



**Hillside Primary School**  
**Maths: Progression of Skills, Knowledge and Vocabulary.**

EYFS						
	22-36 months	30-50 months	40-60+ months	Early Learning Goal		
<b>EYFS Number</b>	<ul style="list-style-type: none"> <li>Selects a small number of objects from a group when asked, for example, 'please give me one', 'please give me two'. Recites some number names in sequence.</li> <li>Creates and experiments with symbols and marks representing ideas of number.</li> <li>Begins to make comparisons between quantities.</li> <li>Uses some language of quantities, such as 'more' and 'a lot'.</li> <li>Knows that a group of things changes in quantity when something is added or taken away.</li> </ul>	<ul style="list-style-type: none"> <li>Uses some number names and number language spontaneously.</li> <li>Uses some number names accurately in play. • Recites numbers in order to 10. 24</li> <li>Knows that numbers identify how many objects are in a set.</li> <li>Beginning to represent numbers using fingers, marks on paper or pictures.</li> <li>Sometimes matches numeral and quantity correctly. • Shows curiosity about numbers by offering comments or asking questions.</li> <li>Compares two groups of objects, saying when they have the same number.</li> <li>Shows an interest in number problems.</li> <li>Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same.</li> <li>Shows an interest in numerals in the environment.</li> <li>Shows an interest in representing numbers.</li> <li>Realises not only objects, but anything can be counted, including steps, claps or jumps.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise some numerals of personal significance. Recognises numerals 1 to 5.</li> <li>Counts up to three or four objects by saying one number name for each item.</li> <li>Counts actions or objects which cannot be moved. Counts objects to 10, and beginning to count beyond 10.</li> <li>Counts out up to six objects from a larger group.</li> <li>Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.</li> <li>Counts an irregular arrangement of up to ten objects.</li> <li>Estimates how many objects they can see and checks by counting them.</li> <li>Uses the language of 'more' and 'fewer' to compare two sets of objects.</li> <li>Finds the total number of items in two groups by counting all of them.</li> <li>Says the number that is one more than a given number. Finds one more or one less from a group of up to five objects, then ten objects.</li> <li>In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.</li> <li>Records, using marks that they can interpret and explain. Begins to identify own mathematical problems based on own interests and fascinations.</li> </ul>	<ul style="list-style-type: none"> <li>Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number.</li> <li>Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.</li> <li>They solve problems, including doubling, halving and sharing.</li> </ul>		
<b>EYFS Shape, Space and Measure</b>	<ul style="list-style-type: none"> <li>Notices simple shapes and patterns in pictures.</li> <li>Beginning to categorise objects according to properties such as shape or size.</li> <li>Begins to use the language of size.</li> <li>Understands some talk about immediate past and future, e.g. 'before', 'later' or 'soon'.</li> <li>Anticipates specific time-based events such as mealtimes or home time.</li> </ul>	<ul style="list-style-type: none"> <li>Shows an interest in shape and space by playing with shapes or making arrangements with objects.</li> <li>Shows awareness of similarities of shapes in the environment.</li> <li>Uses positional language.</li> <li>Shows interest in shape by sustained construction activity or by talking about shapes or arrangements.</li> <li>Shows interest in shapes in the environment.</li> <li>Uses shapes appropriately for tasks.</li> <li>Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'</li> </ul>	<ul style="list-style-type: none"> <li>Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes.</li> <li>Selects a particular named shape.</li> <li>Can describe their relative position such as 'behind' or 'next to'.</li> <li>Orders two or three items by length or height.</li> <li>Orders two items by weight or capacity. • Uses familiar objects and common shapes to create and recreate patterns and build models.</li> <li>Uses everyday language related to time.</li> <li>Beginning to use everyday language related to money. Orders and sequences familiar events.</li> <li>Measures short periods of time in simple ways.</li> </ul>	<ul style="list-style-type: none"> <li>Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.</li> <li>They recognise, create and describe patterns.</li> <li>They explore characteristics of everyday objects and shapes and use mathematical language to describe them.</li> </ul>		
<b>National Curriculum KS1 and KS2</b>						
<b>Number and Place Value</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>



**Hillside Primary School**  
**Maths: Progression of Skills, Knowledge and Vocabulary.**

<b>Counting</b>	<ul style="list-style-type: none"> <li>count to and across 100, <b>forwards and backwards</b>, beginning with 0 or 1, or from any given number</li> <li>count, read and write numbers to 100 in numerals; count in <b>multiples</b> of twos, fives and tens</li> </ul>	<ul style="list-style-type: none"> <li>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</li> </ul>	<ul style="list-style-type: none"> <li>count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 <b>more or less</b> than a given number.</li> </ul>	<ul style="list-style-type: none"> <li>count in <b>multiples</b> of 6, 7, 9, 25 and 1000</li> <li>find 1000 more or less than a given number</li> <li>count backwards through zero to include <b>negative numbers</b></li> </ul>	<ul style="list-style-type: none"> <li>count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</li> <li>interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero</li> </ul>	<ul style="list-style-type: none"> <li>use negative numbers in context, and calculate intervals across zero</li> </ul>
<b>Place Value</b>		<ul style="list-style-type: none"> <li>recognise the <b>place value</b> of each digit in a two-digit number</li> <li><b>compare and order</b> numbers from 0 up to 100; use &lt;, &gt; and = signs</li> </ul>	<ul style="list-style-type: none"> <li>recognise the place value of each digit in a three-digit number</li> <li>compare and order numbers up to 1000</li> </ul>	<ul style="list-style-type: none"> <li>recognise the place value of each digit in a four-digit number</li> <li>order and compare numbers beyond 1000</li> <li><b>round</b> any number to the nearest 10, 100 or 1000</li> </ul>	<ul style="list-style-type: none"> <li>read, write, order and compare numbers up to 1 000 000 and determine the value of each digit</li> <li>round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</li> </ul>	<ul style="list-style-type: none"> <li>read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</li> <li>round any whole number to a required degree of accuracy</li> </ul>
<b>Representing number</b>	<ul style="list-style-type: none"> <li><b>identify and represent</b> numbers using objects and pictorial representations including the <b>number line</b>, &amp; use language of: equal to, more than, less than (fewer), most, least</li> <li>read and write numbers from 1 to 20 in <b>numerals and words</b></li> <li>read, write and interpret mathematical statements involving <b>addition (+), subtraction (-) and equals (=) signs</b></li> </ul>	<ul style="list-style-type: none"> <li>identify, represent and <b>estimate</b> numbers using different representations, including the number line</li> <li>read and write numbers to at least 100 in numerals and in words</li> </ul>	<ul style="list-style-type: none"> <li>identify, represent and estimate numbers using different representations</li> <li>read and write numbers up to 1000 in numerals and in words</li> </ul>	<ul style="list-style-type: none"> <li>identify, represent and estimate numbers using <b>different representations</b></li> <li>read <b>Roman numerals</b> to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value</li> </ul>	<ul style="list-style-type: none"> <li>read Roman numerals to 1000 (M) and recognise years written in Roman numerals</li> <li>recognise and use <b>square numbers</b> and <b>cube numbers</b>, and the notation for squared (<sup>2</sup>) and cubed (<sup>3</sup>)</li> </ul>	
<b>Number facts (+/-)</b>	<ul style="list-style-type: none"> <li>given a number, identify <b>one more and one less</b></li> <li>represent and use <b>number bonds and related subtraction facts within 20</b></li> </ul>	<ul style="list-style-type: none"> <li>use place value and number facts to solve problems</li> <li>recall and use addition and subtraction facts to 20 fluently, and <b>derive and use related facts up to 100</b></li> </ul>				
<b>Mental +/-</b>	<ul style="list-style-type: none"> <li>add and subtract <b>one-digit</b> and two-digit numbers to 20, including zero</li> </ul>	<ul style="list-style-type: none"> <li>add and subtract numbers using concrete objects, pictorial representations, and <b>mentally</b>, including: TO+O, TO+T, TO+TO and O+O+O</li> <li>show that addition of two numbers can be done in <b>any order (commutative)</b> and subtraction of one number from another cannot</li> </ul>	<ul style="list-style-type: none"> <li>add and subtract numbers mentally, including: HTO+O, HTO+T and HTO+H</li> </ul>		<ul style="list-style-type: none"> <li>add and subtract numbers mentally with increasingly large numbers</li> </ul>	<ul style="list-style-type: none"> <li>perform mental calculations, including with <b>mixed operations</b> and large numbers</li> </ul>
<b>Written +/-</b>			<ul style="list-style-type: none"> <li>add and subtract numbers with up to three digits, using <b>formal written methods of columnar addition and subtraction</b></li> </ul>	<ul style="list-style-type: none"> <li>add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</li> </ul>	<ul style="list-style-type: none"> <li>add and subtract whole numbers with more than 4 digits, including using formal written methods</li> </ul>	
<b>Problems +/-</b>	<ul style="list-style-type: none"> <li><b>solve one-step problems</b> that involve addition and subtraction, using concrete objects and pictorial representations, and <b>missing number problems</b> such as <math>7 = \square - 9</math>.</li> </ul>	<ul style="list-style-type: none"> <li>solve problems with addition and subtraction, using concrete, pictorial and abstract representations</li> <li>recognise and use the <b>inverse relationship</b> between addition and subtraction and use this to check calculations and solve missing number problems.</li> </ul>	<ul style="list-style-type: none"> <li>estimate the answer to a calculation and use inverse operations to check answers</li> <li>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</li> </ul>	<ul style="list-style-type: none"> <li>estimate and use inverse operations to check answers to a calculation</li> <li>solve addition and subtraction <b>two-step problems</b> in contexts, deciding which operations and methods to use and why</li> </ul>	<ul style="list-style-type: none"> <li>use <b>rounding to check answers</b> to calculations and determine, in the context of a problem, levels of accuracy</li> <li>solve addition and subtraction <b>multi-step problems</b> in contexts, deciding which operations and methods to use and why</li> </ul>	
<b>Number facts (x/÷)</b>		<ul style="list-style-type: none"> <li>recall and use <b>multiplication and division facts</b> for the 2, 5 and 10 multiplication tables, including recognising <b>odd and even numbers</b></li> </ul>	<ul style="list-style-type: none"> <li>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> </ul>	<ul style="list-style-type: none"> <li>recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></li> </ul>	<ul style="list-style-type: none"> <li>identify <b>multiples and factors</b>, including finding all <b>factor pairs</b> of a number, and <b>common factors</b> of two numbers</li> </ul>	<ul style="list-style-type: none"> <li>identify common factors, common multiples and prime numbers</li> </ul>



**Hillside Primary School**  
**Maths: Progression of Skills, Knowledge and Vocabulary.**

					<ul style="list-style-type: none"> <li>know and use the vocabulary of prime numbers, <b>prime factors and composite (non-prime) numbers</b></li> <li>establish whether a number up to 100 is prime and recall prime numbers up to 19</li> </ul>	
<b>Mental (x/÷)</b>	<ul style="list-style-type: none"> <li>calculate mathematical <b>statements</b> for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs</li> <li>show that multiplication of two numbers can be done in any <b>order</b> (commutative) and division of one number by another cannot</li> </ul>	<ul style="list-style-type: none"> <li>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 <b>mental methods</b></li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>recognise and use <b>factor pairs</b> and commutativity in mental calculations</li> </ul>	<ul style="list-style-type: none"> <li>multiply and divide numbers mentally drawing upon known facts</li> <li>multiply and divide whole numbers and those involving <b>decimals</b> by 10, 100 and 1000</li> </ul>	<ul style="list-style-type: none"> <li>perform mental calculations, including <b>with mixed operations</b> and large numbers</li> </ul>	
<b>Written (x/÷)</b>		<ul style="list-style-type: none"> <li>Progress to formal written methods calculations as above</li> </ul>	<ul style="list-style-type: none"> <li>multiply two-digit and three-digit numbers by a one-digit number using formal written layout</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>divide numbers up to 4 digits by a one-digit number using the formal written method of short division and <b>interpret remainders</b> appropriately for the context</li> </ul>	<ul style="list-style-type: none"> <li>multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</li> <li>divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as <b>whole number remainders, fractions, or by rounding, as appropriate for the context</b></li> <li>divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, <b>interpreting remainders according to context</b></li> </ul>	
<b>Problems (x/÷)</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> <li>solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the <b>equals sign</b></li> <li>solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</li> </ul>	<ul style="list-style-type: none"> <li>use their knowledge of the order of operations to carry out calculations involving the four operations</li> <li>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>solve problems involving addition, subtraction, multiplication and division</li> <li>use <b>estimation</b> to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> </ul>
<b>Recognising fractions</b>	<ul style="list-style-type: none"> <li>recognise, find and name <b>a half</b> as one of two <b>equal parts</b> of an object, shape or quantity</li> <li>recognise, find and name <b>a quarter</b> as one of four equal parts of an object, shape or quantity.</li> </ul>	<ul style="list-style-type: none"> <li>recognise, find, name and write fractions <b>1/3, 1/4, 2/4 and 3/4</b> of a length, shape, set of objects or quantity</li> </ul>	<ul style="list-style-type: none"> <li>count up and down in <b>tenths</b>;</li> <li>recognise that tenths arise from dividing an object into <b>10 equal parts</b> and in dividing one-digit numbers or quantities by 10</li> </ul>	<ul style="list-style-type: none"> <li>count up and down in <b>hundredths</b>;</li> <li>recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.</li> </ul>	<ul style="list-style-type: none"> <li>recognise <b>mixed numbers</b> and <b>improper fractions</b> and <b>convert</b> from one form to the other and write mathematical <b>statements &gt; 1 as a mixed number</b></li> </ul>	

<b>Fractions, Decimals and Percentages</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
--	---------------	---------------	---------------	---------------	---------------	---------------



**Hillside Primary School**  
**Maths: Progression of Skills, Knowledge and Vocabulary.**

Comparing fractions			<ul style="list-style-type: none"> <li>•compare and order unit fractions, and fractions with the same <b>denominators</b></li> <li>•recognise and show, using diagrams, <b>equivalent fractions</b> with small denominators</li> </ul>	<ul style="list-style-type: none"> <li>•recognise and show, using diagrams, families of <b>common equivalent fractions</b></li> </ul>	<ul style="list-style-type: none"> <li>•compare and order fractions whose denominators are all multiples of the same number</li> <li>•identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> </ul>	<ul style="list-style-type: none"> <li>•use common factors to simplify fractions</li> <li>•use common multiples to express fractions in the same denomination</li> <li>•<b>compare and order fractions</b>, including fractions <math>&gt; 1</math></li> </ul>
Finding fractions of quantities			<ul style="list-style-type: none"> <li>•recognise, find and write fractions of a discrete set of objects: unit fractions and <b>non-unit fractions</b> with small denominators</li> <li>•recognise and use fractions as numbers: unit fractions and nonunit fractions with small denominators</li> </ul>	<ul style="list-style-type: none"> <li>•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</li> </ul>		
Fraction calculations		<ul style="list-style-type: none"> <li>•write simple fractions for example, <math>1/2</math> of <math>6 = 3</math> and recognise the equivalence of <math>2/4</math> and <math>1/2</math>.</li> </ul>	<ul style="list-style-type: none"> <li>•add and subtract fractions with the same denominator within one whole [for example, <math>5/7 + 1/7 = 6/7</math> ]</li> </ul>	<ul style="list-style-type: none"> <li>•add and subtract fractions with the same denominator</li> </ul>	<ul style="list-style-type: none"> <li>•add and subtract fractions with the same denominator and denominators that are multiples of the same number</li> <li>•multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</li> </ul>	<ul style="list-style-type: none"> <li>•add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>•multiply simple pairs of proper fractions, writing the answer in its <b>simplest form</b></li> <li>•divide proper fractions by whole numbers</li> </ul>
Decimals as fractional amounts				<ul style="list-style-type: none"> <li>•recognise and write <b>decimal equivalents</b> of any number of tenths or hundredths</li> <li>•recognise and write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math> and <math>\frac{3}{4}</math></li> <li>•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</li> </ul>	<ul style="list-style-type: none"> <li>•<b>read and write decimal numbers as fractions</b></li> </ul>	<ul style="list-style-type: none"> <li>•associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction</li> <li>•identify the value of each digit in numbers given to <b>three decimal places</b></li> </ul>
Ordering decimals				<ul style="list-style-type: none"> <li>•round decimals with one decimal place to the nearest whole number</li> <li>•compare numbers with the same number of decimal places up to two decimal places</li> </ul>	<ul style="list-style-type: none"> <li>•recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>•round decimals with two decimal places to the nearest whole number and to one decimal place</li> <li>•read, write, order and compare numbers with up to three decimal places</li> </ul>	
Calculating with decimals						<ul style="list-style-type: none"> <li>•multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places</li> <li>•multiply one-digit number with up to two decimal places by whole numbers</li> <li>•use written division methods in cases where the answer has up to two decimal places</li> </ul>
Percentages					<ul style="list-style-type: none"> <li>•recognise the <b>per cent symbol (%)</b> and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal</li> </ul>	<ul style="list-style-type: none"> <li>•solve problems involving the <b>calculation of percentages</b> [for example, of measures, and such as 15% of 360] and the use of <b>percentages for comparison</b></li> </ul>



**Hillside Primary School**  
**Maths: Progression of Skills, Knowledge and Vocabulary.**

Fraction problems			<ul style="list-style-type: none"> <li>•solve problems using all fraction knowledge</li> </ul>	<ul style="list-style-type: none"> <li>•solve simple measure and money problems involving fractions and decimals to two decimal places</li> </ul>	<ul style="list-style-type: none"> <li>•solve problems involving number up to three decimal places</li> <li>•solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25</li> </ul>	<ul style="list-style-type: none"> <li>•solve problems which require answers to be rounded to specified degrees of accuracy</li> <li>•recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</li> </ul>
Ratio & Proportion						<ul style="list-style-type: none"> <li>•solve problems involving the <b>relative sizes of two quantities</b> where missing values can be found by using integer multiplication and division facts</li> <li>•solve problems involving similar shapes where the <b>scale factor</b> is known or can be found</li> <li>•solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</li> </ul>
Algebra						<ul style="list-style-type: none"> <li>•<b>use simple formulae</b></li> <li>•<b>generate and describe linear number sequences</b></li> <li>•<b>express missing number</b> problems algebraically</li> <li>•find pairs of numbers that satisfy an equation with <b>two unknowns</b></li> <li>•<b>enumerate possibilities</b> of combinations of <b>two variables</b>.</li> </ul>
Measures	<ul style="list-style-type: none"> <li>•<b>compare, describe and solve practical problems</b> for: length/height, weight/mass, capacity/volume &amp; time</li> <li>•<b>measure</b> and begin to <b>record length/height, weight/mass, capacity/volume &amp; time</b></li> </ul>	<ul style="list-style-type: none"> <li>•choose and use <b>appropriate standard units to estimate and measure</b> length/height (m/cm); mass (kg/g); <b>temperature</b> (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</li> <li>•<b>compare and order lengths</b>, mass, volume/capacity and record the results using &gt;, &lt; and =</li> </ul>	<ul style="list-style-type: none"> <li>•measure, compare, <b>add and subtract lengths</b> (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> </ul>	<ul style="list-style-type: none"> <li>•<b>Convert between different units of measure</b> estimate, compare and calculate different measures, including <b>money in pounds and pence</b></li> </ul>	<ul style="list-style-type: none"> <li>•convert between different <b>units of metric measure</b></li> <li>•understand and use <b>approximate equivalences</b> between <b>metric units and common imperial units</b> such as inches, pounds and pints</li> <li>•<b>estimate volume and capacity</b></li> </ul>	<ul style="list-style-type: none"> <li>•solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</li> <li>•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</li> </ul>
Mensuration			<ul style="list-style-type: none"> <li>•measure the <b>perimeter</b> of simple 2-D shapes</li> </ul>	<ul style="list-style-type: none"> <li>•measure and calculate the perimeter of a <b>rectilinear figure</b> (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares</li> </ul>	<ul style="list-style-type: none"> <li>•measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</li> <li>•<b>calculate and compare the area of rectangles</b> (including squares), and including using standard units, <b>square centimetres</b> (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and <b>estimate the area of irregular shapes</b></li> </ul>	<ul style="list-style-type: none"> <li>•recognise that shapes with the same areas can have different perimeters and vice versa</li> <li>•recognise when it is possible to use <b>formulae for area and volume of shapes</b></li> <li>•calculate the <b>area of parallelograms and triangles</b></li> <li>•calculate, estimate and compare <b>volume of cubes and cuboids using standard units</b>, including cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units.</li> </ul>

Measure and Statistics	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
------------------------	--------	--------	--------	--------	--------	--------



**Hillside Primary School**  
**Maths: Progression of Skills, Knowledge and Vocabulary.**

<b>Money</b>	<ul style="list-style-type: none"> <li>recognise and know the value of different <b>denominations of coins and notes</b></li> </ul>	<ul style="list-style-type: none"> <li>recognise and use <b>symbols for pounds</b> (£) and pence (p); combine amounts to make a particular value</li> <li>find different combinations of coins that equal the same amounts of money</li> <li>solve simple problems in a practical context involving addition and subtraction of money of the same unit, including <b>giving change</b></li> </ul>	<ul style="list-style-type: none"> <li>add and subtract amounts of money to give change, using both £ and p in practical contexts</li> </ul>		<ul style="list-style-type: none"> <li>use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling</li> </ul>	
<b>Time</b>	<ul style="list-style-type: none"> <li><b>sequence</b> events in <b>chronological order</b> using language recognise and use language relating to dates, including <b>days of the week, weeks, months and years</b></li> <li>tell the <b>time to the hour and half past the hour</b> and draw the <b>hands on a clock face</b> to show these times</li> </ul>	<ul style="list-style-type: none"> <li>compare and sequence <b>intervals of time</b></li> <li>tell and write the time to <b>five minutes</b>, including <b>quarter past/to the hour</b> and draw the hands on a <b>clock face</b> to show these times</li> <li>know the number of minutes in an hour and the number of hours in a day</li> </ul>	<ul style="list-style-type: none"> <li>tell and write the time from an <b>analogue clock</b>, including using <b>Roman numerals</b> from I to XII, and <b>12-hour and 24-hour clocks</b></li> <li>estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of <b>seconds, minutes and hours</b>; use vocabulary such as <b>o'clock, a.m./p.m., morning, afternoon, noon and midnight</b></li> <li>know the number of seconds in a minute and the number of days in each month, year and leap year compare durations of events</li> </ul>	<ul style="list-style-type: none"> <li>Convert between different units of measure (e.g. Hours to minutes)</li> <li>read, write and convert time between analogue and digital 12- and 24-hour clocks</li> <li>solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days</li> </ul>	<ul style="list-style-type: none"> <li>solve problems involving converting between units of time</li> </ul>	
<b>Shape vocabulary</b>	<ul style="list-style-type: none"> <li>recognise and name <b>common 2-D shapes</b> (e.g. <b>Square, circle, triangle</b>)</li> <li>recognise and name <b>common 3-D shapes</b> (e.g. <b>Cubes, cuboids, pyramids &amp; spheres</b>)</li> </ul>	<p>Introduce further vocabulary related to <b>properties of shapes. (vertices, edges, faces, symmetry)</b></p>	<ul style="list-style-type: none"> <li>identify <b>horizontal and vertical lines</b> and pairs of <b>perpendicular and parallel lines</b></li> </ul>		<ul style="list-style-type: none"> <li>illustrate and name parts of circles, including <b>radius, diameter and circumference</b> and know that the diameter is twice the radius</li> </ul>	
<b>Properties of 2-d shape</b>		<ul style="list-style-type: none"> <li>identify and describe the properties of 2-D shapes, including the number of sides and <b>line symmetry</b> in a <b>vertical line</b>.</li> <li><b>compare and sort</b> common 2-D and 3-D shapes and everyday objects.</li> </ul>	<ul style="list-style-type: none"> <li>draw 2-D shapes</li> </ul>	<ul style="list-style-type: none"> <li>compare and classify <b>geometric shapes, including quadrilaterals and triangles</b>, based on properties and sizes</li> <li>identify <b>lines of symmetry</b> in 2-D shapes presented in <b>different orientations</b></li> <li>complete a simple symmetric figure with respect to a specific line of symmetry.</li> </ul>	<ul style="list-style-type: none"> <li>use the properties of rectangles to deduce related facts and find missing lengths and angles</li> <li>distinguish between <b>regular and irregular polygons</b> based on reasoning about <b>equal sides and angles</b>.</li> </ul>	<ul style="list-style-type: none"> <li>draw 2-D shapes using given dimensions and <b>angles</b></li> <li><b>compare and classify geometric shapes</b> based on their properties and sizes</li> </ul>
<b>Properties of 3-d shape</b>		<ul style="list-style-type: none"> <li>identify and describe the properties of 3-D shapes, including the number of <b>edges, vertices and faces</b></li> <li>identify 2-D shapes on the surface of 3-D shapes.</li> <li>compare and sort common 2-D and 3-D shapes and everyday objects.</li> </ul>	<ul style="list-style-type: none"> <li>make 3-D shapes using modelling materials</li> <li>recognise 3-D shapes in different <b>orientations</b> and describe them</li> </ul>		<ul style="list-style-type: none"> <li>identify 3-D shapes, including cubes and other cuboids, from 2-D <b>representations</b></li> </ul>	<ul style="list-style-type: none"> <li>recognise, describe and build simple 3-D shapes, including <b>making nets</b></li> <li>find <b>unknown angles</b> in any triangles, quadrilaterals, and regular polygons</li> </ul>
<b>Angles</b>			<ul style="list-style-type: none"> <li>recognise <b>angles</b> as a property of shape or a <b>description of a turn</b></li> <li>identify <b>right angles</b>, recognise that two right angles make a <b>half turn</b>, three make <b>three quarters of a turn and four a complete turn</b></li> <li>identify whether angles are greater or less than right angle</li> </ul>	<ul style="list-style-type: none"> <li>identify <b>acute and obtuse angles</b> and compare and order angles up to two right angles by size</li> </ul>	<ul style="list-style-type: none"> <li>know angles are measured in <b>degrees</b>: estimate and compare acute, obtuse and <b>reflex angles</b></li> <li>draw given angles, and measure them in degrees (°)</li> <li>identify <b>angles at a point and one whole turn</b> (total 360°); at a point on a <b>straight line</b> and ½ a turn (total 180°)</li> <li>identify other multiples of 90°</li> </ul>	<ul style="list-style-type: none"> <li>recognise angles where they meet at a point, are on a straight line, or are <b>vertically opposite</b>, and find <b>missing angles</b></li> </ul>



**Hillside Primary School**  
**Maths: Progression of Skills, Knowledge and Vocabulary.**

<b>Position &amp; Direction</b>	<ul style="list-style-type: none"> <li>describe <b>position, direction and movement</b>, including <b>whole, half, quarter and three-quarter turns</b>.</li> </ul>	<ul style="list-style-type: none"> <li><b>order and arrange combinations</b> of mathematical objects in <b>patterns and sequences</b>.</li> <li>use mathematical vocabulary to describe position, direction and movement, including movement in a <b>straight line</b> and distinguishing between <b>rotation</b> as a turn and in terms of right angles for <b>quarter, half and <math>\frac{3}{4}</math> turns</b></li> </ul>		<ul style="list-style-type: none"> <li>describe <b>positions</b> on a 2-D grid as <b>coordinates</b> in the <b>first quadrant</b></li> <li>describe movements between positions as <b>translations</b> of a given unit to the left/right and up/down</li> <li>plot specified points and draw sides to complete a given <b>polygon</b></li> </ul>	<ul style="list-style-type: none"> <li>identify, describe and represent the position of a shape following a <b>reflection or translation</b>, using the appropriate language, and know that the shape has not changed</li> </ul>	<ul style="list-style-type: none"> <li>describe positions on the <b>full coordinate grid (all four quadrants)</b></li> <li>draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</li> </ul>
<b>Interpreting data</b>		<ul style="list-style-type: none"> <li>interpret and construct simple <b>pictograms, tally charts, block diagrams and simple tables</b></li> </ul>	<ul style="list-style-type: none"> <li>interpret and present data using <b>bar charts, pictograms and tables</b></li> </ul>	<ul style="list-style-type: none"> <li>interpret and present discrete and continuous data using appropriate graphical methods, <b>including bar charts and time graphs</b></li> </ul>	<ul style="list-style-type: none"> <li>complete, read and <b>interpret</b> information in tables, including <b>timetables</b></li> </ul>	<ul style="list-style-type: none"> <li>interpret and construct <b>pie charts and line graphs</b> calculate and interpret the <b>mean</b> as an <b>average</b></li> </ul>
<b>Extract info from data</b>		<ul style="list-style-type: none"> <li>ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</li> <li>ask and answer questions about totalling and comparing <b>categorical data</b></li> </ul>	<ul style="list-style-type: none"> <li>solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables</li> </ul>	<ul style="list-style-type: none"> <li>solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</li> </ul>	<ul style="list-style-type: none"> <li>solve comparison, sum and difference problems using information presented in a line graph</li> </ul>	<ul style="list-style-type: none"> <li>use pie charts and line graphs to solve problems</li> </ul>