods and columnar addition and subtraction | Add and subtract numbers with up to 4 digits using the formal written method and columnar addition and subtraction where appropriate | Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)<br><br>Add and subtract numbers mentally with increasingly large numbers                                                                            | Perform mental calculations, including with mixed operations and large numbers<br><br>Use their knowledge of the order of operations to carry out calculations involving the four operations |
| Addition and Subtraction:<br>Solve Problems       | Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems                                 | Solve problems with addition and subtraction Using concrete objects and pictorial representations, including those involving numbers, quantities and measures Applying their increasing knowledge of mental and written methods                                                                                                                                                      | Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction                                                                                                                                                  | Solve addition and subtraction two-step problems in contexts deciding which operations and methods to use and why                    | 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 and a combination of these, including understanding of the meaning of the equals sign | Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why                                                                         |

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| Multiplication and Division: Recall, Represent, Use |                                                                                                                   | <p>Recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> | Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables                                                                                                                                                  | <p>Recall multiplication and division facts for multiplication tables up to 12 x 12</p> <p>Use place value, known and derived facts to multiply and divide mentally, including multiplying by 0 and; dividing by 1; multiplying together three numbers</p> <p>Recognise and use factor pairs and commutativity in mental calculations</p> | <p>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</p> <p>Know and use the vocabulary or primes numbers, prime factors and composite numbers</p> <p>Establish and use square numbers and cube numbers</p>                                                                                                                                                                                                             | <p>Identify common factors, common multiples and prime numbers</p> <p>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</p>                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Multiplication and Division: Calculations           |                                                                                                                   | Calculate mathematical statements for multiplication and division and division within the multiplication tables and write them using the signs                                                                                                                                  | 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 professing to formal written methods | Multiply two-digit and three-digit numbers by a one-digit number using formal written layout                                                                                                                                                                                                                                              | <p>Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for two-digit numbers</p> <p>Multiply and divide numbers mentally drawing upon known facts</p> <p>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</p> <p>Multiply and divide whole number and those involving decimals by 10,100 and 1000</p> | <p>Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</p> <p>Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</p> <p>Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context</p> <p>Perform mental calculations, including with mixed operations and large numbers</p> |
| Multiplication and Division: Solve Problems         | Solve one-step problems involving multiplication and division, by calculating the answer, using concrete objects, | Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and                                                                                                                                                           | Solve problems, including missing number problems, involving multiplication and division, including                                                                                                                                        | Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one                                                                                                                                                                                                                | Solve problems involving multiplication and division including using their knowledge of factors and                                                                                                                                                                                                                                                                                                                                                                                     | Solve problems involving addition, subtraction, multiplication and division                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|                                                  | pictorial representations and arrays with the support of the teacher                                                                                                                       | multiplication and division facts, including problems in contexts                                                                                        | positive integer scaling problems and correspondence problems                                                                                                                                                                                                                                                                                                                                          | digit, integer scaling problems and harder correspondence problems                                                                 | multiples, squares and cubes<br>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates                                                                                                           |                                                                                                                                                                                                           |
| Multiplication and Division: Combined Operations |                                                                                                                                                                                            |                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                    | Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign                                                                                                            | Use their knowledge of the order of operations to carry out calculations involving the four operations                                                                                                    |
| Fractions: Recognise and Write                   | Recognise, find and name a half as one of two equal parts of an object, shape or quantity<br>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity | Recognise, find, name and write fractions $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity | 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 non-unit fractions with small denominators<br>Recognise and use fractions as numbers; unit fractions and non-unit fractions with small denominators | Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten | Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths<br>Recognise mixed numbers and improper fractions and convert from one form to another and write mathematical statements $> 1$ as a mixed number |                                                                                                                                                                                                           |
| Fractions: Compare                               |                                                                                                                                                                                            | Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$                                                                                             | Recognise and show, using diagrams, equivalent fractions with small denominators<br>Compare and order unit fractions, and fractions with the same denominator                                                                                                                                                                                                                                          | Recognise and show, using diagrams, families of common equivalent fractions                                                        | Compare and order fractions whose denominators are all multiples of the same number                                                                                                                                                                                       | Use common factors to simplify fractions; use common multiples to express fractions with the same denominator<br>Compare and order fractions, including fractions $> 1$                                   |
| Fractions: Calculations                          |                                                                                                                                                                                            | Write simple fractions for example, $\frac{1}{2}$ of 6 = 3                                                                                               | Add and subtract fractions with the same denominator within one whole                                                                                                                                                                                                                                                                                                                                  | Add and subtract fractions with the same denominator                                                                               | Add and subtract fractions with the same denominator and denominators that are multiples of the same number<br>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams                                                          | Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions<br>Multiply simple pairs of proper fractions, writing the answer in its simplest form |

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|                                     |  |  |                                              |                                                                                                                                                                                     |                                                                                                                                                                                                                                              | Divide proper fractions by whole numbers                                                                                                                                                                                                                                                                                                            |
| Fractions: Solve Problems           |  |  | Solve problems that involve all of the above | 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 |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                     |
| Decimals: Recognise and Write       |  |  |                                              | Recognise and write decimal equivalents of any number of tenths and hundredths<br>Recognise and write decimal equivalents to $\frac{1}{4}$ , $\frac{1}{2}$ , $\frac{3}{4}$          | Read and write decimal numbers as fractions<br>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents                                                                                                   | Identify the value of each digit in numbers given to three decimal places                                                                                                                                                                                                                                                                           |
| Decimals: Compare                   |  |  |                                              | Round decimals with one decimal place to the nearest whole number<br>Compare numbers with the same number of decimal places up to two decimal places                                | Round decimals with two decimal places to the nearest whole number and to one decimal place<br>Read, write, order and compare numbers with up to three decimal places                                                                        |                                                                                                                                                                                                                                                                                                                                                     |
| Decimals: Calculations and Problems |  |  |                                              | Find the effect of dividing a one-or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths                               | Solve problems involving number up to three decimal places                                                                                                                                                                                   | Multiply and divide numbers by 10,100 and 1000 giving answers up to three decimal places<br>Multiply one-digit numbers with up to two decimal places by whole numbers<br>Use written division methods in cases where the answer has up to two decimal places<br>Solve problems which require answers to be rounded to specified degrees of accuracy |
| Fractions, Decimals and Percentages |  |  |                                              | Solve simple measure and money problems involving fractions and decimals to two decimal places                                                                                      | Recognise the percent symbol and understand that percent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal<br>Solve problems which require knowing percentage and decimal | Associate a fraction with division and calculate decimal fraction equivalents<br>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts                                                                                                                                                    |

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|                           |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                             |                                                                          |                                                                                                             | equivalents of $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ , $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Ration and Proportion     |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                             |                                                                          |                                                                                                             |                                                                                                                                                                                                                                                                         | <p>Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>Solve problems involving the calculation of percentages and the use of percentages for comparison</p> <p>Solve problems involving similar shapes where the scale factor is known or can be found</p> <p>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</p> |
| Algebra                   |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                             |                                                                          |                                                                                                             |                                                                                                                                                                                                                                                                         | <p>Use simple formulae</p> <p>Generate and describe linear number sequences</p> <p>Express missing number problems algebraically</p> <p>Find pairs of numbers that satisfy an equation with two unknowns</p> <p>Enumerate possibilities of combinations of two variables.</p>                                                                                                                                                                                             |
| Measuring: Using measures | <p>Compare, describe and solve practical problems for: length and heights, mass/weight, capacity and volume and time</p> <p>Measure and begin to record the following: lengths and heights, mass/weight, capacity and volume and time</p> | <p>Choose and use appropriate standard units to estimate and measure length/height in any direction; mass; temperature; capacity to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</p> <p>Compare and order lengths, mass, volume/capacity and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math></p> | <p>Measure, compare, add and subtract lengths; mass; volume/capacity</p> | <p>Convert between different units of measure</p> <p>Estimate, compare and calculate different measures</p> | <p>Convert between different units of metric measure</p> <p>Understand and use approximate equivalences between metric units and common imperial units</p> <p>Use all four operations to solve problems involving measure using decimal notation, including scaling</p> | <p>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</p> <p>Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using</p>                                                                                                                       |

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| Measurement: Money                   | Recognise and know the value of different denominations of coins and notes                                                                                                                                                                                            | Recognise and use symbols for pounds and pence; combine amounts to make a particular value<br>Find different combinations of coins that equal the same amounts of money<br>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change | Add and subtract amounts of money to give change, using both pounds and pence in practical contexts                                                                                                                                                                                                                                                                                                                      | Estimate, compare and calculate different measures, including money in pounds and pence                                                                                                           | Use all four operations to solve problems involving measure                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                            |
| Measurement: Time                    | Sequence events in chronological order using language<br>Recognise and use language relating to dates, including days of the week, weeks, months and years<br>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times | Compare and sequence intervals of time<br>Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times<br>Know the number of minutes in an hour and the number of hours in a day                                                        | Tell and write the time from an analogue clock, including using Roman numerals and 12-hour and 24-hour 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 to support this<br>Know the number of seconds in a minute and the number of days in each month, year and leap year<br>Compare durations of events | Read, write and convert time between analogue and digital 12- and 24-hour clocks<br>Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days | Solve problems involving converting between units of time                                                                                                                                                                                                                                         | Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa                                                                                                                                                                       |
| Measurement: Perimeter, Area, Volume |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                               | Measure the perimeter of simple 2D shapes                                                                                                                                                                                                                                                                                                                                                                                | Measure and calculate the perimeter of a rectilinear figure in centimetres and metres<br>Find the area of rectilinear shapes by counting squares                                                  | Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres<br>Calculate and compare the area of rectangles, and including using standard units, square centimetres and square metres and estimate the area of irregular shapes<br>Estimate volume and capacity | Recognise that shapes with the same areas can have different perimeters and vice versa<br>Recognise when it is possible to use formulae for area and volume of shapes<br>Calculate the area of parallelograms and triangles<br>Calculate, estimate and compare volume of cubes and cuboids using standard units, including |

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| Geometry: 2-D Shapes             | Recognise and name common 2-D shapes                                                              | Identify and describe the properties of 2-D shapes, including the number of side and line of symmetry in a vertical line<br>Identify 2-D shapes on the surface of 3-D shapes<br>Compare and sort common 2-D shapes and everyday objects                                                                               | Draw 2-D shapes                                                                                                                                                                                                                                                                                                                                                           | Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes                                                                                                                                             | Distinguish between regular and irregular polygons based on reasoning about equal sides and angles<br>Use the properties of rectangles to deduce related facts and find missing lengths and angles                                                                                            | Draw 2-D shapes using given dimensions and angles<br>Compare and classify geometric shapes based on their properties and sizes<br>Illustrate and names parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |
| Geometry: 3-D Shapes             | Recognise and name common 3-D shapes                                                              | Recognise and name common 3-D shapes<br>Compare and sort common 3-D shapes and everyday objects                                                                                                                                                                                                                       | Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                | Identify 3-D shapes, including cubes and other cuboids, from 2-D representations                                                                                                                                                                                                              | Recognise, describe and build simple 3-D shapes, including making nets                                                                                                                                                                                               |
| Geometry: Angles and Lines       |                                                                                                   |                                                                                                                                                                                                                                                                                                                       | 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 | 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 | Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles<br>Draw given angles, and measure them in degrees<br>Identify angles at a point and one whole turn, angles at a point on a straight line and $\frac{1}{2}$ a turn and other multiples of 90 degrees | Find unknown angles in any triangles, quadrilaterals and regular polygons<br>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles                                                                |
| Geometry: Position and Direction | Describe position, direction and movement, including whole, half, quarter and three-quarter turns | Order and arrange combinations of mathematical objects in patterns and sequences<br>Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line distinguishing between rotation as a turn and in terms of right angles for quarter, half and three- quarter turns |                                                                                                                                                                                                                                                                                                                                                                           | Describe positions on a 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                | 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                                                                                                                       | Describe positions on the full coordinate grid<br>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes                                                                                                                             |

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| Statistics: Present and Interpret |  | Interpret and construct simple pictograms, tally charts, block diagrams and simple tables                                                                                                            | Interpret and present data using bar charts, pictograms and tables                                               | Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs | Complete, read and interpret information in tables, including timetables                 | Interpret and construct pie charts and line graphs and use these to solve problems |
| Statistics: Solve Problems        |  | Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity<br>Ask and answer questions about totalling and comparing categorical data | Solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables | Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs | Solve comparison sum and difference problems using information presented in a line graph | Calculate and interpret the mean as an average                                     |