

Mathematics in Reception

Autumn

Spring

Summer

Number

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| Number | <ul style="list-style-type: none"> Count objects, actions and sounds with increasing accuracy, using 1:1 correspondence up to 5 and then 10. Subitise quantities to 3 confidently, and begin to subitise to 5 using real objects, images and manipulatives. Recognise numerals 0–5 and begin to recognise 6–10 through daily routines, calendar counting and topic work. Count forwards to 5, then 10, and begin to count on from a given number. Compare groups using more, fewer, same, explaining their thinking using full sentences. Begin to recall simple number bonds to 5 through songs, stories, manipulatives and play. Represent numbers to 5 using fingers, marks, objects, Numicon and tens frames. Explore early addition by combining two groups and saying how many altogether. Explore early subtraction by noticing when items are taken away and saying how many are left. Begin to explore numbers to 10 through rhymes, calendars, winter counting games and natural opportunities (e.g., icicles, footprints, stars). | <ul style="list-style-type: none"> Count forwards and backwards within 10, and begin to count confidently to 15, starting from different numbers (e.g., 7, 9, 5). Explore all the different ways to make 5, using real objects, fingers, tens frames, stories and manipulatives. Investigate how numbers to 10 are composed by breaking them apart and recombining them (e.g., “6 is 4 and 2”, “7 is 5 and 2”). Explore the composition of 6, 7 and 8 using tens frames, fingers and practical resources. Understand that 9 and 10 can be made in different ways and begin to spot smaller numbers hiding inside bigger ones. Quickly recognise small quantities to 5 without counting (subitising), using dice patterns, tens frames and everyday objects. Find one more and one less than numbers within 10 through games, stories and hands-on activities. Split small groups of 3 or 4 objects in different ways and notice that the total stays the same. Begin to combine two small groups and talk about the total. Begin to represent mathematical thinking using marks, drawings, tallies or numerals. | <ul style="list-style-type: none"> Count forwards and backwards to 20 confidently and fluently during play, routines and problem-solving. Match spoken numbers to written numerals up to 20 in meaningful contexts (bus numbers, page numbers, labels, signs). Build and explore 9 and 10 using tens frames, natural objects and manipulatives, showing these numbers in different ways. Explain how numbers to 10 and 20 are composed (e.g., “10 is a ten and 0 ones”, “14 is a ten and 4 more”). Use a counting-on strategy when adding, starting from the larger number. Combine two groups and talk about the total using full sentences (“4 add 3 makes 7”). Explore doubling, halving and sharing using practical resources (ladybird spots, seeds, snacks, tools). Continue to subitise small quantities and recognise larger amounts by grouping (e.g., “I can see 5 and 2 more”). Solve real-life addition and subtraction problems in play (shops, builders’ kits, doctor’s surgery, farm/ocean adventures). Explore one more and one less within 20 using number lines, bead strings and practical resources. |
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			<ul style="list-style-type: none"> • Make sensible estimates and check by counting. • Represent numbers and simple calculations using drawings, marks, number tracks, tens frames and numerals • Begin to explain their mathematical thinking using simple vocabulary. • Revisit and consolidate all Reception learning to prepare for Year 1.
<p>Numerical Patterns</p>	<ul style="list-style-type: none"> • Sequence simple daily events using language such as now, next, after, before, linking to the school day. • Explore early time concepts by talking about what happens at different times of day and noticing seasonal changes (e.g., darker evenings in Wallsend). • Use positional language in play: under, next to, behind, in front of, inside, outside, above, below. • Begin to notice and create simple repeating patterns using natural materials, decorations and classroom resources. • Begin to name and describe basic shapes (circle, square, triangle, rectangle) in meaningful contexts such as winter scenes, buildings and classroom objects. • Explore shape properties using everyday language such as round, flat, curved, straight, long, short. • Spot number patterns to 5 and then 10 using Numicon, tens frames, light boxes and small-world play. • Build with increasing purpose, selecting shapes and materials based on their properties. 	<ul style="list-style-type: none"> • Explore and compare measures in play using vocabulary such as longer, shorter, taller, heavier, lighter, full, empty. • Numerical Patterns • Compare and explore measures such as length, height, weight and capacity using everyday materials and non-standard units (e.g., cubes, sticks, natural objects). • Order lengths and heights using simple non-standard measures, including measuring growing plants and bean stalks. • Talk about the order of daily events using time language such as first, next, after lunch, later, soon, last. • Notice, continue and create simple repeating patterns using colours, shapes, movements and natural materials. • Explore shapes by joining them together, taking them apart, and spotting smaller shapes hidden inside larger ones. • Use mathematical language confidently when describing patterns, shapes and measures in the environment. 	<ul style="list-style-type: none"> • Identify, explain and sort odd and even numbers, noticing patterns and what changes when one more is added. • Create more complex repeating patterns (e.g., stripe–spot–stripe, shell–stone–shell–stone) using natural and classroom materials. • Compare sets using more, fewer, equal, most, least during investigations (farm, bugs, oceans). • Build spatial reasoning by copying and creating block towers, maps, routes, obstacle courses and layouts. • Use shapes to create summer models and pictures (boats, tractors, lighthouses, suns, festival decorations). • Compare lengths and heights through practical activities, including measuring how much children have grown since September. • Explore time through daily routines and use vocabulary such as morning, afternoon, evening, yesterday, tomorrow. • Explore simple maps and routes linked to occupations (postal workers, builders, delivery drivers).

			<ul style="list-style-type: none"> Spot patterns in number lines, tens frames and bead strings, noticing relationships between numbers. Use positional and directional language during outdoor exploration (over, under, behind, next to, forwards).
Key Words & Phrases	<p>Number & Quantity 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 More, fewer, same, altogether, count, how many, next, before, after, first, then</p> <p>Subitising & Representation Pattern, match, group, pair, tens frame, Numicon, add, take away, left</p> <p>Numerical Patterns Big / small, long / short, tall / short, round, flat, straight, curved</p> <p>Position In, on, under, next to, behind, in front of, above, below, inside, outside</p> <p>Time Morning, afternoon, night, day, now, next, before, after, later</p>	<p>Number & Quantity zero, one, two, three, four, five, six, seven, eight, nine, ten, more, fewer, altogether, one more, one less, count, before, after</p> <p>Composition part, whole, add, take away, equal, makes, is the same as</p> <p>Shape circle, square, triangle, rectangle, cube, cylinder, prism, sides, corners, straight, curved</p> <p>Measures long, longer, short, shorter, tall, taller, heavy, light, heavier, lighter, full, empty</p> <p>Patterns repeat, next, same, different</p> <p>Time first, next, after, later, soon, last, morning, afternoon, evening</p>	<p>Number & Calculation zero–twenty, count on, count back, add, take away, altogether, more, fewer, equal, double, half, share, estimate</p> <p>Composition ten, ones, part, whole, teen, more than, less than</p> <p>Shape & Space circle, square, triangle, rectangle, cube, cylinder, prism, sphere, pattern, map, route, direction</p> <p>Measures long, short, tall, heavy, light, full, empty, more, less, most, least</p> <p>Time morning, afternoon, evening, yesterday, today, tomorrow, later, soon</p>
How Adults Support Pupils in Literacy	<ul style="list-style-type: none"> Model key mathematical language throughout the day, especially more, fewer, same, next, before, behind, in front of. Build counting into everyday routines (snack, lining up, tidying, calendar counting). Model careful 1:1 touch counting and encourage children to do the same. Use high-quality questioning to extend thinking: “How do you know?” “Which has 	<ul style="list-style-type: none"> Model counting forwards and backwards in meaningful contexts (lining up, tidying, transitions). Use tens frames, fingers and manipulatives to model number composition and decomposition. Narrate mathematical thinking (“I can see 4 and 1, so that makes 5”). Model subitising by saying what you see without counting. 	<ul style="list-style-type: none"> Model counting to 20 and back during routines and transitions. Use tens frames, bead strings, number lines and manipulatives to model number composition. Narrate mathematical thinking (“I can see 10 and 3 more, so that’s 13”). Encourage children to use counting-on strategies rather than starting from 1.

	<p>more?" "What comes next?" "How many altogether?"</p> <ul style="list-style-type: none"> • Model subitising by saying what you see without counting ("I can see 3 because it looks like a triangle pattern"). • Draw attention to shape and pattern in the environment (e.g., buildings, decorations, natural materials). • Narrate mathematical thinking during play (e.g., "You put the triangle on top because it's pointy and makes a roof"). • Use positional language naturally in movement, construction and outdoor play. 	<ul style="list-style-type: none"> • Use high-quality questioning to deepen understanding: "How do you know?" "What do you notice?" "What's the same? What's different?" • Support children to represent their thinking using marks, drawings or numerals. • Demonstrate comparing and ordering lengths, heights and weights using non-standard units. • Encourage children to spot and create patterns in the environment. • Use time language naturally throughout the day ("After lunch we will...", "Next we are going to..."). • Provide repeated opportunities to explore shapes by joining, rotating and combining them. • Observe children closely to identify misconceptions and plan next steps. 	<ul style="list-style-type: none"> • Provide real-life problem-solving opportunities in role play and outdoor learning. • Model doubling, halving and sharing using practical resources. • Support children to represent their thinking using marks, drawings and numerals. • Use high-quality questioning: "How do you know?" "What do you notice?" "What's the same? What's different?" • Encourage children to spot patterns in number lines, tens frames and bead strings. • Model positional and directional language during outdoor exploration. • Provide opportunities to build spatial reasoning through construction and map-making. • Use time vocabulary naturally throughout the day. • Observe children closely to identify misconceptions and plan next steps.
<p>Experiences</p>	<ul style="list-style-type: none"> • Daily counting during routines (register, snack, calendar, tidy-up). • Number rhymes linked to topics (stars, fireworks, snowmen, animals). • Explore light and dark spaces using torches, light boxes, shadows and winter themes. • Use Numicon, tens frames and natural materials to explore number patterns. • Create repeating patterns using leaves, conkers, beads, decorations. • Build winter scenes and familiar local structures (e.g., houses, shops, Metro bridges) using blocks and loose parts. 	<ul style="list-style-type: none"> • Daily counting forwards and backwards during routines. • Tens-frame games exploring number composition. • Subitising activities using dice, dominoes, natural materials and images. • Practical addition and subtraction through stories, role play and small-world play. • Comparing lengths and heights using cubes, sticks, ribbons and natural objects. • Measuring growing plants and bean stalks. • Water and sand play exploring capacity (full, empty, pour, tip). 	<ul style="list-style-type: none"> • Daily counting to 20 and back during routines. • Tens-frame and bead-string activities exploring number composition. • Subitising games using dice, dominoes, natural materials and images. • Real-life addition/subtraction in role play (shops, doctors, builders, farms). • Doubling and halving activities (ladybird spots, seeds, snacks). • Pattern-making using flowers, leaves, shells, stones and movement. • Shape-based model making (boats, lighthouses, crowns, hives).

	<ul style="list-style-type: none"> • Outdoor obstacle courses using positional language (under, over, through). • Winter walks in Wallsend to notice seasonal changes and count natural features. • Sorting and grouping activities using natural materials, classroom objects and topic resources. • Shape hunts indoors and outdoors, linking shapes to real objects (circle moon, rectangle window, triangle tree). • Counting games linked to winter themes (footprints, icicles, stars, snowballs). 	<ul style="list-style-type: none"> • Pattern-making using natural materials, beads, shapes and movement. • Shape exploration using construction kits, loose parts and 2D/3D shapes. • Story-based time sequencing activities. • Outdoor maths trails spotting shapes, patterns and measures in the environment. 	<ul style="list-style-type: none"> • Outdoor maths trails exploring direction, shape and pattern. • Measuring growth, plants and natural objects using non-standard units. • Map-making linked to occupations and outdoor routes. • Estimation games using natural materials (shells, stones, seeds). • Revisiting all Reception maths to prepare for Year 1.
<p>By Summer, children will be ready for Year 1 because:</p>	<p><u>Number</u></p> <ul style="list-style-type: none"> • Count to 5 (objects) and begin to 10. • Subitise to 3 and begin to 5. • Recognise numerals 0–5 (and begin 6–10). • Compare quantities (more/fewer/same). • Begin number bonds to 5. • Combine groups and say the total. • Represent numbers to 5 in different ways. • Count forwards and backwards within 10 and begin to count to 15. • Subitise to 5 using familiar patterns. • Explain different ways to make numbers to 10. • Find one more and one less within 10. • Combine small groups and talk about the total. • Represent their mathematical thinking using simple marks or numerals. • Compare and describe measures using everyday language. • Count confidently to 20 and back. • Match spoken numbers to written numerals to 20 • Explain how numbers to 10 and 20 are made. • Add by counting on and subtract using practical strategies. • Solve real-life addition and subtraction problems. • Double, halve and share small quantities. • Subitise small amounts and recognise larger amounts by grouping. • Represent calculations using marks, drawings and numerals. 		

- Explain their thinking using simple mathematical language

Numerical Patterns

- Sequence simple daily events.
- Use positional language accurately.
- Notice and create simple patterns.
- Name and describe basic shapes.
- Talk about size and shape.
- Notice seasonal changes.
- Compare and order lengths, heights and weights using non-standard units.
- Create and continue simple repeating patterns.
- Join and separate shapes and talk about the shapes they can see.
- Use time language to talk about daily events.
- Use mathematical vocabulary confidently in play and routines.
- Identify odd and even numbers.
- Create and continue more complex repeating patterns.
- Compare sets using mathematical vocabulary.
- Build and copy spatial arrangements and simple maps.
- Use shape knowledge to create purposeful models.
- Compare lengths and heights using non-standard units.
- Use time vocabulary accurately in daily routines.
- Follow and describe simple routes.
- Spot number patterns in structured representations.