Activity Ideas

Let's Roll – Number Frames

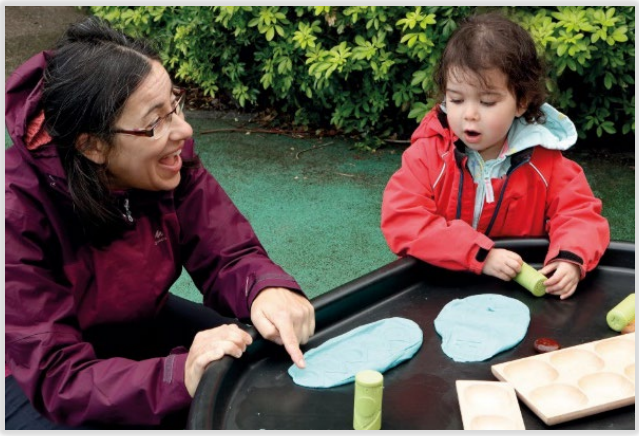
YD1187

Let's Roll Number Frames offers a sensory and playful way to develop early picture counting and number understanding. Counting, subitising and number composition are all essential for early number. Using the rollers to create a variety of pictures provides plenty of opportunities to develop these skills – simply stamp and count! The set includes four pictorial counting frames (a beanstalk, stepping-stones, bird boxes and train carriages) and two traditional counting grids (a single layer grid and a double layer grid – ideal for creating 10-frames).

On a roll

As children get rolling and stamping, they will be developing important fine motor skills:

- The easiest way to use the rollers is to push them away from the body, creating a vertical number frame. The beanstalk and stepping-stone rollers are ideal for this. Use the stamps to add ladybirds and lizards.
- A more advanced skill is rolling horizontally, as children have to cross the midline of the body. The bird boxes and train carriages rollers both show a horizontal scene. Use the stamps to add birds in the boxes or people in the carriages. Of course, children can just roll and then turn the created dough image as well!

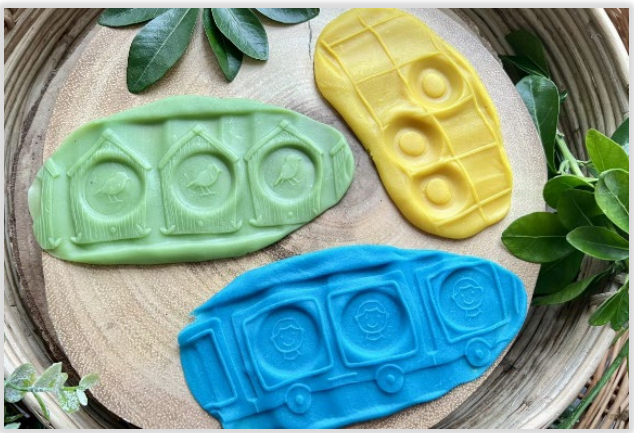


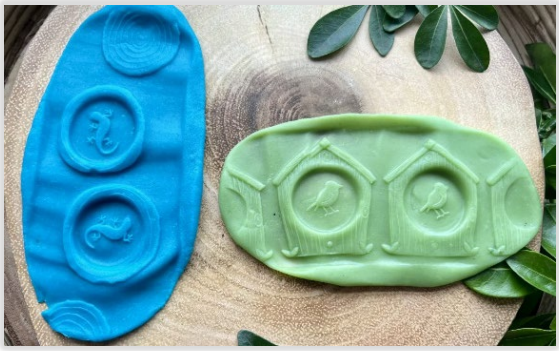
Roll, stamp and count

As children explore the number frames and stamps, encourage them to get counting:

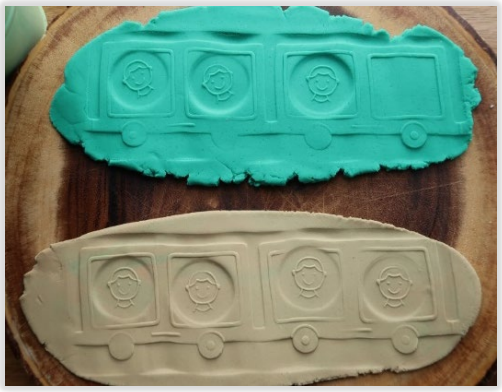
- How many beanstalk leaves, stepping-stones, bird boxes or train carriages have you rolled?
- How many ladybirds, lizards, birds or people have you stamped? Is there the same number of ladybirds as leaves? Is it one less? How many empty leaves are there?

- Model counting each picture as you stamp. This will help develop children's understanding of one-to-one correspondence, as they learn to count in the correct order, using one number for each picture.
- After rolling the stepping-stones, for example, ask the child to stamp three lizards. They will need to concentrate so they stop when they reach the number 3. Touch and count the stamped lizards afterwards to check.
- Use several pieces of play dough to create the same number in different arrangements. This might include an array (such as people in adjacent carriages), patterns (such as a bird in every other bird box), stars within a single box (using the roller with the single layer grid), dots in a 10-frame (using the roller with the double layer grid) or pictures stamped in random groupings.



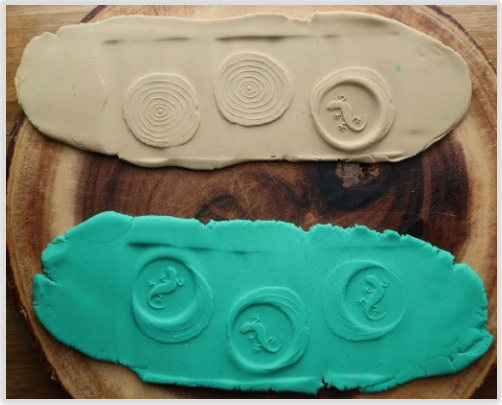


- Roll a vertical number frame on one piece of dough and a horizontal one on another. Stamp the same number of pictures on both and compare them. This lays the foundation for understanding that the number is the same in either orientation.
- As children use the rollers, there are plenty of opportunities for them to practise subitising – such as when a child tells you how many ladybirds there are without needing to count them.



- After rolling a number frame, such as the train carriages, you can give the child experience of zero by talking about how many people there are before they start using the stamp (zero people!).
- Roll two number frames on different pieces of dough and add pictures to each with the stamp, then compare how many pictures there are. For example, which train has more passengers? Which has less? Is it the same?

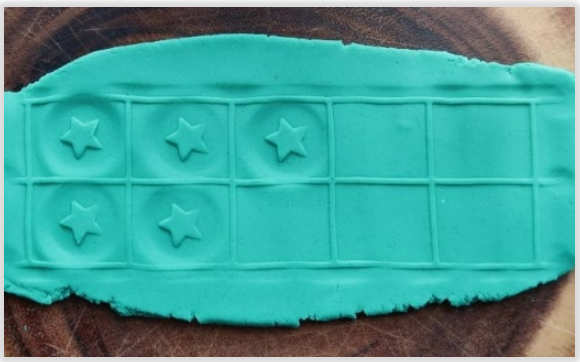
Add it up



The rollers are great for early addition, and even subtraction:

- Talk about adding one more picture to a number frame. For example, if a child has stamped two birds, can they add one more? How many are there now?
- Use two pieces of dough (maybe in different colours) to roll two number frames. Can the children subitise how many pictures are on each frame? Can they work out how many there are altogether? They may need to count, or use their knowledge of what numbers are made up of (composition) to reach the answer – for example, if there is one lizard on one number frame and three on the other, they may know that four is made up of one and three. Knowing what numbers are made up of is another key development in number understanding.

- The beanstalk roller has alternate leaves on the right and left side of the stalk. You could use this to ask how many ladybirds are on one side and how many on the other. If there is one on one side and two on the other, how many ladybirds are there altogether?
- Another way to do this is to use the roller with the double layer grid to create a 10-frame, then stamp some stars in both the top the bottom rows (using the stamp from the roller with the single layer grid). If there are three stars in the top row and two stars in the bottom row, how many are there altogether? Encourage children to think about what the answer might be before counting them to check.

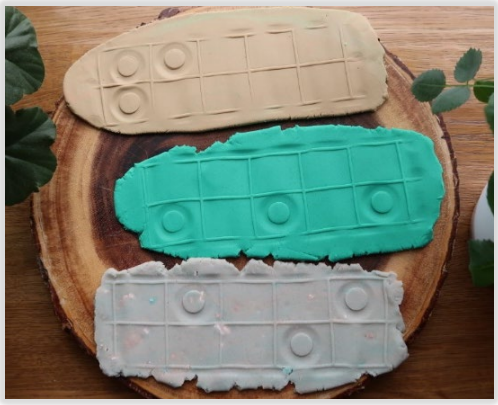


- You could use the blank end of the roller to practise subtraction. If a child has stamped four birds, can they make one less by stamping over one of them with the blank end? How many are there now? Can they take away two birds? How many are left?

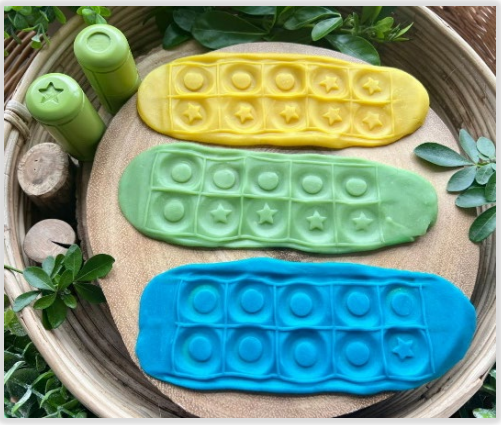
10-frames

Using the roller with the double layer grid allows you to quickly and easily create an endless supply of play dough 10-frames for children to use. 10-frames offer a visual way to explore number and encourage subitising:

- After rolling a blank 10-frame, children can add a dot to each square and count or subitise how many there are. How many are there when the frame is full?
- Roll a blank 10-frame and ask a child to stamp five dots.



- Roll several 10-frames and use them to create different representations of a number (such as 3). Talk about how it is always three, even if the arrangement is different.
- Roll two 10-frames on separate pieces of dough (ideally in different colours). Stamp five dots on one frame and two on the other, and encourage children to subitise how many dots are on each frame, and how many there are altogether.



- Roll a single 10-frame, then use the dot stamp and the star stamp to explore number bonds to ten by stamping, for example, three dots and seven stars. You could use several pieces of dough to find all the number bonds to ten.

Take it further

The rollers can also be used to explore other areas of early numeracy:

- Encourage spatial development by using positional language. For example, are the birds next to each other? Is this ladybird above or below the other one? Which person is between the other two?
- Roll a single layer grid and add two stars to each box, then use these to count in twos.
- Explore numbers to 20 and place value using 10-frames. Use the roller with the double layer grid to roll 10-frames on two separate pieces of dough, then add ten dots to one and six to the other. How many dots are there altogether?

Get talking – useful words

How many, one more, one less, the same, how many altogether, add, take away

Full, empty, next to, above, below, between, count in twos