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:

Resources

Story

The cat in the hat https://www.youtube.com/watch?v=HQW8AfBdea4

Songs Silly sausage dance https://www.youtube.com/watch?v=vLO1bvfwSt8

Der Gloomph https://www.youtube.com/watch?v=obySvN64VTU

Balance on one foot https://www.youtube.com/watch?v=aQ2Vco_giiE

- 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

- Dance with your child/children to silly action songs (see the resource box). These songs support your child/children to listen and respond; understand position, direction and movement instructions; and develop motor skills, flexibility, coordination and spatial awareness (where they are in relation to others/things). Silly songs promotes a sense of fun and creativity and expands children's positional and directional vocabulary.
- Invite your child/children to create an action course by drawing arrows and symbols for others to follow. They
 can use chalk on concrete or paved areas, or draw symbols on pieces of paper laying them out in order.
 Encourage your child/children to consider different actions people can do with their bodies, and the symbols
 they could use to represent them, for example a swirl for spinning around, a circle to jump in or an X to stop.
 Extend the game by encouraging your child/children to follow the course in reverse or in a jumbled order, or to
 work together with a family member, taking turns to add each new action symbol.
- Play a memory game. Gather a range of small items from around the house, for example, kitchen utensils, a toy car, stapler, calculator, comb, marble. Place them on a tray and invite your child/children to look at the items and talk about their location, for example 'The comb is between the marble and the spatula. Can you tell me where the car is?' Next, cover the tray with a tea towel and remove one item while your child/children close their eyes. Show your child/children the tray again and ask them to name the missing item. Support your child/children with clues about the objects original location, 'Hmmm it was between the marble and the spatula. Can you remember what was there?' Extend the game by changing or adding new items, or by inviting your child/children to be in charge of the tray and clues.



Text: Seuss, Dr. 2016, The cat in the hat, Harper Collins: 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 story together.
- Step 2. Read/watch the story.
- Step 3. Here are some questions to ask your child/children about the story.
 - 1. (show a page with both children) Point to Sally.
 - 2. (look at the illustration of the cat falling off the ball) Tell me what is happening here.
 - 3. How was the fish feeling when the Cat in the Hat and the Things were there?
 - 4. Do you think they will tell their mother about the Cat in the Hat? Why?

Play ideas to try

- Invite your child/children to play balancing games:
 - Balance a small soft toy or bean bag on different parts of their body such as the back of their hand, the top of their head or the top of their foot. As they gain confidence, encourage them to try walking forwards or backwards or standing on one leg while balancing the toy.
 - Place a flat board (e.g. timber off-cut or a sturdy baking tray) on top of a strong cylinder (e.g. metal water bottle or rolling pin), similar to a seesaw. Hold your child's hands while they stand on the board with feet hip width apart, and shift their weight from side to side. Gradually release support as your child gains confidence. Safety Note play this on grass or carpet as smooth floors may cause the cylinder to slip out from under the board.
 - Lie a long narrow piece of timber, a row of bricks or a skipping rope along the ground. Invite your child/children to balance in different ways along it like a tightrope. Try heel to toe walking, tip-toeing, walking on heels or bear walks (on hands and feet).
 - As your child/children gain confidence, vary the game like Cat in the Hat! Invite them to balance a toy or beanbag while balancing on the seesaw board or tip-toeing along a tightrope.
- Ask your child/children to imagine what it would be like if the Cat in the Hat came to your house! Do you have a fish (or another pet)? What would they think? Could the Cat hold them up while he balanced on a ball? What else would he balance right before they fall? What about the Things what would they do? What would they take and break or crash and smash in your house? Imagine having a picking-up-playthings machine. What would yours look like? Engage your child/children in deep, imaginative and playful conversation, 'Do you think he could hold up Jessie? Yes, she would bark a lot. And what would be on top of her?... The computer? Would that make him fall or would there be more on top?', 'How would you catch the Things?... Tell me how that would work... What things would you need to make it?' Invite your child/children to further express their ideas through drawing, painting, collage or drama.
- Create Cat in the Hat sandwiches using healthy ingredients stacked high. Together with your child/children, prepare a range of ingredients that are unusual but will work well together, including sweet (e.g. apple, sultanas, honey, banana) and savoury foods (e.g. cheese, cream cheese, walnuts, celery, peanut butter). Talk about the different characteristics of each ingredient such as taste, smell and texture, as you prepare them. Invite your child/children to layer bread and fillings to create their own crazy sandwich, using words such as below, between, above, top and bottom. Cut the sandwiches into small triangles to make them easier to eat.

