



Mathematics in EYFS:

What Mathematics Subject Leaders Need to Know

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. The aim of this document is to help subject leaders to understand how the skills taught across EYFS feed into national curriculum subjects.

This document demonstrates which statements from the 2021 Development Matters are prerequisite skills for mathematics within the national curriculum. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception to match the programme of study for mathematics.

The most relevant statements for mathematics are taken from the following areas of learning:

- Communication and Language
- Mathematics

Taken from the Our Lady & St Benedict Catholic Academy EYFS LTP

| | | | | | | |
|---------|---|--|--|---|--|---|
| Nursery | <p><u>Number</u> Children will rote count to 5.</p> <p><u>Numerical Patterns</u> Children will sort by colour, size and object.</p> <p>Children will sequence events using language including first, then and after.</p> <p>Children will identify patterns around them such as stripes on clothes.</p> | <p><u>Number</u> Children will count to 5 using 1:1 correspondence (touch counting objects).</p> <p>Children will rote count to 10.</p> <p><u>Numerical Patterns</u> Children will compare big and small.</p> <p>Children will identify a circle, square and triangle.</p> <p>Children will use language including sides, corners, straight, flat and round.</p> | <p><u>Number</u> Children will count in 1:1 correspondence to 5, knowing that the total is 5 (cardinal principle).</p> <p>Children will show 'finger numbers' up to 5 and 10.</p> <p><u>Numerical Patterns</u> Children will use language including tall, long, short.</p> <p>Children will identify a rectangle and a cube.</p> | <p><u>Number</u> Children will rote count to 10 and sometimes beyond.</p> <p>Children will experiment with their own symbols and marks as well as numerals.</p> <p>Children will identify more/less.</p> <p><u>Numerical Patterns</u> Children will use positional language including on top, under, next to and behind.</p> <p>Children will match objects</p> | <p><u>Number</u> Children will count in correspondence to 10.</p> <p>Children will subitise to 3.</p> <p>Children will solve real world maths problems with numbers up to 5.</p> <p><u>Numerical Patterns</u> Children will use language including light, heavy, full and empty.</p> <p>Children will make shape pictures using a tangram.</p> | <p><u>Number</u> Children will count and recognise numbers up to 5.</p> <p><u>Numerical Patterns</u> Children will make an AB repeating pattern.</p> <p>Children will notice and correct an error in a repeating pattern.</p> <p>Children will discuss routes and locations using words such as 'in front of' and 'behind'.</p> |
|---------|---|--|--|---|--|---|

| | | | | | | |
|-----------|--|---|--|---|--|--|
| | | | | that are the same. | Children will solve real world mathematical problems with numbers up to 5. | |
| Reception | <p>Number Children will represent, compose and compare numbers to 5.</p> <p>Numerical Patterns Children will match and sort.</p> <p>Children will compare amounts, size, mass and capacity. Drawing and comparing more and fewer.</p> <p>Children will make AB patterns.</p> <p>Children will select rotate and manipulate shapes to develop spatial reasoning skills.</p> | <p>Number Children will represent, compose and compare numbers to 5.</p> <p>Children will be able to recall some number bonds to 5 automatically.</p> <p>Children will begin to share out equally.</p> <p>Numerical Patterns Children will identify and describe circles, triangles, squares and rectangles.</p> <p>Children will use positional language including under, over, around and through.</p> <p>Children will use vocabulary of 'first, then and now' to sequence mathematical stories.</p> <p>Children will identify one more and one less within 5.</p> | <p>Number Children will represent, compose and compare numbers to 10.</p> <p>Children will know number bonds to 4.</p> <p>Children will identify 0.</p> <p>Children will represent, compose and compare numbers within 10.</p> <p>Children will use ten frames and the part-whole model to add up to 10.</p> <p>Numerical Patterns Children will compare mass and capacity.</p> <p>Children will make pairs.</p> | <p>Number Children will represent, compose and compare numbers to 10.</p> <p>Children will know number bonds to 5.</p> <p>Children will share equally from a total of up to 10.</p> <p>Numerical Patterns Children will combine 2 groups.</p> <p>Children will explore length, height and time.</p> <p>Children will identify a cube, sphere, cylinder and cone.</p> <p>Children will make ABB/AAB repeated patterns.</p> <p>Children will use everyday language to talk about position and distance.</p> | <p>Number Children will know $5+5=10$, $0+10=10$ and will be confident with their number bonds to 5.</p> <p>Children will count forwards and backwards within 10. Children will use their fingers to count on and back.</p> <p>Children will use concrete resources to help them solve problems and count up to and from 20.</p> <p>Numerical Patterns Children will build and identify numbers to 20.</p> <p>Children will match patterns using tangrams and shapes.</p> <p>Children will add more and take away within 20</p> <p>Children will double and find out half.</p> | <p>Number Children will double within 10.</p> <p>Numerical Patterns Children will equally share into two groups by halving.</p> <p>Children will identify even and odd numbers up to 10.</p> <p>Children will verbally count beyond 20.</p> <p>Children will manipulate shapes to solve problems.</p> <p>Children will use shapes in more complex pattern arrangements.</p> <p>Children will use everyday language to discuss time and order events.</p> |

Outcomes from Development Matters and Early Learning Goals

| Mathematical Vocabulary | | |
|--------------------------|----------------------------|---|
| Three and Four-Year-Olds | Communication and Language | <ul style="list-style-type: none"> Use a wider range of vocabulary. Understand 'why' questions, like: "why do you think the caterpillar is so fat?" |
| Reception | Communication and Language | <ul style="list-style-type: none"> Learn new vocabulary. Use new vocabulary throughout the day. |

| | | | |
|-----|----------------------------|----------|---|
| ELG | Communication and Language | Speaking | <ul style="list-style-type: none"> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. |
|-----|----------------------------|----------|---|

Number and Place Value

Counting

| | | |
|--------------------------|-------------|--|
| Three and Four-Year-Olds | Mathematics | <ul style="list-style-type: none"> Recite numbers past 5. Say one number name for each item in order: 1, 2, 3, 4, 5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). |
|--------------------------|-------------|--|

| | | |
|-----------|-------------|---|
| Reception | Mathematics | <ul style="list-style-type: none"> Count objects, actions and sounds. Count beyond ten. |
|-----------|-------------|---|

| | | | |
|-----|-------------|--------------------|---|
| ELG | Mathematics | Numerical Patterns | <ul style="list-style-type: none"> Verbally count beyond 20, recognising the pattern of the counting system. |
|-----|-------------|--------------------|---|

Identifying, Representing and Estimating Numbers

| | | |
|--------------------------|-------------|--|
| Three and Four-Year-Olds | Mathematics | <ul style="list-style-type: none"> Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. |
|--------------------------|-------------|--|

| | | |
|-----------|-------------|---|
| Reception | Mathematics | <ul style="list-style-type: none"> Subitise. Link the number symbol (numeral) with its cardinal number value. |
|-----------|-------------|---|

| | | | |
|------------------------------------|-------------|--------------------|--|
| ELG | Mathematics | Number | <ul style="list-style-type: none"> Subitise (recognising quantities without counting) up to 5. |
| Reading and Writing Numbers | | | |
| Three and Four-Year-Olds | Mathematics | | <ul style="list-style-type: none"> Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. |
| Reception | Mathematics | | <ul style="list-style-type: none"> Link the number symbol (numeral) with its cardinal number value. |
| Compare and Order Numbers | | | |
| Three and Four-Year-Olds | Mathematics | | <ul style="list-style-type: none"> Compare quantities using language: 'more than', 'fewer than'. |
| Reception | Mathematics | | <ul style="list-style-type: none"> Compare numbers. |
| ELG | Mathematics | Numerical Patterns | <ul style="list-style-type: none"> Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. |
| Understanding Place Value | | | |
| Reception | Mathematics | | <ul style="list-style-type: none"> Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10. |
| ELG | Mathematics | Number | <ul style="list-style-type: none"> Have a deep understanding of numbers to 10, including the composition of each number. |
| Solve Problems | | | |
| Three and Four-Year-Olds | Mathematics | | <ul style="list-style-type: none"> Solve real world mathematical problems with numbers up to 5. |

| | | | |
|---------------------------------|-------------|--------------------|--|
| Addition and Subtraction | | | |
| Mental Calculations | | | |
| Reception | Mathematics | | <ul style="list-style-type: none"> Automatically recall number bonds for numbers 0-5 and some to 10. |
| ELG | Mathematics | Number | <ul style="list-style-type: none"> Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. |
| Solve Problems | | | |
| ELG | Mathematics | Numerical Patterns | <ul style="list-style-type: none"> Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly. |

| | | | |
|---|-------------|--|---|
| Measurement | | | |
| Describe, Measure, Compare and Solve (All Strands) | | | |
| Three and Four-Year-Olds | Mathematics | | <ul style="list-style-type: none"> Make comparisons between objects relating to size, length, weight and capacity. |
| Reception | Mathematics | | <ul style="list-style-type: none"> Compare length, weight and capacity. |

Telling the Time

| | | |
|--------------------------|-------------|--|
| Three and Four-Year-Olds | Mathematics | <ul style="list-style-type: none">• Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then...' |
|--------------------------|-------------|--|

Properties of Shapes

Recognise 2D and 3D Shapes and their Properties

| | | |
|--------------------------|-------------|--|
| Three and Four-Year-Olds | Mathematics | <ul style="list-style-type: none">• Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners', 'straight', 'flat', 'round'.• Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc.• Combine shapes to make new ones – an arch, a bigger triangle, etc. |
| Reception | Mathematics | <ul style="list-style-type: none">• Select, rotate and manipulate shapes in order to develop spatial reasoning skills. |

Compare and Classify Shapes

| | | |
|-----------|-------------|---|
| Reception | Mathematics | <ul style="list-style-type: none">• Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can. |
|-----------|-------------|---|

Position and Direction

Position, Direction and Movement

| | | |
|--------------------------|-------------------------|--|
| Three and Four-Year-Olds | Mathematics | <ul style="list-style-type: none">• Understand position through words alone – for example, "The bag is under the table," – with no pointing.• Describe a familiar route.• Discuss routes and locations, using words like 'in front of' and 'behind'. |
| Reception | Understanding the World | <ul style="list-style-type: none">• Draw information from a simple map. |

Patterns

| | | |
|--------------------------|-------------|--|
| Three and Four-Year-Olds | Mathematics | <ul style="list-style-type: none">• Talk about and identify the patterns around them. For example, stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc.• Extend and create ABAB patterns – stick, leaf, stick, leaf.• Notice and correct an error in a repeating pattern. |
| Reception | Mathematics | <ul style="list-style-type: none">• Continue, copy and create repeating patterns. |

Statistics

Record, Present and Interpret Data

| | | |
|--------------------------|-------------|---|
| Three and Four-Year-Olds | Mathematics | <ul style="list-style-type: none">• Experiment with their own symbols and marks, as well as numerals. |
|--------------------------|-------------|---|

