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

Get a large piece of fabric – stretchy is good, but not necessary (a beach towel or sheet will do). Invite your child/children (and anyone else in the house) to sit on the floor around the fabric. Pick up the edge of the fabric and hold it in both hands. Try making different movements with the fabric, such as pushing and

Resources

'I see the wind' (rhyme with actions)

https://www.nurseryrhymes.org/i-see-the-wind-fingerplay.html

I see the wind when the leaves dance by; (dance your hands around)

I see the wind when the clothes wave "Hi!" (wave your hand)

I see the wind when the trees bend low; (bend your arms over and down)

I see the wind when the flags all blow; (wave your arms high)

I see the wind when the kites fly high; (raise your arms high)

I see the wind when the clouds float by; (wave your hand gently)

I see the wind when it blows my hair; (lift your hair with your hands)

I see the wind most everywhere. (hold your hands out, palms up)

Video

The wind blew

https://www.youtube.com/watch?v=jOGegRIO79o

How to make a simple kite

https://www.youtube.com/watch?v=XI_NiH1g0VQ

Songs

My lovely lycra

https://www.youtube.com/watch?v=iayQXK0r_lk

Row, row, row your boat

https://www.youtube.com/watch?v=4tqYO1wES2U

Here we go Looby Lou

https://www.youtube.com/watch?v=TQNOEpl3yd4

Website

Australian Bureau of meteorology (BOM)

http://www.bom.gov.au

- pulling (forwards and backwards, side to side), making waves up and down (big and slow or fast and sharp), while trying not to pull it out of each other's hands it may take a little practice. Place a soft toy, ball or beanbag on the fabric, then wiggle and wave the fabric to see if you can make the toy bounce. When your child/children are confident, listen to the song *My lovely lycra* (see the resource box) and make actions with your fabric. Try other familiar songs such as *Row, row, row your boat* or *Here we go Looby Lou*. This activity encourages children to coordinate their movements while cooperating with and responding to others.
- Invite your child/children to do box construction and collage. Gather items such as empty boxes of all sizes (e.g. cereal, muesli bar or shoe boxes), ice block sticks, milk bottle lids, cotton wool balls, buttons, fabric scraps, pasta, patty pans, coloured paper, glue, paint and sticky/masking tape. Encourage your child/children to make a plan before they start, using positional words to describe their construction ideas. Support your child/children to develop independent problem solving and fine motor skills by modelling techniques for applying glue, cutting with scissors and tearing off sticky tape.



• Invite your child/children to do a jigsaw puzzle. If you don't have a suitable puzzle at home, you can make one by gluing a picture (e.g. from a magazine, your child's art, or a photo) onto firm card then cutting it into large pieces. Support your child/children to do the puzzle by talking about the position (beside, above, below, between), direction (right, left, along, around) and movement (turn, flip, slide) of pieces as they work, but avoid the temptation to do it for them. Puzzles provide opportunities for children to sort and match visual information (colour, shape, image), and to develop spatial awareness (the relationship between objects), fine motor skills and problem solving skills.

Text: Hutchins, P. 1968, The wind blew, Red Fox Picture Books, London

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. What was the first thing to blow up into the sky? (umbrella)
 - 2. What were some other things that blew up into the sky? (any of the following balloon, hat, kite, shirt, hanky, wig, letters, flag, scarf, newspaper)
 - 3. What do you think the people did when everything came down all mixed up?
 - 4. Why do you think there is a boat at the end of the story?

Play ideas to try

- Fly a kite with your child/children or make one if you don't have one. Flying a kite provides opportunities to talk about position (above, over, in front, behind), direction (up, down, forwards, backwards, across), comparison (higher, faster, slower) and movement (gliding, spinning, dipping). It also invites conversations about science concepts such as wind, weather and push/pull forces. Invite your child/children to create their own kites from simple materials such as paper, bamboo skewers or ice block sticks, string, streamers or crepe paper. They are lots of fun but less likely to fly! See the resource box for a simple kite you can make with your child.
- Share the action rhyme *I* see the wind (see the resource box). Read the rhyme aloud to your child/children and encourage them to join in the actions as you model them. Support your child/children to think of other times when they have seen the wind, for example 'I see the wind when the curtains blow. Can you think of another time when you saw the wind, Jamie?' Encourage your child/children to think of new ways they can move their bodies to represent this.
- Investigate the weather. Together with your child/children, look at different ways to find out about the weather, including weather reports on TV or the newspaper, weather apps or websites (see the resource box), or by observing with their senses. Talk with your child/children about how they we can sense with our eyes (see the sunshine, rain or movement of the wind in the trees), ears (hear the wind rustle leaves or the sound of the rain on the roof), skin (feel hot, cold, wet or a cool breeze) and nose (the smell of rain or a scent blowing on the breeze). Encourage your child/children to use their senses to observe the weather and share these observations with the family each day.

