

## St Thomas' Federation and Princess Frederica Maths Curriculum



### Curriculum Aims:

At St Thomas' Federation and Princess Frederica, we want all our pupils to develop a **love of mathematics** and **experience successes** within the subject. We support all our pupils to become **fluent** mathematicians, who can use **quick recall of key number facts** to **solve problems** in a variety of contexts. Through a **Teaching for Mastery** approach, pupils develop **reasoning** skills and explore concepts **in depth**, enabling them to develop **confidence, competence** and **independence** with mathematics. Mistakes and misconceptions are an essential part of the learning process and **learning is built upon in manageable steps**, encouraging children to **make connections** and spot **patterns**. We aim to develop an ability in the children to express themselves fluently, to talk about the subject with assurance, using **correct mathematical language and vocabulary**. We encourage the effective use of mathematics as a tool in a wide range of **problem-solving activities** within school and, subsequently, adult life.

### Nursery

Autumn	Spring	Summer
<p><b><u>Number</u></b> Beginning to recognise and notice numbers in the environment</p> <p>Points or touches each item, saying one number for each item, using the stable number order</p> <p>Children enjoy joining in with number rhymes and songs</p> <p><b><u>Numerical Patterns</u></b> Children enjoy counting as far as they go They are able to use some number names and number language within play</p>	<p><b><u>Number</u></b> Children recognise that the last number said represents the total counted so far</p> <p>Children are developing an understanding of conservation of number</p> <p>They are becoming more able to link numerals with amounts up to 5 and beyond</p> <p><b><u>Numerical Patterns</u></b> Children are able to show finger numbers up to 5</p> <p>Children are developing understanding of ordinal counting and beginning to use it accurately in play (1st, 2nd, 3rd)</p> <p>Children are developing a sense of equal parts</p>	<p><b><u>Number</u></b> Children are able to subitise up to 3</p> <p>Through play and exploration, children are beginning to learn that numbers are composed of smaller numbers (part whole model)</p> <p>They are able to match a numeral with a group of items to show how many there are Children are able to say the number names in order and can count reliably using 1:1 correspondence</p> <p>Children experiment with their own symbols and marks as well as numerals to represent their own maths problems</p> <p><b><u>Numerical Patterns</u></b> Children can confidently count to 10 and back from 10 Children are able to show finger numbers up to 10</p> <p>Children understand the 'howmany' of each number</p>

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		Compares small groups of objects, saying when they have more or fewer
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### Reception

Autumn	Spring	Summer
<p><b><u>Number</u></b> Children are able to subitise up to 3</p> <p>Through play and exploration, children are beginning to learn that numbers are composed of smaller numbers (part whole model)</p> <p>They are able to match a numeral with a group of items to show how many there are</p> <p>Children are able to say the number names in order and can count reliably using 1:1 correspondence</p> <p>Children experiment with their own symbols and marks as well as numerals to represent their own maths problems</p> <p><b><u>Numerical Patterns</u></b> Children can confidently count to 10 and back from 10</p> <p>Children are able to show finger numbers up to 10</p> <p>Children understand the 'howmanyess' of each number</p> <p>They are able to count out a smaller number from a large group, knowing when to stop and</p>	<p><b><u>Number</u></b> Children are becoming increasingly more able to subitise and are beginning to subitise numbers 1 to 5.</p> <p>Children continue to explore the composition of number up to 6 and beyond through the use of the part whole model</p> <p>They are able to recall number bonds to 5 and their knowledge of number bonds to 10 and doubling facts is increasing.</p> <p><b><u>Numerical Patterns</u></b> As children's mathematical understanding develops they are becoming confident comparing numbers.</p> <p>They are using the language 'more than', 'less than', 'fewer' when making comparisons about amounts.</p> <p>They are also able to identify when two groups have the same amount.</p> <p>Children can verbally count confidently to 20, without making errors.</p>	<p><b><u>Number</u></b> Children have a deep understanding of numbers to 10, the composition of each number and can confidently subitise numbers to 5</p> <p>They are able to automatically recall number bonds to 5 and some number bonds to 10, including doubling facts</p> <p><b><u>Numerical Patterns</u></b> Children are able to verbally count beyond 20 and are beginning to recognise the patterns of the counting system</p> <p>They are able to make comparisons between numbers to 10, saying when they have the same, 'more than' or 'less than'</p> <p>Children are able to explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</p>

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<p>showing understanding of the cardinal principle.</p> <p>Compares small groups of objects, saying when they have more or fewer</p>		
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### Y1

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>- Previous reception experiences and counting within 100 (3 weeks)</p> <p>Comparison of quantities and part-whole relationships (2 weeks)</p> <p>- Numbers 0-5 (2 weeks)</p>	<p>- Recognise, compose, decompose and manipulate 2D and 3D shapes. (3 weeks)</p> <p>- Numbers 0-10 (3 weeks)</p> <p>-Consolidation (1 week)</p>	<p>-Additive Structures (4 weeks)</p> <p>-Addition and subtraction facts within 10 (2 weeks)</p>	<p>-Addition and subtraction facts within 10 (1 weeks)</p> <p>- Unitising and coin recognition (5 weeks)</p>	<p>- Numbers 0-20 (4 weeks)</p> <p>-Position and direction (1 week)</p> <p>- Time (1 week)</p>	<p>- Time (1 week)</p> <p>-Measures (1 week)</p> <p>-Consolidation if needed (1 week)</p> <p>-Numbers 10-100 (4 weeks)</p>

### Y2

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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<ul style="list-style-type: none"> <li>- Numbers 10 to 100 (4 weeks)</li> <li>- Calculations within 20 (3 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Fluently add and subtract within 10 (1 week)</li> <li>- Addition and subtraction of 2 digit numbers (1) (3 weeks)</li> <li>- Introduction to multiplication (3 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Introduction to multiplication (continued) (3 weeks)</li> <li>- Shape (2 weeks)</li> <li>- Introduction to division structures (1 week)</li> </ul>	<ul style="list-style-type: none"> <li>- Introduction to division structures (2 weeks)</li> <li>- Addition and subtraction of 2 digit numbers (2) (3 weeks)</li> <li>- Money (1 week)</li> </ul>	<ul style="list-style-type: none"> <li>- Fractions (2 weeks)</li> <li>- Time (1 week)</li> <li>- Position and direction (1 week)</li> <li>KS1 Assessments</li> </ul>	<ul style="list-style-type: none"> <li>- Sense of measure (capacity, volume and mass) (2 weeks)</li> <li>- Multiplication and division (doubling, halving, quotative and partitive division) (3 weeks)</li> <li>Consolidation</li> </ul>
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Y3

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<ul style="list-style-type: none"> <li>- Adding and subtracting across 10 (2 weeks)</li> <li>- Numbers to 1,000 (5 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Numbers to 1,000 (5 weeks)</li> <li>-Consolidation (2 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Right angles (2 weeks)</li> <li>- Manipulating the additive relationship and securing mental calculations (4 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Column addition (2 weeks)</li> <li>- 2,4,8 times tables (3 weeks)</li> <li>- Column subtraction (1 week)</li> </ul>	<ul style="list-style-type: none"> <li>- Unit fractions (5 weeks)</li> <li>- Time (1 week)</li> </ul>	<ul style="list-style-type: none"> <li>- Non-unit fractions (4 weeks)</li> <li>- Parallel and perpendicular sides in polygons (2 weeks)</li> <li>-Consolidation</li> </ul>

Y4

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Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<ul style="list-style-type: none"> <li>- Review of column addition and subtraction (3 weeks)</li> <li>- Numbers to 10,000 (4 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Number to 10,000 (1 weeks)</li> <li>- Perimeter (2 weeks)</li> <li>- 3,6,9 times tables (4 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Co-ordinates (2 weeks)</li> <li>- 7 times table and patterns in Multiplication Tables (2 weeks)</li> <li>- Understanding and manipulating multiplicative relationships (2 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Understanding and manipulating multiplicative relationships (3 weeks)</li> <li>-11 and 12 times tables (1 week)</li> <li>-Consolidation</li> </ul>	<ul style="list-style-type: none"> <li>- Review of fractions (1 week)</li> <li>- Fractions greater than 1 (3 weeks)</li> <li>- Symmetry in 2D shapes (2 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Fractions greater than 1 (2 weeks)</li> <li>- Time (1 week)</li> <li>- Division with remainders (2 weeks)</li> <li>Consolidation</li> </ul>

Y5

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<ul style="list-style-type: none"> <li>- Decimal fractions (5 weeks)</li> <li>- Money (2 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Negative numbers (2 weeks)</li> <li>- Short multiplication and short division (5 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Short multiplication and short division (1 weeks)</li> <li>- Area and Scaling (5 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Calculating with decimal fractions (3 weeks)</li> <li>- Factors, multiples and primes (3 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Factors, multiples and primes (1 week)</li> <li>- Fractions (1) (4 weeks)</li> <li>- Angles (1 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Angles (1 week)</li> <li>- Fractions (2)(4 weeks)</li> <li>- Converting units (2 weeks)</li> </ul>

Y6

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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<ul style="list-style-type: none"> <li>- Calculating using knowledge of structures (1) (6 weeks)</li> <li>- Multiples of 1,000 (1 week)</li> </ul>	<ul style="list-style-type: none"> <li>- Multiples of 1,000 (1 week)</li> <li>- Numbers up to 10,000,000 (4 weeks)</li> <li>- Draw, compose and decompose shapes (2 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Multiplication and division (4 weeks)</li> <li>- Area, perimeter, position and direction (2 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Fractions and percentages (6 weeks)</li> </ul>	<ul style="list-style-type: none"> <li>- Statistics (1 week)</li> <li>-KS2 Assessments</li> </ul>	<ul style="list-style-type: none"> <li>- Ratio and proportion (2 weeks)</li> <li>- Calculating using knowledge of structures (2) (1 week)</li> <li>- Solving problems with 2 unknowns (2 weeks)</li> <li>- Order of operations (1 week)</li> <li>- Mean average (1 week)</li> </ul>
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