

NUMERACY

Numeracy is not just counting, adding and subtracting, colours and shapes. It extends to include sorting, rhythm, pattern, position, problem solving, and lateral thinking. To be able to use maths concepts in our lives, we have to have the confidence and problem solving skills to tap into our library of knowledge in order to figure out which concept is relevant, and then apply it.

We need to break this down a bit more when we are thinking about early childhood. We are not expected to deliver children to the school system who can already count, add and subtract, but rather children who are ready to develop those skills, and who have the confidence to try things out in order to learn them.

We all know that children explore concepts according to their developmental stage, and where their passions and interest lie. Our role as adults is to capitalise on these moments of opportunity, give children the language to describe their discoveries, and find other ways to explore them.

Woodwork and carpentry give us plenty of options for developing numeracy skills. From measuring, to selecting shapes and sizes of pieces of wood, to counting nails, adding colour, to developing the rhythm required to swing a hammer accurately.

You can even take your quest for numeracy skills outdoors. On this excursion, we were able to speak to the children about the colours and shapes that attracted their attention. We counted our footsteps, the birds and the trees that we saw. We collected leaves and seed pods from the forest floor, taking them back to the centre to discuss differences and similarities. We even noticed how a footbridge moved when we all stepped in time.

Block play provides some excellent opportunities to explore mathematical concepts like small and large, long and short, and recognising shapes like rectangle, square and circle. Creating 'cages' is currently popular with our three year old girls. Making a successful cage involves analysing which shape needs to be used in order to make the structure sound.

Once children are at the stage of being able to recreate the symbols they will use in numeracy, blackboards, whiteboards, paint and sticks in the sand are all great mediums to allow them to draw shapes, numbers and other symbols. As adults, we can encourage them by describing what they have created, and talking to them about what we can see in their creations. eg. I can see a circle face, with two circle eyes.

Dough is another great medium for developing early numeracy skills. Colours, shapes and sizes are all easily discovered at the playdough table. Often we have cutters that enable children to categorise their dough creations (let's put all the animals over here). Dough creations are easily deconstructed and reconstructed too. For example: I've got a ball. Look, now it's a cube. And now look what I've done, I added more dough and I have a bigger ball. Let's try rolling between our hands. Now I've made a long worm. And when I roll it some more, I get a longer worm. But what else do you see? It has got thinner. Now I can make a loop out of my worm. When I join the ends together, it makes a circle. Or if I cut it into three worms, I can join them together to make a triangle. What can you make with your playdough?

Music is well known for its links with mathematical concepts. Many of the great mathematicians were also musicians and vice versa. The keen sense of rhythm developed by taking part in music and dance is valuable to the young mathematical brain. Rākau, poi and percussion instruments are a great way to have children participate in music – counting, beating etc ...Ukuleles make developing rhythm through strumming accessible.

