

Maths

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

Nursery 1 (Early Explorers)	No Active Cohort Present: Continuous rolling intakes for Nursery 1 begin in Spring 1 (January) and Summer 1 (April). Baseline Mapping: Upon entry in January/ April, practitioners will utilise the Spring/Summer development milestones to establish immediate, child-focused baseline parameters.	- Identifies, matches, and pairs identical physical objects (e.g., matching a pair of socks or identical animal figures). - Explores, names, and groups items by primary colours. - Explores and verbally describes objects using size language (e.g., "big" and "small"). - Fills and empties containers, exploring early capacity concepts through sand and water play.	- Independently sorts a group of varied objects by a single criterion (e.g., sorting toys by colour or shape, ignoring size). - Identifies and copies simple alternating AB patterns (e.g., red block, blue block) using concrete objects or physical actions. - Touches or points to items in a small group, showing an emerging awareness that one number word corresponds to one object. - Plays with and stacks 3D shapes, exploring their physical properties (e.g., identifying which shapes roll and which stack).
Nursery 2 (Confident learners)	- Categorizes objects based on more complex attributes (e.g., sorting shapes by the number of sides). - Independently continues and creates simple AB repeating patterns with confidence. - Orally counts up to 3, consistently demonstrating 1:1 correspondence and	- Confidently counts up to 5 physical objects with 1:1 precision, showing cardinality. - Instantly subitises groups of up to 3 objects in varied arrangements. - Understands that a group of 3 or 4 can be made of smaller parts (e.g., "I have 3 apples: 2 here and 1 there").	- Links spoken number names and physical quantities to written numerals up to 5. - Verbally partitions numbers to 5 (e.g., identifying that 5 can be split into 3 and 2, or 4 and 1).

	understanding cardinality (the last number counted is the total). - Instantly recognizes groups of 1 or 2 items without counting them.	- Compares two distinct groups of objects visually, using early quantitative language (e.g., "more than" and "fewer than").	- Compares sets of objects directly to determine which has "more", "fewer", or an "equal number". - Names and describes common flat 2D shapes (circles, triangles, squares) and compares the mass/capacity of real-world objects using appropriate language (e.g., "heavy", "light", "full", "empty").
Reception <i>Mastering Number & White Rose</i>	- Instantly subitises arrangements of up to 4 objects (and sounds) without counting. - Counts groups up to 5 with rapid 1:1 accuracy, showing absolute cardinality and understanding the "five-ness" of 5 (5 fingers on one hand, die-5 pattern). - Identifies the hidden parts in 3 and 4 (e.g., seeing 4 as 3 and 1, or 2 and 2). - Compares sets of objects "just by looking" and by direct matching, using comparison vocabulary: <i>more than, fewer than, equal to</i>. - Identifies circles, triangles, and 4-sided shapes (squares, rectangles); duplicates and creates complex repeating patterns.	- Speedily subitises up to 5 using dot structures, dice patterns, and random arrangements. - Identifies the relative positions of numbers (1st, 2nd, 3rd) and recognizes that each number in the counting sequence is exactly "one more" than the previous one. - Consolidates part-whole relationships of 5; explores 6 and 7 using the "5 and a bit" structure (e.g., 6 is 5 and 1). - Orders numbers up to 8 and uses comparison language of "less than". - Explores and compares length, height, and units of time; names and explores the physical properties of 3D shapes (spheres, cubes, cylinders, cones).	- Subitises up to 6 in structured arrangements. - Explores even sharing, grouping, and doubles; identifies odd and even numbers (understanding odd blocks as having an "extra" block vs. even blocks having "flat tops"). - Explores the composition of 10 and demonstrates automatic recall of number bonds to 5. - Verbally counts past 20 and identifies structural patterns in larger numbers. - Solves real-world addition and subtraction word problems using "First, Then, now" structures, adding and taking away objects. - Visualizes, builds 3D constructions, maps physical spaces, and gives/follows directional language. - Demonstrates a controlled pencil grip to legibly form numerals 0 to 9, using consistent starting points and orientation in preparation for Year 1.

Nursery:

Our Nursery curriculum transitions children from sensory play to structured mathematical thinking. Nursery 1 (newly turned 3s) focus on the prime areas of learning during the autumn term, beginning sensory, play-based maths in spring. Nursery 2 (older 3–4s) follow the *Master the Curriculum* framework to build early number, pattern, and shape skills.

Reception:

In Reception, we integrate *NCETM Mastering Number* and *White Rose Maths* using a structured weekly cadence. Four days a week are dedicated to daily number fluency and subitising, with White Rose number concepts seamlessly intertwined, while one day a week is reserved entirely for White Rose's space, shape, and measure curriculum.

Nursery 1 (Early Explorers)		Singing 1-3 number rhymes (e.g., "3 Blind Mice"). Counting out 3 pieces of fruit at snack time. Building towers with flat-edged blocks. Feeling and exploring boundaries of basic 2D shapes. Jumping, clapping, or stomping 1, 2, 3 times. Matching physical actions to a spoken count. Rote counting up to 5 during hide-and-seek. Spotting numerals on toys in the environment. Playing with heavy/light objects (e.g., feathers vs. stones). Visual comparisons of "more/less" during water play.	Understanding "first we wash hands, then we eat." Sequencing visual cards of the nursery day. Placing toys "in the box", "under the bucket", or "behind our back" Construction play. Walking along giant floor number tiles 1 to 5. Jumping forward along a number track. Free-flow sorting by a single criterion. Rote counting and number songs
Nursery 2	Colours, Matching & Sorting Subitising and Counting 1 and 2	Subitising, Counting and Composition of 3 and 4.	Sequencing & Positional Language 2D Shape & 3D Shape

(Confident learners)	Pattern	Shapes with 3 and 4 sides Subitising, Counting and Composition of 5 Subitising, Counting and Composition of 6 & Ten-Frames More Than / Fewer & Length, Height, Mass and Capacity	Number composition, what comes after? & What comes before? Mastery of numbers to 5
Reception <i>Mastering Number & White Rose</i>	White Rose: Basic counting principles It's me 1,2,3 Match, sort and compare 1,2,3,4,5 Circles and Triangles Talk about Measure and Patterns Shapes with 4 sides Alive in 5 Mastering Number: Perceptual Subitising within 3 Cardinality and basic counting skills. How all numbers are made of ones; composition of 3 and 4. Subitising objects and sounds. Comparison of sets "just by looking" (more than / fewer than). "Five-ness" of 5 (5 fingers, die patterns). Comparing sets by matching (more/fewer/equal). Exploring parts and wholes. Composition of 3, 4, and 5. Matching numerals to quantities within 10; verbal counting past 20.	White Rose: Mass and Capacity Growing 6,7,8 Building 9 & 10 To 20 and beyond! Length, height and time Explore 3-D shapes Mastering Number: Subitising within 5 using dice patterns; matching numerals. Ordinality and the "staircase" pattern (1 more than). Deep-dive focus on 5. Focus on 6 and 7 as "5 and a bit". Compare sets; make unequal sets equal. Staircase patterns to 8; ordering numbers. Ordering numbers up to 8; using "less than". Focus on 7. Doubles (2 equal parts).	White Rose: To 20 and beyond! How many now? Manipulate, compose and decompose Sharing and grouping Visualise, build and map Make connections Mastering Number: Sorting odd and even numbers (flat tops vs. odd blocks). Counting larger, abstract sets (things that can't be seen). Subitising to 6 in structured arrangements. Composition of "5 and a bit" (on 10-frames). Composition of 10. Ordinality and track games. Subitising to 5; Introduction to the Rekenrek. Automatic recall of number bonds to 5. Composition of numbers up to 10. Comparison and ordinality.

			Identifying and completing number patterns. Rapid, precise object counting.
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