

Continuous provision: Composition of numbers to 7

Maths area

Turn the maths area into a 'Make 7' station: a low table with ten frames, pots, and a small-world bus with 7 seats, so children meet composition of 7 through hands-on sorting and storytelling rather than recording sheets. Children split a fixed set of 7 objects between two pots, hide some under a cloth, or seat passengers on the bus, discovering and rediscovering the pairs that make 7.

Resources

- Laminated ten frames (use the first 7 spaces only) with double-sided counters, one colour each side
- A tray of 7 identical treasure objects (shells, conkers, pebbles or buttons) for splitting between two parts
- Two small pots, plates or cups per child/pair, for sorting the 7 objects into two parts
- A small-world bus or bus mat with 7 marked seats, plus 7 small toy passengers
- A seven-section egg box or muffin tray for arranging objects into two groups
- Numeral cards 0 to 7, laminated, for labelling each part
- A soft cloth or small tin for hiding some of the 7 objects (how many are hidden?)
- A mini whiteboard and pen for an adult to jot the number sentence a child says aloud
- A 0-7 spinner or dice for a game of 'spin and share'

When you join the play

- You've got 7 shells altogether — how many are in this pot, and how many in the other one?
- If 3 passengers are sitting on the bus, how many of the 7 seats are still empty?
- Can you make 7 a different way with your two pots?
- What if nothing goes in this pot — how many would be in the other one then?
- You said 3 and 4 make 7 — what happens if you swap them round, 4 and 3?
- I'm going to hide some of your 7 under the cloth — how many am I hiding if I can still see 2?
- Tell me the two parts you can see, and I'll write down what you tell me.

Look for

- Children splitting a group of 7 into two parts without being told to, and trying more than one way
- Children subitising small groups on the ten frame (e.g. seeing 5 and 2) instead of counting every counter
- Children recalling a pair instantly (e.g. straight away saying 3 and 4) rather than recounting from 1
- Children representing zero as an empty pot, seat or section and still saying the total is 7
- Children noticing that swapping the two parts (e.g. 2 and 5, then 5 and 2) still makes 7
- Children using the bus or hiding game to work out a missing part by counting on or back from 7

- Children with limited English or SEND joining in by matching quantities and pointing, even without number names yet

Construction

Set up a 'Builders' Bridge Repair Yard' in the construction area. Children build a bridge (or tower, or wall) using exactly 7 blocks each time, then explore the different ways the 7 blocks can be split into two loads for two toy lorries, two cranes, or two building teams, recording their split on a small whiteboard peg or card before trying another way.

Resources

- 7 matching building blocks per set (several identical sets so more than one child can build at once)
- Small world lorries, dumper trucks or cranes, 2 per building area, for carrying blocks in 'loads'
- A simple bridge or wall outline mat marked with a start and end post, 7 blocks wide
- Small whiteboards or blank cards and chunky pens for children to jot down their split, for example as two piles of dots or marks
- Ten frame printed on card (showing only up to 7 spaces in use) for children who want to check their total
- Number cards 0 to 7 for labelling loads
- Two builders' trays or crates labelled 'Lorry A' and 'Lorry B' for sorting blocks into two groups
- Picture recipe cards showing two small towers side by side with a gap for children to count and compare, for children who benefit from a visual model
- Laminated vocabulary cards: 'makes', 'and', 'altogether', 'take away', 'none', 'nothing' in English and other home languages spoken in the setting

When you join the play

- You've got 7 blocks for your bridge. If 3 go on this lorry, how many are left for the other lorry?
- Can you find a different way to split your 7 blocks between the two lorries than the way you did last time?
- What if one lorry carries 0 blocks? How many would the other lorry need to carry so you still have 7 altogether?
- I can see 4 and 3. Is there another pair of numbers that also makes 7?
- Show me on your fingers, or on the ten frame, how you know your two piles still make 7 altogether.
- What happens to your tower if you take 2 blocks away? How many would you need to add back to make 7 again?
- Can you build it so both lorries carry almost the same number of blocks? What numbers would that be?

Look for

- Children splitting 7 blocks into two groups in more than one way, for example 2 and 5, then 6 and 1
- Children checking their total by recounting all the blocks together after splitting them

- Children using the ten frame or fingers to support their counting rather than counting one by one each time
- Children predicting how many blocks are missing from one pile when told the other pile and the total of 7
- Children using vocabulary such as 'makes', 'and', 'altogether' or 'none' when describing their building
- Children representing 0 confidently, for example leaving one lorry empty and saying all 7 are on the other
- Children spotting that 3 and 4 making 7 is the same pair as 4 and 3, just swapped around

Small world

A small world 'Seven Ducks on the Pond' tray: a shallow blue pond mat with two lily-pad islands and a little bridge, set up in the small world area so children move 7 duck figures between the islands as they play, discovering different ways to make 7 as they go.

Resources

- A pond mat or blue fabric with two felt lily-pad 'islands' joined by a small bridge
- 7 small world ducks (varied colours/sizes so they are easy to tell apart)
- 2 small nests or baskets, one on each island, to hold the ducks
- A set of 0-7 numeral cards or pebbles with numerals painted on, placed beside the pond
- A small whiteboard or laminated 'part-whole' mat showing two circles joined to one circle, for children to place ducks on
- A waterproof mark-making pot with chalk pens so children can record how they split the ducks

When you join the play

- You've got 7 ducks altogether - how many are swimming on this island, and how many on the other one?
- Can you move a duck across the bridge? What happens to the two groups now - how many and how many make 7?
- I wonder if there's a way to put all 7 ducks on one island and none on the other - what would that look like?
- Can you find a different way to share the 7 ducks between the two islands than the one you just made?
- If 3 ducks are on this island, how many must be on the other one so we still have 7 altogether?

Look for

- Children splitting the 7 ducks between the two islands in different ways (for example 2 and 5, then 3 and 4) without needing to recount from 1 each time
- Children recognising that moving one duck across the bridge changes both groups, showing an early grasp of part-whole relationships
- Children using the numeral cards (0-7) to label each island's group correctly
- Children noticing that 7 ducks cannot be split into two equal islands, unlike some other numbers they have explored

- Children using vocabulary such as 'altogether', 'more', 'fewer' and 'the same as' while comparing the two island groups
- Children who are new to English or have SEND engaging through the physical movement of ducks across the bridge, showing understanding through actions rather than words alone

Outdoors

An outdoor 'Seven Pebble Garden' den area where children split a set of 7 natural loose parts between two hiding spots (plant pots, logs or hoops) as part of their play, with a chalk ten-frame on the patio so they can also build and check totals up to 7 during den-building, bug-hunting and small-world games.

Resources

- Several identical sets of 7 natural loose parts (conkers, pebbles, pine cones or shells) in a crate
- Two large plant pots, log slices or hoops per set, to act as 'homes' for splitting the 7 items
- Chalk for drawing a 7-space frame (two rows, using only 7 of the squares) on the patio or decking
- Pebbles or wooden discs, numbered 0 to 7, for labelling each home
- A tarpaulin or builders' tray divided into two bays with tape, for den-building with 7 large sticks or crates
- Small world creatures (7 ladybirds, ducks or bugs) and two bug hotels or nests for them to hide in
- A laminated outdoor whiteboard and chalk pen for an adult to jot down the ways to make 7 that children find

When you join the play

- We've got 7 pine cones altogether – how many have gone in this pot, and how many in that one?
- I wonder if there's another way to share the 7 pebbles between the two logs?
- How many more do we need in the frame to make 7?
- You've put all 7 in one home and none in the other – is that still 7 altogether?
- If 3 ladybirds crawl into this nest, how many of our 7 are left outside?
- Can you find a way to make 7 that's different from the one you just showed me?

Look for

- Children splitting a group of 7 objects into two smaller groups without being asked
- Checking the total by counting all 7, or by counting on from one part
- Accepting 0 and 7 as a real way to make 7 (an empty home still counts)
- Noticing that swapping the parts over still makes 7 (for example 2 and 5, then 5 and 2)
- Using the chalk frame to show how many more are needed to reach 7
- Talking about 'take away' when items are removed from a group of 7 during play

Malleable (playdough)

Set up a 'Ladybird Spot Workshop' in the playdough area: laminated ladybird mats with a body split into two wings (numeral 7 above each mat) and laminated ten-frame outline mats, alongside playdough and tools. Children roll playdough balls into 'spots' and press them onto the two wings, discovering how 7 spots can be split between the wings in different ways, and use the ten-frame mat to find how many more balls are needed to make 7.

Resources

- Playdough in at least 2 colours, including red and black
- Laminated ladybird mats: a body outline split into 2 wings, with the numeral 7 printed above each mat
- Laminated blank ten-frame outline mats (no numerals) for rolling up to 7 playdough balls into
- Rolling pins, small round cutters and blunt modelling tools for making balls ('spots') and flattening wings
- Numeral cards 0 to 7 to place next to each wing
- Small trays or plates to hold a 'whole' of 7 playdough balls before children split them between the wings

When you join the play

- You have 7 spots altogether – how many are on this wing, and how many on that one?
- If I take 1 spot away, how many are left on your ladybird?
- Can you make a ladybird with 0 spots on one wing? How many would the other wing need then?
- How many more balls do we need to fill your ten-frame up to 7?
- You've made 3 and 4 on your ladybird – can you squash it and find a different way to make 7?
- What happens to the total if you move 1 spot from this wing to that wing?

Look for

- Children moving playdough balls between the 2 wings while keeping the total at 7 (an early sign of part-whole understanding)
- Children recognising small groups of spots (such as 3) without counting each one
- Children using the ten-frame mat to count on and work out how many more balls are needed to reach 7
- Children answering correctly when asked how many spots are hidden or have been taken away
- Children using words such as 'altogether', 'more', 'left' and 'makes' as they talk about their ladybird
- Children showing 0 appropriately, for example leaving a wing empty and saying 'none' or '0'

Role play shop

Set up a role-play fruit shop with a 7-space shelf tray and a stockroom box, so children split a bag of 7 apples between the shelf and the stockroom as they stock up, serve customers and restock during their play.

Resources

- A tray with 7 marked spaces for the shop shelf (an upcycled egg box with 7 sections, or a 7-hole muffin tin works well)
- A stockroom box or basket labelled 'Stockroom' to hold spare fruits
- 7 matching plastic or felt apples for each fruit type on offer
- A till with play coins and notes
- Small purses or pots so customers can carry 0 to 7 coins
- Paper bags and baskets for customers to carry their shopping
- Price labels showing numerals 0 to 7
- A laminated shelf-plan card showing 7 empty circles, for children to mark how many apples are on display

When you join the play

- You've got 7 apples to sort out. Some go on the shelf and some stay in the stockroom - how many are on the shelf, and how many are in the stockroom?
- If 3 apples are on the shelf, how many more do we need to fill all 7 spaces?
- There were 7 apples on the shelf. Now there are 4. How many has the customer bought?
- Can you show me a different way to split the 7 apples between the shelf and the stockroom?
- What if nobody buys any apples today - how many would stay on the shelf?

Look for

- Children splitting a group of up to 7 items into two parts without being asked, for example 2 on the shelf and 5 in the stockroom
- Children recounting after moving apples between the shelf and the stockroom to check the total is still 7
- Children using words like 'and' or 'makes' to describe their stock, for example '4 and 3 makes 7'
- Children noticing that when all 7 apples are on the shelf, the stockroom has 0, and the other way round
- Children finding more than one way to split the same 7 apples when they restock the shelf