

Make math magical for children through play and you will 'Let them feel math in their fingers before you ask them to hold it in their heads.'

Children will enjoy collecting and counting objects in these beautifully crafted tactile Number Trays. Ideal for exploring counting, number bonds and mathematical language of 'more than' and 'less than'. Keeping math physical and real for as long as possible is so important.

Make it sparkly and twinkly, make it squidgy and smelly, make it natural and textured. Let children use real things and lots of them. Let them hold them, move them, squish them, smell them, describe them and yes, count them. Doing the same thing in lots and lots of different ways, using all the senses, will build a strong sense of number: the awesome one, the tantalizing two, the thunderous three, the fabulous four!

## Collecting treasures

Go collecting sticks and stones, pinecones and seashells, flowers and leaves.

- Give each child their own Number Tray and encourage them to collect the corresponding number of each item – such as four sticks, four pinecones, four shells. As they collect, let them put their treasures on a table, so eventually they will have a collection of lots of different 'fours'.
- Alternatively, each child can collect different things in all nine Number Trays. You can then make a lovely display. You could take a photograph of each child's favorite collection and make your own natural number line that children can relate to.



Extend the activity:

- Ask them to look for their number on other objects, such as four legs on a table, four petals on a flower, four buttons on my coat etc.
- Talk about 'one more' and 'one less'. If they have tray 4, which of their friends has the 'one more' tray (5)? Who has the 'one less' tray?
- Talk about size. Find four tiny, miniscule, minute things. Find four big, huge, massive things. Talk about the different words we might use for big and small.
- Talk about 'the same' and 'different'. Find four things that are the same. What makes them the same – their size, color, pattern? Find four things that are different. What makes them different?

## Squishy, smelly math

- Using scented playdough and cutters, let each child roll out shapes and put them in their tray. Encourage them to make 'cakes' by piling up the shapes, maybe adding a bead, pebble or star on top. Who can make the tallest/prettiest/wobblest cake? Each additional layer gives more opportunity for counting.
- Fill each tray with scented playdough and then squish the corresponding number of loose parts into it – such as pebbles, seashells, buttons, beads or pasta. Pushing them in and pulling them out is such a lovely way to build those fine motor skills as well as a love of math.
- Ask children to collect things that are the same color as their playdough – how many do they need to match their number?



## Marvelous mark making

- Ask children to trace the numeral on the tray with their finger.
- Fill the tray with chia seeds, flour or rice. Using their finger or a twig, ask the children to copy their numeral in the tray.
- Use loose parts (such as beads, rice or pebbles) to fill the numeral. Use fingers (easy) or tweezers (harder) – great for fine motor skills.





## That's my number!

- Squish some scented playdough into a Number Tray, then ask the children to copy the numeral by squishing loose parts into the playdough (such as pebbles or sparkly beads). Take a photograph of each and make a number line. Pull out the loose parts and look at the marks they have made; can they still see their number?



## One more! One less!

- Offer a collection of loose parts, such as wooden pieces, felt balls, buttons, etc. Place one Number Tray on the table – for example 6. Ask the children to put six objects into the tray. Then ask them to add 'one more'. How many do they have now? Can they find the 7 number tray? Move all the objects into this tray. Then ask them to add 'one more', and so on until they get to 9.
- Repeat the game, starting with a different number.
- Play the game again, but this time ask for 'one less'.

### *Get talking – useful words*

One more, one less, quantity, same, different, count, add, subtract, double, halve, trace, copy, big, small, huge, minute.

## Books about numbers

*The Very Hungry Caterpillar* by Eric Carle

*Ten Black Dots* by Donald Crews

*One is a Snail, Ten is a Crab* by April Pulley Sayre and Jeff Sayre

*One to Ten and Back Again* by Nick Sharratt and Sue Heap