

EYFS · PRE-K / RECEPTION / K

Number Bonds for the Youngest

Without worksheets

Why bonds matter

Number bonds — knowing that 5 can be made from $4+1$, $3+2$, $2+3$, $1+4$ — are the foundation of fluent arithmetic. Children who know number bonds to 5 and to 10 fluently by the end of Reception are positioned brilliantly for KS1 maths. Children who don't will struggle to keep up. The danger is teaching bonds through worksheets. Worksheets test what children already know but don't BUILD the understanding. Building the understanding requires hands-on, repeated, varied experience with quantities.

Stage 1 — Composing and decomposing

<p>Five frame with counters</p> <p>Give each child 5 counters and a 5-frame. 'How many ways can you arrange them in two groups?' $5+0$, $4+1$, $3+2$, $2+3$, $1+4$, $0+5$.</p>	<p>Hands behind back</p> <p>Adult shows 5 fingers. 'I'm going to make some go behind my back. How many can you see? How many are hiding?' Repeat with different splits.</p>
<p>Two-coloured beans</p> <p>5 beans, painted on one side. Shake. Toss onto a tray. How many red? How many white? Always 5.</p>	<p>Cherries on a tree</p> <p>Drawn tree. 5 paper cherries. Some on the tree, some fallen. Children describe: '3 on the tree, 2 on the ground. 5 cherries altogether.'</p>

Stage 2 — Recording in pictures

<p>Pegs on a coat hanger</p> <p>10 pegs. Some red, some blue. Slide them to one end. How many of each colour? Always 10. Children record by drawing.</p>	<p>Bunny ears</p> <p>'Show me 5 with your bunny ears!' Children put fingers up in different splits — 3 on one hand, 2 on the other.</p>
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<p>Domino exploration</p> <p>Find all the dominoes that make 5 (5-0, 4-1, 3-2). Talk about each. What patterns do you notice?</p>	<p>Story splits</p> <p>'5 ducks. 2 swam to the pond. 3 stayed on the bank. How many altogether?' Tell stories with bonds.</p>
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Stage 3 — Bonds to 10 (ten-frame focus)

<p>Ten-frame with two colours</p> <p>10-frame partly filled with red, partly with blue. 'How many red? How many blue?' Always make 10.</p>	<p>Tens-frame match</p> <p>Children match cards. 4-fingered hand + 6-frame card, etc. Always make 10.</p>
<p>Walking number line</p> <p>Big number line on floor. 'Stand on 7. How many more to 10?' Walk the difference.</p>	<p>Bowling games</p> <p>10 pins. Knock some down. How many fell? How many still up? Always 10.</p>

Common mistakes

1. WORKSHEETS TOO EARLY. If children can't yet show 5 in different ways with objects, the worksheet won't help them. 2. ONLY 5+0, 4+1 PATTERNS. Children should encounter all the bonds repeatedly. 1+4 is just as important as 4+1. 3. TEACHING IT AS NEW EVERY TIME. Bonds are practised over months, in many ways. Don't expect mastery from one lesson. 4. SKIPPING TO BONDS TO 20. Bonds to 5 and bonds to 10 must be ROCK SOLID before bonds to 20. Don't rush. 5. NOT MAKING IT FUN. Children who associate maths with worksheets and right-or-wrong will avoid maths. Children who associate it with stories, games and small wins will lean in. Lean in beats worksheet, every time.

