Communicating: Exploring numeracy and early mathematical understandings



Learning possibilities for location and direction

Children learn about location and direction from everyday experiences, first by experimenting with ways to move their bodies, to navigate furniture and avoid falls. As they develop physical knowledge of being in a space children begin to see relationships between people and other objects or events. For example, a child may begin to make judgments, such as whether a toy car will fit into a small box or whether they need a larger box.

As your child/children learn about location and direction it's important to introduce spatial language including:

- Position: over, under, above, below, top, bottom, side, on, in, between, outside, inside, around, in front, behind, front, back, before, after, beside, next to, opposite, apart, middle, edge, corner.
- **Direction:** left, right, up, down, forwards, backwards, sideways, across, along, through, close, far, near, to, from, towards, away from.
- Comparison: wide, wider, widest, loud, louder, loudest, quiet, quieter, quietest, empty, full, half full, same, overflowing.
- Movement: slide, roll, stretch, bend.

Play ideas to try

 Together with your child/children, engage in the finger play, Four little kitty cats (see the resource how). Demonstrate the finger movements using a

box). Demonstrate the finger movements, using position, direction and movement words to describe the actions (right, left, in, out, around, up, down, roll, away). You can extend the finger play by repeating the verse and reducing the number of kitty cats each time until there are none (e.g. three little kitty cats... two little kitty cats...). This helps support children's number fluency, understanding of quantities, and fine motor dexterity.

- Play pin the tail on the donkey. Invite your child/children to draw or paint a donkey on a large piece of paper (newspaper will do). Use a small strip of paper with a piece of sticky tape on the end for the tail. Before starting the game, make sure your child/children are comfortable wearing a blindfold over their eyes (a folded scarf works well) and that there is plenty of open space to play. When they are ready, cover your child's eyes with the blindfold then give them verbal directions to the donkey, for example 'Turn around three times... one... two... three. Well done Sofia, now go forward three steps, almost there! Now step sideways and... pin the tail on!' Invite the whole family to play and encourage your child/children to give directions to other players.
- Make a ribbon stick by attaching approximately 1.5m of ribbon (or a strip of fabric) to a handle (e.g. a smooth stick, piece of dowel or firm cardboard cylinder). Briefly show your child/children how to hold and move the ribbon stick to make patterns in the air, such as circles, side to side and up and down swishes. Invite your child/children to experiment with the ribbon stick and use direction, movement and comparison words to describe their actions (up, down, around, side to side, roll, stretch, wiggle, bigger, smaller, wider). Try playing

Resources

'Four little kitty cats' (finger play)

Four little kitty cats in a row (Hold up four fingers on left hand)

Four more kitty cats come and go (Hold up four fingers on right hand)

Eight little kitty cats play in the sun (Make sun with arms overhead)

Rolling and tumbling and having fun (Roll and tumble hands from head to lap)

Then... out came two puppy dogs (Stop rolling hands and pop out thumbs)

And away they run (Make fingers run in the air and into your lap)

(say quickly in a whispery voice)

Story

Hairy Maclary Scattercat https://www.youtube.com/watch?v=-l89nxYGINA

Poem

Cat by Mary Britton Miller https://www.poetrynook.com/poem/cat-7

Music for movement

The most beautiful waltz music
https://www.youtube.com/watch?v=FaxTRX9oAV4
Afro percussion
https://www.youtube.com/watch?v=zSdwo_qsXS4



different types of music and encourage your child/children to match their movements to the music, for example large, slow and flowing movements for classical, or fast, short and jerky movements for African drumming (see the resource box for links to music).

Text: Dodd, L. 1985, Hairy Maclary Scattercat, Keystone Picture Books, SA

Engage

- Step 1. If you have this book at home, encourage your child/children to predict what the story is about from the cover. If not use the suggested video link in the resources box and watch the video together.
- Step 2. Read/watch the story.
- Step 3. Here are some questions to ask your child/children about the story.
 - 1. (Look at the picture of Greywacke Jones hunting a bee) Where is Hairy Maclary in this picture? (top right of page)
 - 2. What did Hairy Maclary want to do in the story? (chase the cats)
 - 3. (Look at the page showing Scarface Claw's tail under the bush) Who's tail do you think this is? (Scarface Claw's)
 - 4. Why did Hairy Maclary run away from Scarface Claw?

Play ideas to try

- Share the poem *Cat* by Mary Britton Miller with your child/children (see the resource box). Talk about unfamiliar vocabulary or metaphors used in the poem and invite your child/children to consider their meaning, for example 'I wonder why is says *Her slice of tongue*? What do you think that means, Sarah? Yes, I think you are right cats do have small tongues.', 'Delicate toes... I wonder what delicate means? Yes Oscar, soft, small they are good words for delicate.' Encourage your child/children to pretend to be the cat, using their whole body to act out its movements as the poem is read.
- Allocate an area of the yard for dirt play. A garden bed or a shaded area where grass doesn't grow is ideal. If you do not have a suitable area, you can use a large shallow tray filled with sand and pebbles. Provide a variety of items to support play, such as garden tools (spade, fork, rake), kitchen items (old saucepan, fry pan, muffin tray, metal spoons, cake tin), untreated timber off-cuts of various shapes and lengths, rocks, toy cars and trucks, and buckets. Allow your child/children to use the garden hose or fill a watering can if water is scarce. Invite your child/children to engage in open ended play digging, cooking, gardening, camping, building roads, rivers, cities and bridges. Talk with your child about their play and participate if you are invited. Use position, direction, comparison and movement words when talking with your child/children, for example 'Look how long the river is now! It stretches all the way around the tree. Which cars can drive over the bridge?'
- Play a game of hide and seek with your child/children. Encourage your child/children to take turns at hiding or being 'it'. Support them to count while the other players are hiding. When someone is found, use position and location words to describe their hiding place, 'There you are! It was hard to see you crouched down under that chair!' 'There's Sam, he's inside the pantry!'

