



## Greasley Beauvale Primary School Maths Curriculum



	<b>Knowledge</b>	<b>Skills</b>	<b>Vocabulary</b>
<b>Nursery</b>  <b>40-60</b> <b>months</b>	<p><b><u>Place Value: counting</u></b> Recite numbers in order to 10 Realise not only objects, but anything can be counted including steps, claps or jumps</p> <p><b><u>Place Value: represent</u></b> Say the number that is one more than a given number Find one more or one less from a group of up to five objects, then ten objects</p> <p><b><u>Place Value: Use and compare</u></b> Use the language of 'more' and 'fewer' to compare two sets of objects</p> <p><b><u>Place value: problems and rounding</u></b> Identify own mathematical problems based on own interest and fascination</p> <p><b><u>Addition and subtraction</u></b> To use the vocabulary involved in adding and subtracting in practical activities and discussion Find the total of items in two groups by counting all of them</p> <p><b><u>Measurement</u></b> Order two or three items by length or height Order two items by weight or capacity Begin to use everyday language related to money Use everyday language related to time Order and sequence familiar events Measure short periods of time in simple ways</p> <p><b><u>Geometry</u></b> Begin to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes Select a particular named shapes Describe their relative position such as 'behind' or 'next to' Use familiar objects and common shapes to create and recreate patterns and build models</p>	<ul style="list-style-type: none"> <li>• <b>Counting &amp; Place Value:</b> Count to 10, understand "more" and "fewer"</li> <li>• <b>Addition/Subtraction:</b> Combine groups of objects</li> <li>• <b>Measurement:</b> Compare length, weight, time</li> <li>• <b>Geometry:</b> Identify 2D/3D shapes, describe position</li> </ul>	<p>More, fewer, count, number, shape, big, small, long, short, heavy, light, next to, behind</p>
<b>Reception</b> <b>ELG</b>	<p><b><u>Place Value: counting</u></b> Count reliably with numbers from one to 20.</p>	<ul style="list-style-type: none"> <li>• <b>Counting &amp; Place Value:</b> Count to 20, order numbers</li> </ul>	<p>Add, subtract, double, half, share, pattern, size, weight, time, money, position</p>



## Greasley Beauvale Primary School Maths Curriculum



	<p><b><u>Place Value: represent</u></b> Say which number is one more or one less than a given number from one to 20</p> <p><b><u>Place Value: Use and compare</u></b> Place numbers one to 20 in order</p> <p><b><u>Place value: problems and rounding</u></b> Identify own mathematical problems based on own interest and fascination</p> <p><b><u>Addition and subtraction</u></b> Add and subtract two single-digit numbers and count on and back to find the answer using quantities and objects Say which number is one more or one less than a given number from one to 20 Solve problems, including doubling, halving and sharing</p> <p><b><u>Measurement:</u></b> Use everyday languages to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and solve problems</p> <p><b><u>Geometry</u></b> Explore characteristics of everyday objects and shapes and use mathematical language to describe them</p> <p><b><u>Use positional language</u></b> Recognise, create and describe patterns</p>	<ul style="list-style-type: none"> <li>• <b><u>Addition/Subtraction:</u></b> Solve simple problems, doubling/halving</li> <li>• <b><u>Measurement:</u></b> Use everyday language for size, time, money</li> <li>• <b><u>Geometry:</u></b> Describe shapes, patterns, positions</li> </ul>	
<b>Year 1</b>	<p><b><u>Place Value</u></b> Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count numbers to 100 in numerals: count in multiples of 2 5 and 10s</p> <p><b><u>Place Value: Represent</u></b> Identify and represent numbers using objects and pictorial representations. Read and write numbers to 100 in numerals Read any write numbers from 1 to 20 in words and numerals</p> <p><b><u>Place Value: compare</u></b> Given a number, identify 1 more and 1 less</p> <p><b><u>Addition and subtraction</u></b> Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Represent ant use number bonds and related subtraction facts within 20 Add and subtract one-digit and two-digit numbers to 20, including zero</p>	<ul style="list-style-type: none"> <li>• <b><u>Place Value:</u></b> Count to 100, identify 1 more/less</li> <li>• <b><u>Addition/Subtraction:</u></b> Use number bonds, solve one-step problems</li> <li>• <b><u>Multiplication/Division:</u></b> Use arrays and objects</li> <li>• <b><u>Fractions:</u></b> Recognise halves and quarters</li> <li>• <b><u>Measurement:</u></b> Compare lengths, mass, time</li> <li>• <b><u>Geometry:</u></b> Identify 2D/3D shapes, describe turns</li> <li>• <b><u>Statistics:</u></b> Begin interpreting simple data</li> </ul>	<p>Number bond, equal, total, difference, multiply, divide, half, quarter, coin, note, hour, minute, turn, clockwise</p>



## Greasley Beauvale Primary School Maths Curriculum



Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems such as  $7 = \_ - 9$

### **Multiplication and Division**

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

### **Fractions**

Recognise and name a half as one of two equal parts of an object shape or quantity

Recognise and name a quarter as one of four equal parts of an object shape or quantity

### **Measurement**

Compare, describe and solve practical problems for:

- lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
- mass/weight [for example, heavy/light, heavier than, lighter than]
- capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
- time [for example, quicker, slower, earlier, later]

Measure and begin to record the following:

- lengths and heights
- mass/weight,
- capacity and volume
- time (hours, minutes, seconds)

Recognise and know the value of different denominations of coins and notes  
Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].

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.

### **Geometry**

Recognise, handle and name common 2D shapes (for example rectangles (including squares), circles and triangles)

Recognise, handle and name common 3D shapes [for example, cuboids (including cubes), pyramids and spheres]



## Greasley Beauvale Primary School Maths Curriculum



	Describe position, direction and movement, including whole, half, quarter and three-quarter turns		
<b>Year 2</b>	<p><b><u>Place Value</u></b> Count in steps of 2,3 and 5 from 0, and in 10s from and number, forward and backward. Read and write numbers to at least 100 in numerals and in words. Identify, represent and estimate numbers using different representations, including the number line. Recognise the place value of each digit in a two digit number (tens and ones). Compare and order numbers from 0 up to 100; use <math>&lt;</math> <math>&gt;</math> and <math>=</math> signs. Use place value and number facts to solve problems.</p> <p><b><u>Addition and subtraction</u></b> Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100. Show that addition of two numbers can be done in any order (Commutative) and subtraction of one number from another cannot. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p> <p>Add and subtract numbers using concrete objects pictorial representations and mentally including:</p> <ul style="list-style-type: none"><li>• a two-digit number and ones</li><li>• a two-digit number and 10s</li><li>• two two-digit numbers</li><li>• adding three one-digit numbers</li></ul> <p>Solve problems with addition and subtraction:</p> <ul style="list-style-type: none"><li>• using concrete objects and pictorial representations, including those involving numbers quantities and measures</li><li>• applying their increasing knowledge of mental and written methods</li></ul> <p><b><u>Multiplication and division</u></b> Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables including recognising odd and even numbers. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. Calculate mathematical statements for multiplication and division within multiplication tables and write them using the multiplication division and equals signs. Solve problems involving multiplication and division using materials, arrays, repeated addition, mental methods, and multiplication and division facts including problems in contexts.</p>	<ul style="list-style-type: none"><li>• <b>Place Value:</b> Understand tens and ones, compare numbers</li><li>• <b>Addition/Subtraction:</b> Use mental and written methods</li><li>• <b>Multiplication/Division:</b> Recall 2, 5, 10 tables</li><li>• <b>Fractions:</b> Recognise simple fractions, equivalence</li><li>• <b>Measurement:</b> Use standard units, solve money problems</li><li>• <b>Geometry:</b> Describe properties of shapes, symmetry</li><li>• <b>Statistics:</b> Use pictograms, tally charts</li></ul>	Estimate, inverse, commutative, symmetry, vertical, pictogram, tally, block diagram, compare, sort



## Greasley Beauvale Primary School Maths Curriculum



### **Fractions**

Recognise find name and write fractions  $1/3$ ,  $1/4$ ,  $2/4$  and  $3/4$  of a length shape set of objects or quantity.

Recognise the equivalence of  $2/4$  and  $1/2$ .

Write simple fractions for example  $1/2$  of  $6 = 3$

### **Algebra**

Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

### **Measurement**

Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ( $^{\circ}\text{C}$ ); 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  $=$ .

Recognise and use symbols for pounds (£) and pence (p) accurately, recording pounds and pence separately; combine amounts to make a particular value.

Find and use different combinations of coins that equal the same amounts of money.

Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

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Find and use different combinations of coins that equal the same amounts of money.

Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

### **Geometry**

Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line.

Identify 2D shapes on the surface of 3D shapes.

Compare and sort common 2D and 3D shapes and everyday objects.

Recognise and name common 3D shapes [for example, cuboids (including cubes), pyramids and spheres].

Compare and sort common 3D shapes and everyday objects.

Order and arrange combinations of mathematical objects in patterns and sequences.

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 three-quarter turns (clockwise and anticlockwise)

### **Statistics**



## Greasley Beauvale Primary School Maths Curriculum



	<p>Interpret and construct simple pictograms, tally charts, block diagrams and simple tables (e.g. many-to-one correspondence in pictograms with simple ratios 2, 5, 10 scales).</p> <p>Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data.</p>		
<b>Year 3</b>	<p><b><u>Place Value</u></b> Count from 0 in multiples of 4, 8, 50 and 100. Find 10 or 100 more or less than a given number. Identify, represent and estimate numbers using different representations. Read and write numbers up to 1000 in numerals and words. Recognise the place value of each digit in a three digit number (hundreds, tens and ones). Solve number problems and practical problems involving these ideas.</p> <p><b><u>Addition and subtraction</u></b> Estimate the answer to a calculation and use inverse operations to check answers. Add and subtract numbers mentally including:</p> <ul style="list-style-type: none"> <li>• a three-digit number and ones</li> <li>• a three-digit number and 10s</li> <li>• a three-digit number and hundreds.</li> </ul> <p>Add and subtract numbers with up to three digits using formal written methods of columnar addition and subtraction. Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction.</p> <p><b><u>Multiplication and division</u></b> Recall and use multiplication and division facts for the three four and eight multiplication tables. 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. 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.</p> <p><b><u>Fractions</u></b> Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers in or quantities by 10.</p>	<ul style="list-style-type: none"> <li>• <b>Place Value:</b> Understand hundreds, estimate numbers</li> <li>• <b>Addition/Subtraction:</b> Use column methods</li> <li>• <b>Multiplication/Division:</b> Use 3, 4, 8 tables</li> <li>• <b>Fractions:</b> Compare, add/subtract fractions</li> <li>• <b>Measurement:</b> Tell time, measure perimeter</li> <li>• <b>Geometry:</b> Identify angles, lines</li> <li>• <b>Statistics:</b> Use bar charts, tables</li> </ul>	<p>Hundreds, column method, scaling, tenths, perimeter, right angle, parallel, perpendicular, bar chart</p>



## Greasley Beauvale Primary School Maths Curriculum



Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators  
Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.  
Recognise and show using diagrams, equivalent fractions with small denominators.  
Compare and order unit fractions, and fractions with the same denominators.  
Add and subtract fractions with the same denominator within one whole for example  $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ .  
Solve problems that involve all of the above.

### **Algebra**

Solve problems, including missing number problems.

### **Measurement**

Measure, compare, add and subtract using mixed units: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).

Add and subtract amounts of money, including mixed units, to give change, using both £ and p in practical contexts.

Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour 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.

Know the number of seconds in a minute and the number of days in each month, year and leap year.

Compare durations of events [for example to calculate the time taken by particular events or tasks].

Measure the perimeter of simple 2D shapes.

Draw 2D shapes.

3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them.

Recognise angles as a property of shape or a description of a turn.

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.

Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

### **Statistics**

Interpret and present data using bar charts, pictograms and tables and use simple scales with increasing accuracy.

Solve one-step and two-step questions using information presented in scaled bar charts, pictograms and tables.



## Greasley Beauvale Primary School Maths Curriculum



<h3>Year 4</h3>	<p><b><u>Place Value</u></b> Count in multiples of 6, 7, 9, 25 and 1000. Count backwards through zero to include negative numbers. 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. 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) Compare and order numbers beyond 1000. Round any number to the nearest 10, 100 or 1000. Solve number and practical problems that involve all of the above with increasingly large positive numbers</p> <p><b><u>Addition and subtraction</u></b> Estimate and use inverse operations to check answers to a calculation. Add and subtract numbers with up to four digits using formal written methods of columnar addition and subtraction where appropriate. Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.</p> <p><b><u>Multiplication and division</u></b> Recall multiplication and division facts for multiplication tables up to 12 x 12. 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. Recognise and use factor pairs and commutativity in mental calculations. Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.</p> <p><b><u>Fractions, decimals and percentages</u></b> Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10. Recognise and show using diagrams, families of common equivalent fractions. Solve problems involving increasingly hard fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalent to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math>. Round decimals with one decimal place to the nearest whole number.</p>	<ul style="list-style-type: none"><li>• <b>Place Value:</b> Understand thousands, round numbers</li><li>• <b>Addition/Subtraction:</b> Solve two-step problems</li><li>• <b>Multiplication/Division:</b> Use all tables to <math>12 \times 12</math></li><li>• <b>Fractions/Decimals:</b> Compare decimals, solve problems</li><li>• <b>Measurement:</b> Convert units, find area/perimeter</li><li>• <b>Geometry:</b> Classify shapes, symmetry, coordinates</li><li>• <b>Statistics:</b> Use time graphs, solve comparison problems</li></ul>	Thousands, rounding, factor, product, quotient, hundredths, decimal, area, coordinates, translation, acute, obtuse
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## Greasley Beauvale Primary School Maths Curriculum



<b>Year 5</b>	<p>Compare numbers, amounts and quantities with the same number of decimal places up to two decimal places. Find the effect of dividing a one- or two-digit number by 10 and 100 identifying the value of the digits in the answers as ones, tenths and hundredths. Solve simple measure and money problems involving fractions and decimals to two decimal places.</p> <p><b><u>Measurement</u></b> Convert between different units of measure (for example, kilometre to metre; hour to minute) Estimate, compare and calculate different measures. Estimate, compare and calculate different measures, including money in pounds and pence. 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. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Find the area of rectilinear shapes by counting squares.</p> <p><b><u>Geometry</u></b> Compare and classify geometric shapes, including different quadrilaterals and triangles, based on their properties and sizes. Identify lines of symmetry in 2-D shapes presented in different orientations. Identify acute and obtuse angles and compare and order angles up to two right angles by size. Identify lines of symmetry in 2D shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry. Describe positions on a 2D grid as coordinates in the first quadrant. 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.</p> <p><b><u>Statistics</u></b> 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.</p>		
	<p><b><u>Place Value</u></b> Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.</p>	<ul style="list-style-type: none"><li>• <b>Place Value:</b> Read/write to 1,000,000, use negative numbers</li></ul>	<p>Prime, composite, squared, cubed, improper fraction, mixed</p>



## Greasley Beauvale Primary School Maths Curriculum



Count forwards and backwards with positive and negative whole numbers, including through zero.  
Read, write (order and compare) numbers to at least 1,000,000 and determine the value of each digit.  
Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.  
(Read, Write), order and compare numbers to at least 1,000,000 and determine the value of each digit.  
Interpret negative numbers in context.  
Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.  
Solve number problems and practical problems that involve all of the above.

### **Addition and subtraction**

Use rounding to check answers to calculations and determine in the context of a problem levels of accuracy.  
Add and subtract whole numbers with more than 4 digits including using formal written methods (columnar addition and subtraction).  
Add and subtract numbers mentally with increasingly large numbers.  
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 the meaning of the equals sign.

### **Multiplication and division**

Identify multiples and factors including finding all factor pairs of a number and common factors of two numbers.  
Know and use vocabulary of prime numbers, prime factors and composite (non-prime) numbers.  
Establish whether a number up to 100 is prime and recall prime numbers up to 19.  
Recognise and use square numbers and cube numbers the notation for squared and cubed.  
Multiply numbers up to four digits by a one or two-digit number using a formal written method including long multiplication for two-digit numbers.  
Multiply and divide numbers mentally drawing upon known facts.  
Divide numbers up to four digits by a one-digit number using formal written method of short division and interpret remainders appropriately for the context.  
Multiply and divide whole numbers and those involving decimals by 10,100 and 1000.  
Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.  
Solve problems involving multiplication and division, including scaling by simple fraction and problems involving simple rates.  
Solve problems involving addition subtraction multiplication and division and a combination of these, including understanding the meaning of the equals sign.

- **Addition/Subtraction:** Solve multi-step problems
- **Multiplication/Division:** Use long multiplication/division
- **Fractions/Decimals/Percentages:** Convert between forms
- **Measurement:** Use metric/imperial units, calculate area/volume
- **Geometry:** Classify polygons, find missing angles

number, thousandths, metric, imperial, volume, capacity



## Greasley Beauvale Primary School Maths Curriculum



### **Fractions, decimals and percentages**

Identify name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths.

Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements  $> 1$  as mixed number for example. Compare and order fractions whose denominators are all multiples of the same number.

Read and write decimal numbers as fractions for example  $0.71 = 71/100$ .

Recognise and use thousandths and relate them to tenths hundredths and decimal equivalents.

Round decimals with two decimal places to the nearest whole number and to one decimal place.

Read, say, write, order and compare numbers with up to three decimal places.

Solve problems involving number up to three decimal places

Recognise the percent symbol and understand that percent relates to number of parts per hundred and write percentages as a fraction with the denominator 100 and as a decimal.

Solve problems which require knowing percentage and decimal equivalents of  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{2}{5}$ ,  $\frac{4}{5}$  and those fractions with the nominator of a multiple of 10 or 25.

### **Measurement**

Convert between different units of metric measure (for example, kilometre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).

Understand and use approximate equivalences between metric units and common imperial units, such as inches, pounds and pints.

Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Use all four operations to solve problems involving measure [for examples, money]

Solve problems involving converting between units of time. 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 ( $\text{cm}^2$ ) and square metres ( $\text{m}^2$ ) and estimate the area of irregular shapes.

Estimate volume [for example, using  $1\text{cm}^3$  blocks to build cuboids (including cubes)] and capacity [for example, using water]

### **Geometry**

Identify 3D shapes, including cubes and other cuboids, from 2D representations.

Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Use the properties of rectangles to deduce related facts and find missing lengths and angles.



## Greasley Beauvale Primary School Maths Curriculum



<b>Year 6</b>	<p><b><u>Place Value</u></b> Read, write (order and compare) numbers to at least 10,000,000 and determine the value of each digit. (Read, Write), order and compare numbers to at least 10,000,000 and determine the value of each digit. Round any whole number to a requires degree of accuracy. Use negative numbers in context and calculate intervals across zero. Solve number problems that involve all of the above.</p> <p><b><u>Addition and subtraction</u></b> Perform mental calculations, including with mixed operations and large numbers 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.</p> <p><b><u>Multiplication and division</u></b> Identify common factors, common multiples and prime numbers. Use estimation to check to answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Multiply multi-digit numbers up to four digits by a two-digit whole number using the formal written method of long multiplication Divide numbers up to four 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. Divide numbers up to four digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. Perform mental calculations including with mixed operations and large numbers. Solve problems involving addition subtraction multiplication and division. Use their knowledge of the order of operations to carry out calculations involving the four operations.</p> <p><b><u>Fractions, decimals and percentages</u></b> Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions &gt; 1 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>] Divide proper fractions by whole numbers [for example, <math>\frac{1}{3} \div 2 = \frac{1}{6}</math>]</p>	<ul style="list-style-type: none"> <li>• <b>Place Value:</b> Read/write to 10,000,000, round accurately</li> <li>• <b>Addition/Subtraction:</b> Use order of operations</li> <li>• <b>Multiplication/Division:</b> Use long division, interpret remainders</li> <li>• <b>Fractions/Decimals/Percentages:</b> Simplify, calculate, convert</li> <li>• <b>Ratio &amp; Proportion:</b> Solve scaling and comparison problems</li> <li>• <b>Algebra:</b> Use formulae, sequences, unknowns</li> <li>• <b>Measurement:</b> Use formulae for area/volume, convert units</li> <li>• <b>Geometry:</b> Draw shapes, calculate angles, understand circles</li> </ul>	<p>Order of operations, common factor, common multiple, simplify, algebra, formula, variable, ratio, proportion, circumference, diameter, radius</p>
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## Greasley Beauvale Primary School Maths Curriculum



Identify the value of each digit in numbers given to three decimal places.  
Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.  
Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.  
Multiply 1-digit numbers with up to two decimal places 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 specific degrees of accuracy.  
Recall and use equivalence is between simple fractions decimals and percentages including in different contexts. 7

### **Ratio and 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 the calculation of percentages and the use of percentages for comparison.  
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.

### **Algebra**

Use simple formula generate and describe linear number sequences express missing number problems algebraically find pairs of numbers that satisfy an equation with two unknowns enumerate possibilities of combinations of two variables.

### **Measurement**

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.  
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.  
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.  
Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres ( $\text{cm}^3$ ) and cubic metres ( $\text{m}^3$ ), and extending to other units (for example,  $\text{mm}^3$  and  $\text{km}^3$ ).



## Greasley Beauvale Primary School Maths Curriculum



	<p><b><u>Geometry</u></b> Draw 2D shapes using given dimensions and angles. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise, describe and build simple 3D shapes, including making nets.</p>		
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