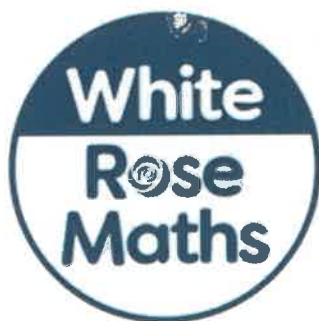


Penclawdd Primary School

Maths Calculation Strategies



Mathematics and Numeracy

At Penclawdd Primary School, we use the White Rose Maths scheme for the teaching of Maths from Reception to Year 6, which follows the mastery approach to learning. At the heart of White Rose Maths is the belief that all children can achieve.

White Rose Maths focuses on helping all children to build a deep understanding of maths concepts and confidence in maths.

For each year group the curriculum strands are broken down into small steps that build on prior knowledge to help children develop a deep and robust understanding of the concept before moving on.

Within this booklet, you will find the calculation strategies taught and used by your child in school.

Further information can be found at www.whiteroseeducation.com

Progression of skills - Addition

Year group	Skill
Nursery	<ul style="list-style-type: none">• Subitise to 3• Count how many• Make numbers to 5• Add 1 more (through songs and rhymes)
Reception	<ul style="list-style-type: none">• Conceptually subitise to 5• 1 more• Notice the composition of numbers within 10• Combine 2 groups• Add more
Year 1	<ul style="list-style-type: none">• Add together• Add more• Bonds within 10• Related facts within 20• Missing numbers






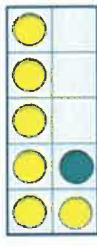


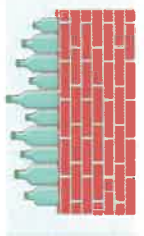

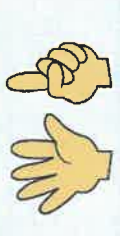

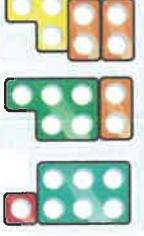
Progression of skills - Addition

Year group	Skill
Year 2	<ul style="list-style-type: none">• Add 1s to any number (related facts)• Add three 1-digit numbers• Add across a 10• Add multiples of 10• Add 10s to any number• Add two 2-digit numbers (not across a ten)• Add two 2-digit numbers (across a ten)• Missing numbers
Year 3	<ul style="list-style-type: none">• Add 1s, 10s and 100s to a 3-digit number• Add two numbers (no exchange)• Add two numbers across a 10 or 100• Complements to 100• Add fractions with the same denominator within 1 whole• Calculate the duration of events

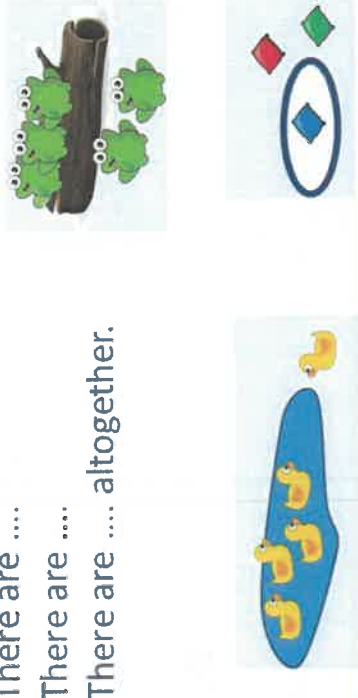
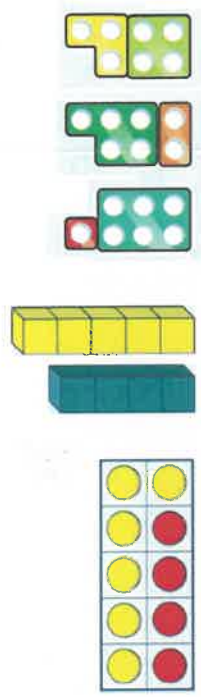
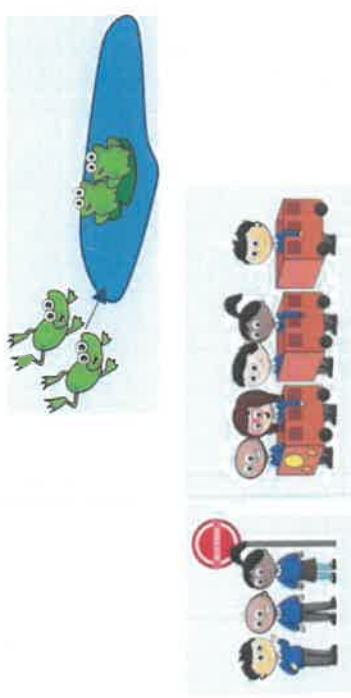
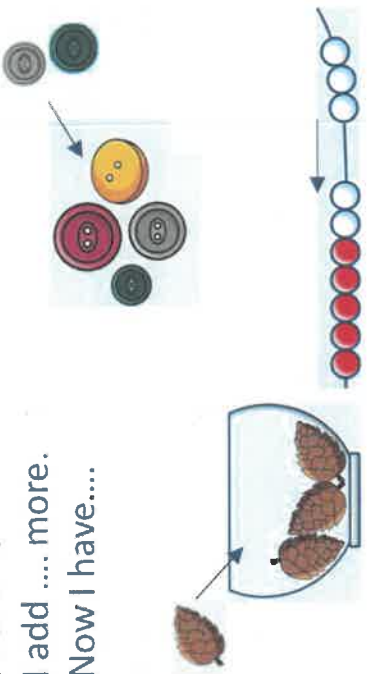
Progression of skills - Addition

Year group	Skill
Year 4	<ul style="list-style-type: none">• Add 1s, 10s and 100s to a 4-digit number• Add up to two 4-digit numbers• Add decimal numbers in the context of money• Add fractions and mixed numbers with the same denominator beyond 1 whole
Year 5	<ul style="list-style-type: none">• Add using mental strategies• Add whole numbers with more than 4 digits• Add decimals with up to 2 decimal places• Complements to 1• Add fractions with denominators that are a multiple of one another
Year 6	<ul style="list-style-type: none">• Add integers up to 10 million• Add decimals with up to 3 decimal places• Order of operations• Negative numbers• Add fractions


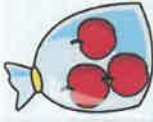


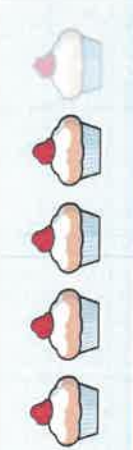


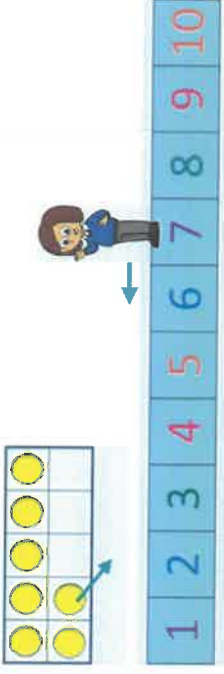

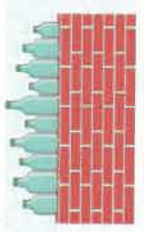


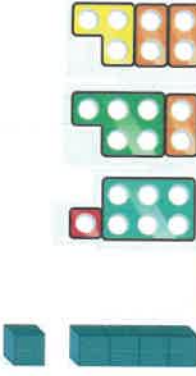
Addition

	<ul style="list-style-type: none"> • Have a deep understanding of numbers to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5 • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 and some number bonds to 10, including double facts.
<p>Progression of skills</p>	<p>Key representations</p>
<p>Conceptually subitise to 5</p> <p>Notice the parts that make up the whole.</p>	<p>What do you see? How do you see it?</p>    
<p>1 more</p> <p>Continue to link to stories, songs and rhymes.</p>	<p>1 more than ... is ...</p>   
<p>Notice the composition of numbers within 10</p> <p>Link to stories, songs and rhymes.</p>	<p>How many...? How many...? How many altogether?</p>      

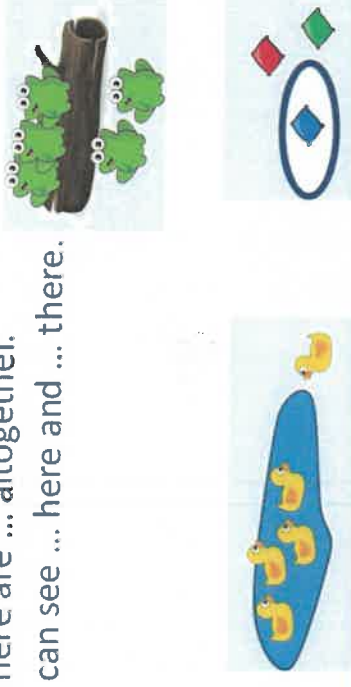
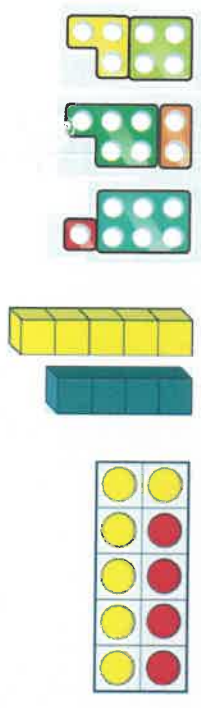

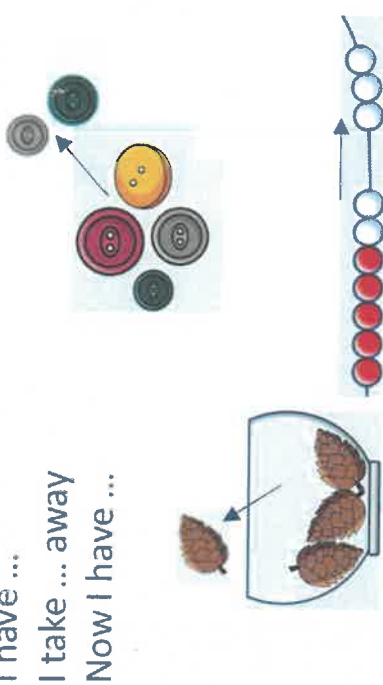
Addition

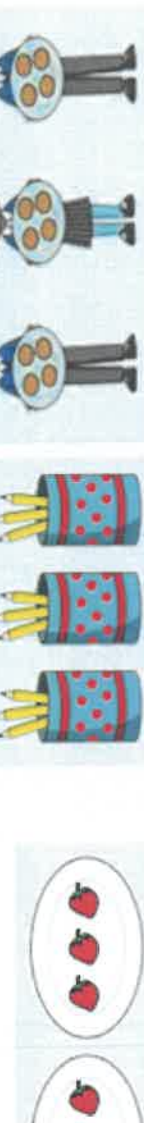
Progression of skills	Key representations	
<p>Combine 2 groups</p> <p>2 groups are combined to find the total.</p>	<p>There are</p> <p>There are</p> <p>There are altogether.</p> 	<p>.... and make</p> 
<p>Add more</p> <p>A quantity is increased.</p>	<p>First... Then.... Now....</p> 	<p>I have</p> <p>I add more.</p> <p>Now I have....</p> 

Subtraction

	<ul style="list-style-type: none"> • Have a deep understanding of number to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5 • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (and some subtraction facts) and some number bonds to 10, including double facts.
<h3>Progression of skills</h3>	<h3>Key representations</h3>
<p>Conceptually subitise to 5</p> <p>Notice the parts that make up the whole.</p>	<p>What do you see? How do you see it?</p>    
<p>1 less</p> <p>Continue to link to stories, songs and rhymes.</p>	<p>1 less than ... is ...</p>    
<p>Notice the composition of numbers within 10</p> <p>Link to stories, songs and rhymes.</p>	<p>How many...? How many...? How many altogether?</p>     

Subtraction

Progression of skills	Key representations	
<p>Partition</p> <p>Using objects, explore different ways to partition a number into 2 or more parts.</p>	<p>There are ... altogether. I can see ... here and ... there.</p> 	<p>... and ... make ...</p> 
<p>Take away</p> <p>A quantity is reduced.</p>	<p>First... Then... Now...</p> 	<p>I have ... I take ... away Now I have ...</p> 

<p>Reception</p>	<ul style="list-style-type: none"> • Have a deep understanding of number to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5 • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 and some number bonds to 10, including double facts. • Explore and represent patterns within numbers up to 10, including evens and odds, and how quantities can be distributed equally.
<p>Progression of skills</p>	<p>Key representations</p>
<p>Sharing</p> <p>Provide practical activities such as sharing items during snack time. Encourage children to check whether items have been shared fairly (equally).</p>	<p>There are ... altogether. They are shared equally between ... groups.</p> 
<p>Grouping</p> <p>Provide opportunities to make equal groups when tidying up or during snack time. Encourage children to check that each group has the same amount.</p>	<p>There are ... groups of ... There are ... altogether.</p> 