## Longfields Skills Progression

Maths

|  | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Counting | - count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number -count, read and write 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 - find 1000 more or less than a given number count backwards through zero to include negative numbers | - count forwards or backwards in steps of powers of 10 for any given number up to 1 000000 <br> -interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero | -use negative numbers in context, and calculate intervals across zero |
| Place Value |  | - recognise the place value of each digit in a two-digit number - compare and order numbers from 0 up to 100; use <, > and = signs | - recognise the place value of each digit in a three-digit number - compare and order numbers up to 1000 | - recognise the place value of each digit in a four-digit number - order and compare numbers beyond 1000 - round any number to the nearest 10,100 or 1000 | - read, write, order and compare numbers up to 1000000 and determine the value of each digit <br> - round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000 | - read, write, order and compare numbers up to 10000000 and determine the value of each digit - round any whole number to a required degree of accuracy |


| Representing number | -identify and represent numbers using objects and pictorial representations including the number line, \& use language of: equal to, more than, less than (fewer), most, least - read and write numbers from 1 to 20 in numerals and words - read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs | - identify, represent and estimate numbers using different representations, including the number line -read and write numbers to at least 100 in numerals and in words | -identify, represent and estimate numbers using different representations - read and write numbers up to 1000 in numerals and in words | -identify, represent and estimate numbers using different representations -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 | - read Roman numerals to 1000 (M) and recognise years written in Roman numerals - recognise and use square numbers and cube numbers, and the notation for squared ( ${ }^{2}$ ) and cubed ${ }^{(3)}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number facts $(+/-)$ | -given a number, identify one more and one less <br> -represent and use number bonds and related subtraction facts within 20 | - use place value and number facts to solve problems recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 |  |  |  |  |
| Mental +/- | - add and subtract one-digit and two-digit numbers to 20, including zero | - add and subtract numbers using concrete objects, pictorial representations, and mentally, including: | -add and subtract numbers mentally, including: HTU+U, HTU+T and HTU+H |  | - add and subtract numbers mentally with increasingly large numbers | - perform mental calculations, including with mixed operations and large numbers |





| Problems $(x / \div)$ | - solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. | -solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts | - solve problems, including missing number problems, involving <br> multiplication and division, including positive integer scaling problems and correspondence problems in which $n$ objects are connected to m objects. | -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 | -solve problems involving <br> multiplication and division including using their knowledge of factors and multiples, squares and cubes <br> - solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign <br> - solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates | - use their knowledge of the order of operations to carry out calculations involving the four operations <br> -solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why <br> -solve problems involving addition, subtraction, multiplication and division <br> - use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recognising fractions | - recognise, find and name a half as one of two equal parts of an object, shape or quantity - recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. | - recognise, find, name and write fractions $1 / 3,1 / 4$, $2 / 4$ and $3 / 4$ of a length, shape, set of objects or quantity | - count up and down in tenths; <br> - recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 | - count up and down in hundredths; - recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. | - recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number |  |



| Decimals as fractional amounts |  |  |  | - recognise and write decimal equivalents of any number of tenths or hundredths - recognise and write decimal equivalents to $1 / 4,1 / 2$ and $3 / 4$ <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 | - read and write decimal numbers as fractions | - associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction - identify the value of each digit in numbers given to three decimal places |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ordering decimals |  |  |  | - round decimals with one decimal place to the nearest whole number - compare numbers with the same number of decimal places up to two decimal places | - recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents <br> - round decimals with two decimal places to the nearest whole number and to one decimal place - read, write, order and compare numbers with up to three decimal places |  |
| Calculating with decimals |  |  | $y$ |  |  | - multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places - multiply one-digit number with up to two decimal places by |




| Measures | - compare, describe and solve practical problems for: length/height, weight/mass, capacity/volume \& time <br> - measure and begin to record length/height, weight/mass, capacity/volume \& time | -choose and use appropriate standard units to estimate and measure <br> length/height (m/cm); mass (kg/g); temperature ( ${ }^{\circ} \mathrm{C}$ ); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels -compare and order lengths, mass, volume/capacity and record the results using >, < and = | -measure, compare, add and subtract: lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ); mass (kg/g); volume/capacity (l/ml) | -Convert between different units of measure estimate, compare and calculate different measures, including money in pounds and pence | -convert between different units of metric measure - understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints -estimate volume and capacity | - solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate - 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 decimal notation to up to three decimal places convert between miles and kilometres |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mensuration |  |  | -measure the perimeter of simple 2D shapes | -measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares | -measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres - calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres ( $\mathrm{cm}^{2}$ ) and square metres ( $\mathrm{m}^{2}$ ) | - 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 parallelograms and triangles <br> - calculate, estimate and compare volume of |



| Time | - sequence events in chronological order using language recognise and use language relating to dates, including days of the week, weeks, months and years -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 -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 from I to XII, 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 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 leap year compare durations of events | - Convert between different units of measure (e.g. Hours to minutes) <br> - 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 | -solve problems involving converting between units of time |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Shape vocabulary | - recognise and name common 2-D shapes (e.g. Square, circle, triangle) <br> - recognise and name common 3-D shapes (e.g. Cubes, cuboids, pyramids \& spheres) | (vertices, edges, faces, symmetry) | -identify horizontal and vertical lines and pairs of perpendicular and parallel lines |  |  | - illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |



|  |  |  | complete turn <br> - identify whether angles are greater or less than right angle |  | point and one whole turn (total $360^{\circ}$ ); at a point on a straight line and $1 / 2$ a turn (total $180^{\circ}$ ) <br> - identify other multiples of $90^{\circ}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Position \& 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 and distinguishing between rotation as a turn and in terms of right angles for quarter, half and $3 / 4$ 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 - 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 (all four quadrants) -draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |
| Interpreting data |  | - 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 calculate and interpret the mean as an average |




