

Continuous provision: Composition of numbers to 9

Maths area

Turn the maths area into a 'Make 9' station: a floor mat with a large nine-frame (3 rows of 3 boxes) sits next to a basket of small natural loose parts and a part-whole mat (two hoops on a tray, with a large '9' numeral card above them), so children can split a group of up to 9 objects into two parts and put them back together again as they play.

Resources

- One large nine-frame mat (3 rows of 3 boxes), floor-sized, for children to fill with objects
- Baskets of small loose parts to count out, such as shells, conkers, pebbles or buttons, with at least 9 in each basket
- A part-whole mat: a tray with two hoops (or two small plates) underneath a card showing the numeral 9
- Numeral cards 0 to 9, laminated, for labelling each part
- Two small pots or jars for children to pour and sort objects into
- A 9-space egg box or seed tray with compartments, for hiding some and showing others
- A small cloth or scarf for covering some of the objects in the nine-frame
- A tuff tray or mat version of a 'bus' or 'train' with 9 numbered seats/windows, for small-world figures

When you join the play

- How many are in your basket altogether? Can you check by counting?
- You've put some shells in each hoop. How many are in this part, and how many in that part? Do they still make 9 together?
- I can see 6 in the nine-frame and some are hidden under the cloth. How many are hiding?
- What if one hoop has 0 in it? Where would the rest of the 9 be?
- Can you find a different way to split your 9 into two parts?
- You had 9, and then 3 went on the bus. How many are left waiting?
- Show me with your fingers: some on one hand, some on the other, making 9 altogether.

Look for

- Children filling the nine-frame and recognising when it shows 9 without needing to count every box
- Children splitting a group of up to 9 objects into two parts and checking the parts still make the same whole
- Children noticing that 0 and 9 still make a pair that totals 9
- Children using fingers, the egg box compartments or the two hoops to hold each part while they count
- Children spotting that swapping the two parts (for example 2 and 7, then 7 and 2) still makes 9

- Children linking a 'take away' action, such as figures leaving the bus, to how many are left of the 9
- Children learning English using the loose parts and pointing/matching numeral cards to show their thinking without needing many words

Construction

Turn the construction area into a builders' yard with a wall-building challenge: the yard always needs a wall, bridge or tower made of exactly 9 bricks, built using two trucks, two trays or two hands of a builder puppet, so children keep discovering different ways to split 9 as they build and knock down and rebuild.

Resources

- Wooden or foam building blocks, at least 9 of one colour and 9 of a second colour
- Two small builders' trucks, trays or buckets for carrying bricks to the wall
- Large numeral cards 0 to 9 pegged to the yard fence
- A site sign reading '9 bricks needed for today's wall'
- High-vis vests and hard hats for role play
- A long plank to use as a bridge base for laying bricks along
- A builder puppet or small world figure who 'orders' how many bricks for each side

When you join the play

- The builder needs 9 bricks for the wall. You've put 4 on the truck. How many more does the other truck need to bring?
- Can you build the same wall of 9 bricks a different way, so the two trucks carry a different split?
- What if one truck carries 0 bricks today? How many would the other truck need to carry to still make 9?
- I can see 6 bricks on the bridge and 3 bricks waiting. What do 6 and 3 make together?
- The wall had 9 bricks but 2 fell down. How many are still standing?
- How could you check that both trucks together really do make 9?

Look for

- Children splitting 9 bricks between two trucks or trays and checking the total comes to 9
- Children trying more than one way to split 9, for example 5 and 4, then 7 and 2
- Children using the idea of 0, for example one truck empty and the other carrying all 9
- Children subitising small groups of bricks rather than counting every one from 1
- Children predicting how many bricks are left after some are taken away from a group of 9
- Children explaining their split of 9 to a friend or the adult using number names

Small world

Turn the small world area into a 'Barn and Field' farm with a fixed herd of 9 small world animals, so children naturally split, re-group and recombine 9 as they play out stories of animals moving between the barn and the field.

Resources

- 9 small world farm animals, all the same type (for example 9 sheep), kept together in one labelled basket so the total of 9 stays fixed
- A large felt or wooden small world mat split into two clear zones: 'barn' and 'field'
- A small barn model (box or wooden structure) and fencing to mark the field edge
- A 9-space ten frame printed onto a tray or mat, placed beside the small world for children to move animals onto if they choose
- Number cards 0 to 9 for children to post into the barn and the field to label how many are in each
- Small baskets or crates (two per set) for scooping up and carrying animals between zones
- A simple laminated story card showing a farmer figure, for adults or children to use when inventing 'moving' stories

When you join the play

- You've got 9 sheep altogether today. How many are in the barn and how many are out in the field?
- If 4 sheep are in the field, how many must be in the barn, so we still have 9?
- Can you move one sheep from the field into the barn? What happens to the two amounts now?
- Is there another way to split the 9 sheep between the barn and the field?
- What if all 9 sheep went into the field and 0 stayed in the barn? Is that still 9 altogether?
- Can you find the number cards that show how many are in each part?

Look for

- Children physically moving animals between the two zones and recounting each part
- Children finding more than one way to split 9 (for example 2 and 7, then trying 5 and 4)
- Children checking that both parts still add back up to 9 altogether
- Children using the ten frame alongside the small world to check their counting matches
- Children noticing that as one group gets bigger, the other gets smaller
- Children selecting or placing the matching number cards for each part without an adult prompting
- Children using zero correctly, recognising that 0 and 9 still make 9

Outdoors

Set up a 'Splitting Station' in the outdoor area: a builder's tray or digging pit holding 9 loose-part treasures (conkers, pebbles or shells) next to two hoops laid on the ground as 'homes'. Children scoop, carry and tip the 9 treasures, deciding how many go in each hoop, then check their total against a large chalk ten-frame drawn alongside. Nearby, a skittles alley with 9 skittles and a soft ball lets children knock some down and work out how many are left standing, linking to take away and bonds to 9.

Resources

- A builder's tray or shallow digging pit with 9 matching loose-part treasures (conkers, pebbles, shells or pinecones)

- Two large hoops or plant pots to use as 'homes' for splitting the treasures
- A ten-frame drawn in chalk directly on the tarmac or playground floor, large enough for children to place treasures or stand in the squares
- A set of 9 skittles and one or two soft balls for an outdoor skittle alley
- Numeral cards 0 to 9 pegged to a washing line or taped along a fence
- A chalk number line 0 to 9 on the ground
- Buckets, scoops and trugs for carrying and tipping the treasures

When you join the play

- You've got 9 treasures in your bucket. If you tip some into the red hoop, how many do you think will be left for the blue hoop?
- I can see 3 in this hoop. How many more do we need to make 9 altogether?
- You knocked down 4 skittles. How many are still standing out of our 9?
- Can you find two different numeral cards that make 9 when you put them together?
- What happens to the two hoops if we start again with 0 in one of them?
- Is there another way to split your 9 treasures between the two hoops?
- Can you show me 9 on the chalk ten-frame, then show me how many more you'd need if I take some away?

Look for

- Children splitting the 9 treasures between the two hoops in different ways without being told to
- Children checking their two groups still make 9 altogether, by counting all or counting on
- Children matching numeral cards to the amounts in each hoop, including a card showing 0
- Children predicting how many skittles are left standing before counting to check
- Children using the chalk ten-frame to organise their count rather than counting at random
- Children repeating the splitting game with the same 9 treasures and noticing the pairs of numbers that keep appearing
- Children explaining their thinking aloud, using words like 'altogether', 'left' and 'more'

Malleable (playdough)

Turn the playdough table into a 'Snail Shop' where children roll playdough snails and pair them onto number mats showing 9 shell spaces, so they physically split 9 snails between two leaves or two shells and see every way to make 9.

Resources

- Playdough in at least 2 colours, enough for each child to make up to 9 small balls or snails
- Flat mats or paper plates each printed with a single large shell outline split into two sides by a line, for 9 to be shared between the two sides
- Small leaf-shaped mats, each with space for up to 9 playdough snails
- Shallow trays with 9 dots or 9 shallow thumbprint hollows pressed in for children to fill
- Rolling pins, lolly sticks and blunt tools for marking snail shell spirals
- Small bun cases or pots in two colours, 2 per child, for sorting snails into

- Laminated numeral cards 0 to 9 for labelling how many on each side
- Picture cards showing 0 to 9 playdough dots as a matching reference
- A simple bilingual or symbol label mat saying 'this side' and 'that side' in English and other languages spoken in the setting, for children learning English

When you join the play

- You've made 9 snails altogether. If 4 go on this leaf, how many are left for the other leaf?
- Can you make 9 snails a different way, so it isn't 4 and 5 this time?
- What if all 9 snails went onto one leaf, and none went on the other? Is that still 9 altogether?
- I can see 3 snails here. How many more playdough balls do you need to roll to make 9 altogether?
- Let's check together: if we put the two leaves back together, do we still have 9 snails?
- Can you show me 9 made with just two snails, by making one snail really big?

Look for

- Children splitting 9 playdough pieces into two groups without being asked, such as 6 and 3 or 2 and 7
- Children recounting all the pieces together to check the total is still 9 after splitting them
- Children swapping pieces between the two sides and recognising the total stays the same
- Children using the numeral cards to label each side correctly, for example 1 and 8
- Children showing 0 and 9 by putting every snail on one side and none on the other
- Children spotting that 3 and 6 make 9 in the same way that 6 and 3 make 9, just swapped around

Role play shop

Turn the role play shop into a 'Nine Pence Pocket Money Shop' where every item costs 1p, so children build amounts up to 9p and find different ways to make 9p using two coins or two piles of coins.

Resources

- A till or tray with nine compartments, plus a basket of play 1p coins (at least 18, so two piles can be made)
- Small shop items or empty packets priced individually from 0p to 9p using numeral price tags (use real numerals, not symbols like p alone without a number)
- Two small purses or pots labelled 'my coins' and 'your coins' for splitting 9 coins between a shopkeeper and a customer
- A nine-frame mat (a strip with nine spaces) by the till for lining up coins as they are counted
- A simple picture price list showing items with dots or coins next to them matching numbers 0 to 9
- A bag or two trays for sorting coins into two groups when paying for a 9p item

When you join the play

- You've got 9p to spend today. If you put 3p in your purse, how many pennies are left for your pocket?

- Can you pay for this 9p toy using two piles of coins? Show me one way, then show me a different way.
- I'll be the customer with 4 coins. How many coins do you need as the shopkeeper so we have 9 altogether?
- What if you had 0p left in your purse — how many would be in the till?
- You've given me 9p but I want to give you 2p change. How many pennies should I keep?
- Let's line the coins up on the strip. How many more do we need to reach 9?

Look for

- Children splitting 9 coins into two groups without recounting from one every time
- Children recalling a pair, such as 4 and 5, from memory rather than counting all the coins again
- Children noticing that if one pile grows, the other pile shrinks by the same amount
- Children using the nine-frame or coin strip to check how many more are needed to make 9
- Children acting out zero, such as saying the till is empty and all 9 coins are in the purse
- Children using take away language, such as saying 9 take away 3 leaves 6, during buying and selling