Communicating: Exploring numeracy and early mathematical understandings



Learning possibilities for data

The beginning step in the process of learning about data is to recognise and identify the attributes of objects. Young children may already have some knowledge of the attributes of objects related to home life such as choosing favourite foods, tidying toys, selecting their favoured colour cups, and choosing clothes to wear. Learning to sort and categorise objects according to an attribute requires lots of hands on experiences where children can test out ideas, and sustained conversations that help to build children's knowledge and use of descriptive language.

Play ideas to try

- Together with your child/children, listen to the song We all go travelling by (see the link in the resource box). This is a cumulative (growing) song about the attributes of different types of vehicles (size, colour, type and sound). As the song progresses, encourage your child/children to remember and join in the singing. After sharing the song, talk about vehicles you can see and hear near you, and how they could be described, for example 'A black motorbike goes brrr, brrr, brrr, brrr!' What else can you see and hear in the environment? Perhaps an animal (a shaggy brown dog goes woof, woof, woof!), a plant (a tall gum tree goes swish, swish) or an insect (a yellow butterfly goes flutter, flutter, flutter).
- Play a game of funny walks. Invite your child/children to take turns at thinking of a different way to walk and demonstrating it for others to do, for example walking on toes, heels, sides of the feet, waddling like a duck, walking backwards or bear walks. Record the different funny walks by drawing or photographing each. Repeat the game with other types of moves, for example, different ways to jump (on the spot, forwards, backwards, star jump, jump and spin). Use photographs at a later time as a conversation starter to reflect on experiences shared earlier in the day. Try the actions again adding some background music that your child/children select.
- Invite your child/children to create a zoo using animal figures, stuffed toys, boxes or blocks for animal enclosures, and green fabric/paper for grass. Encourage them to sort the animals into enclosures and create signs to record what is in each, 'I can see you have drawn a giraffe with a very long neck on your sign. How many giraffes are there? Yes, there's four. How can you show that on your sign? Four dots will be perfectl' Talk about different ways to sort the animals, such as by type (e.g. birds, reptiles, mammals), where come from (e.g. Africa, Australia), where they live (e.g. forest, sea, desert), or whether they are wild or farm animals.

Resources

Video

Red rockets and rainbow jelly

https://www.youtube.com/watch?v=n9goNsbFbZk

We all go travelling by

https://www.youtube.com/watch?v=Kpoze1QKOCY

Wibble, wobble, jelly on the plate

https://www.youtube.com/watch?v=eRIZSFN6dTg

Story

Mix it up!

https://www.youtube.com/watch?v=DuJzLzE36uA



Text: Sharratt, N. 2013, Red rockets and rainbow jelly, Puffin, Australia.

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. What colour apples does Nick like? (red)
 - 2. (point to the page where Nick likes yellow socks) What is Nick doing in this picture? (standing on his head)
 - 3. (point to the page Sue likes everything blue) What do you think Sue might do at the beach?
 - 4. (point to the page where Sue likes red rockets and red dogs) Why is Sue floating above the dogs?

Play ideas to try

- Make some jelly with your child/children. Invite them to choose a favourite colour/flavour jelly and a bowl to make it in. Talk about the jelly crystals what do they look, smell and taste like? Add the water and notice how the crystals dissolve into a liquid, and invite your child/children to make predictions about what will happen when it goes in the fridge. When it is set, talk about the way the jelly looks, moves, tastes and feels. Is it possible to make it into a liquid again? (yes, warm it up). To make rainbow jelly, prepare another jelly colour and allow it to cool. Pour it over the already set jelly and allow it to set. Repeat with each colour. Share the song Wibble wobble, jelly on the plate with your child/children (see the link in the resource box).
- Fill a range of shallow buckets or baking trays with a different sensory material in each, for example sand, water, mud, dry leaves, pebbles, pinecones, playdough, or fabric scraps. Invite your child/children to investigate the materials in different ways such as feeling it with their hands or stepping in with their feet. Encourage them to describe the different textures, feelings, sounds and colours, 'Oooh, its cold! The mud is squelchy. I can hear it when I pull my foot out!' Talk about ways to group the materials, 'You said the pinecones were spikey. Which other one was spikey? Yes, the pebbles were spikey when you walked on them.'
- Group some paints in warm colours (yellow, orange, red) and cool colours (blue, green, purple) in cups or pallets, or directly onto a plastic table cloth. Talk to your child/children about the groupings Why might they be called warm and cool? What do they remind you of? Invite your child/children to experiment with mixing the colours What happens when you mix two warm colours or two cool colours? What happens when you mix a warm and a cool? What colour can you make? Try different ways of mixing, painting and printing colour, such as, hand prints, or painting and printing with leaves, feathers, or sponges. Share the story *Mix it up!* (see the link in the resource box) with your child/children.

