New

Reception schemes of learning

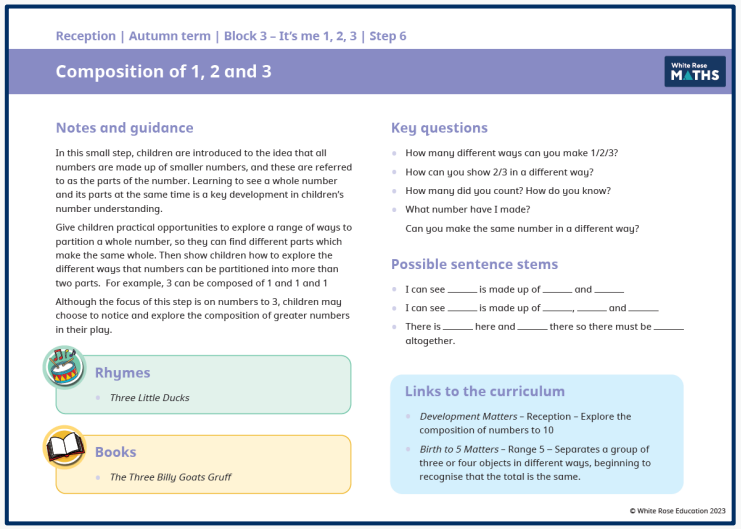
Non-statutory curriculum mapping

September 2023

White Rose MATHS

Introduction

The aim of this document is to give an at a glance guide to how the White Rose Maths Reception schemes of learning link to the two forms of non-statutory curriculum guidance for the EYFS, Development Matters (DFE 2021) and Birth to 5 Matters (Early Education 2021)
These statements are taken from documents that explicitly say they are suggestions of what "children will be learning to do" and "what children might be doing". They are not to be used or intended to be focused on as a tick list.



Reception | Autumn term | Block 3 – It's me 1, 2, 3 | Step 6

Composition of 1, 2 and 3

Notes and guidance

In this small step, children are introduced to the idea that all numbers are made up of smaller numbers, and these are referred to as the parts of the number. Learning to see a whole number and its parts at the same time is a key development in children's number understanding.

Give children practical opportunities to explore a range of ways to partition a whole number, so they can find different parts which make the same whole. Then show children how to explore the different ways that numbers can be partitioned into more than two parts. For example, 3 can be composed of 1 and 1 and 1

Although the focus of this step is on numbers to 3, children may choose to notice and explore the composition of greater numbers in their play.

Rhymes

- *Three Little Ducks*

Books

- *The Three Billy Goats Gruff*

Key questions

- How many different ways can you make 1/2/3?
- How can you show 2/3 in a different way?
- How many did you count? How do you know?
- What number have I made?

  Can you make the same number in a different way?

Possible sentence stems

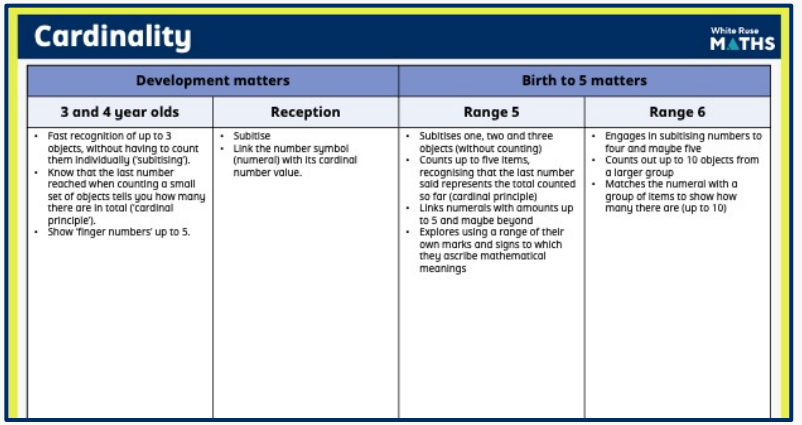
- I can see _____ is made up of _____ and _____
- I can see _____ is made up of _____, _____ and _____
- There is _____ here and _____ there so there must be _____ altogether.

Links to the curriculum

- *Development Matters* – Reception – Explore the composition of numbers to 10
- *Birth to 5 Matters* – Range 5 – Separates a group of three or four objects in different ways, beginning to recognise that the total is the same.

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On each of our small steps we reference where in both documents there are links to the curriculum so teachers can see this direct link as you teach each small step.



Cardinality

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Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• Fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Show 'finger numbers' up to 5.	• Subitise • Link the number symbol (numeral) with its cardinal number value.	• Subitises one, two and three objects (without counting) • Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle) • Links numerals with amounts up to 5 and maybe beyond • Explores using a range of their own marks and signs to which they ascribe mathematical meanings	• Engages in subitising numbers to four and maybe five • Counts out up to 10 objects from a larger group • Matches the numeral with a group of items to show how many there are (up to 10)

Many schools require teachers to show coverage. This document is designed to support teachers in Reception to easily show this.
Each of the major topic areas have been broken down into key mathematical concepts so you can then see which statements from both documents are covered together with the term and block of the White Rose Maths Reception scheme.
This document gives teachers confidence of the wide coverage given in the White Rose Maths Reception schemes.

Number

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Comparison

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Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• 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.	• Count objects, actions and sounds. • Compare numbers.	• Compares two small groups of up to five objects, saying when there are the same number of objects in each group, e.g. You've got two, I've got two. Same!	• Uses number names and symbols when comparing numbers, showing interest in large numbers • Estimates of numbers of things, showing understanding of relative size
Autumn 3, Autumn 5 Spring 1 Summer 2	Autumn 1, Autumn 5 Spring 1, Spring 3, Spring 4, Spring 5 Summer 1, Summer 6	Autumn 2, Autumn 5	Spring 1, Spring 3, Spring 5 Summer 1, Summer 4

Counting

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Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• Recite numbers past 5. • Say one number for each item in order: 1, 2, 3, 4, 5.	• Count beyond ten.	• May enjoy counting verbally as far as they can go • Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5. • Uses some number names and number language within play, and may show fascination with large numbers • Begin to recognise numerals 0 to 10	• Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0 • Increasingly confident at putting numerals in order 0 to 10 (ordinality)
Autumn 3, Autumn 5 Spring 3, Spring 5 Summer 1	Summer 1, Summer 6	Autumn 3, Autumn 5 Spring 1, Spring 5 Summer 1	Spring 5 Summer 1

Cardinality

Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Show 'finger numbers' up to 5.	• Subitise • Link the number symbol (numeral) with its cardinal number value.	• Subitises one, two and three objects (without counting) • Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle) • Links numerals with amounts up to 5 and maybe beyond • Explores using a range of their own marks and signs to which they ascribe mathematical meanings	• Engages in subitising numbers to four and maybe five • Counts out up to 10 objects from a larger group • Matches the numeral with a group of items to show how many there are (up to 10)
Autumn 3, Autumn 5 Spring 1	Autumn 3, Autumn 5 Spring 1, Spring 3, Spring 5 Summer 6	Autumn 3, Autumn 5 Spring 1 Summer 2	Autumn 5 Spring 1, Spring 3, Spring 5 Summer 4

Composition

Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• Solve real world mathematical problems with numbers up to 5.	• Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10. • Automatically recall number bonds for numbers 0-5 and some to 10.	• Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers • Beginning to use understanding of number to solve practical problems in play and meaningful activities • Beginning to recognise that each counting number is one more than the one before • Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same	• Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects • Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three • In practical activities, adds one and subtracts one with numbers to 10 • Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and "+" or "-"
Autumn 5 Spring 1	Autumn 3, Autumn 5 Spring 1, Spring 3, Spring 5 Summer 2, Summer 4, Summer 6	Autumn 3, Autumn 5 Spring 1	Autumn 5 Spring 1, Spring 3, Spring 5 Summer 2, Summer 4, Summer 6

Shape, space and measure

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Spatial awareness

Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• Compare quantities using language: 'more than', 'fewer than', • 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'.	• Select, rotate and manipulate shapes in order to develop spatial reasoning skills.	• Responds to and uses language of position and direction • Predicts, moves and rotates objects to fit the space or create the shape they would like	• Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints • Investigates turning and flipping objects in order to make shapes fit and create models; predicting and visualising how they will look (spatial reasoning) • May enjoy making simple maps of familiar and imaginative environments, with landmarks
Autumn 2, Autumn 4 Spring 3 Summer 5	Spring 6 Summer 3	Autumn 4 Spring 6 Summer 3	Spring 6 Summer 3, Summer 5

Shape

Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• 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 building, a triangular prisms for a roof, etc. • Combine shapes to make new ones – an arch, a bigger triangle, etc.	• Compose and decompose shapes so that children recognise a shape can have other shapes *within* it, just as numbers can.	• Chooses items based on their shape which are appropriate for the child's purpose • Responds to both informal language and common shape names • Shows awareness of shape similarities and differences between objects • Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes • Attempts to create arches and enclosures when building, using trial and improvement to select blocks	• Uses informal language and analogies, (e.g. *heart-shaped and hand-shaped leaves*), as well as mathematical terms to describe shapes . • Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes • Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build.
Autumn 4, Autumn 6 Spring 6	Autumn 6 Spring 6 Summer 3	Autumn 6 Spring 6 Summer 3	Autumn 4 Spring 6 Summer 3, Summer 5

Pattern

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Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• 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.	• Continue, copy and create repeating patterns.	• Creates their own spatial patterns showing some organisation or regularity • Explores and adds to simple linear patterns of two or three repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC) • Joins in with simple patterns in sounds, objects, games and stories dance and movement, predicting what comes next	• Spots patterns in the environment, beginning to identify the pattern "rule" • Chooses familiar objects to create and recreate repeating patterns beyond AB patterns and begins to identify the unit of repeat
Autumn 2 Spring 6	Autumn 2 Spring 6 Summer 5	Autumn 2	Autumn 1 Spring 6 Summer 5

Measure

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Development matters		Birth to 5 matters	
3 and 4 year olds	**Reception**	**Range 5**	**Range 6**
• Make comparisons between objects relating to size, length, weight and capacity. • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…'	• Compare length, weight and capacity.	• In meaningful contexts, finds the longer or shorter, heavier or lighter and more/less full of two items • Recalls a sequence of events in everyday life and stories.	• Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy • Becomes familiar with measuring tools in everyday experiences and play • Is increasingly able to order and sequence events using everyday language related to time • Beginning to experience measuring time with timers and calendars
Autumn 2 Spring 2, Spring 4 Summer 5	Spring 2, Spring 4 Summer 6	Autumn 2, Autumn 6 Spring 4	Autumn 6 Spring 2, Spring 4 Summer 6