

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

- Provide a muffin tray and a range of small items such as buttons, beads, shells, marbles, small toys, plastic bricks, dice, coins and bottle tops. Invite your child/children to sort the items into the muffin tray. There are many ways to sort, some of which are obvious (e.g. big things, round things, green things) and some of which are less obvious to an onlooker (e.g. helicopter, ladybeetle, Superman – things that fly), so encourage your child/children to explain their sort to you. Extend the play by asking your child if they can think of another way to sort the items.
- Invite your child/children to create a café or restaurant. Set a small table (a coffee table works well) with items such as a tablecloth, crockery, cutlery, flowers and old take away menus. Gather play food, pens, a notebook, a calculator or toy cash register and play money/old credit cards, and set up another small table as the counter. Café/restaurant play provides opportunities for children to categorise (e.g. drinks, cakes, meals), make choices (e.g. selecting from a menu) and record data (e.g. taking orders) through role play in a meaningful setting.
- Be a backyard scientist. Gather a notebook or paper and a clipboard, pencils, a digital device to take photos/video and a magnifying glass (optional). Invite your child/children to look in the garden for creatures that live there, such as insects, caterpillars, worms, spiders and centipedes. Support them to identify and record data about what they find. For example, noticing how many of each type of creature they find (e.g. 4 butterflies, 2 caterpillars, 3 grasshoppers), or data about just one (e.g. a grasshopper has 6 legs, 2 antennae, 4 wings). Encourage your child/children to record their findings as drawings/meaningful marks on paper, photos or videos.

Resources

'If you're wearing' (song)

To the tune of London Bridge is falling down.

Choose an feature of clothing for each verse, e.g. type (socks, shorts, shoes), colours, attributes (sleeves, zips, laces, buttons, collar, buckles, pockets)

If you're wearing buttons today,

Buttons today, buttons today.

If you're wearing buttons today,

Stand up and shout 'hooray!'

(repeat with different clothing feature)

Story

The button box

https://www.youtube.com/watch?v=APY-JJ_6TPs

Website

Spinning button toy – How to make a button thread spinner

<https://www.youtube.com/watch?v=stca7J0KCUU>

Text: Reid, M. 1990, *The button box*, Dutton Books, New York.

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 is in Grandma's special box? (buttons)
2. What does the boy like to do with the buttons? (look at them, find favourites, match, sort, make patterns)
3. Where do you think Grandma found all the different buttons?
4. How do you think buttons were made from seashells?

Play ideas to try

- Make a button spinner toy like the one in *The button box*. Gather a large button (or a round piece of cardboard with two holes punched in it) and some string. Help your child/children to thread the string through the holes and tie a loop (see the video link in the resource box). Model how to use the spinner and support your child/children to have a go. Talk about what makes it move, how to make it go faster and the sound that it makes as it spins. Try making a spinner with a larger cardboard disk and decorating it with different colours and patterns. How does it look and sound as it spins?
- Sing the song *If you're wearing* to your child/children. Begin with buttons and invite your child/children to look closely at the clothes they are wearing and see if they have any buttons (don't forget to check the back of clothes too). If they have buttons, encourage them to jump up and shout hooray at the end of the verse. Repeat the song using a different clothing feature such as zips, sleeves, pockets or shoe laces. When your child/children are familiar with the song, invite them to sing it to others and choose the clothing feature.
- Gather a range of buttons of different shapes and sizes (spare buttons from new clothes, buttons cut from old clothes), heavy paper or card, craft glue and pens. Invite your child/children to create a collage using the buttons. Encourage your child/children to share their ideas about their art, such as their choice of buttons (colour, texture, size), and the designs and patterns they have made.
- A collection of buttons can also be used with playdough to create patterns. Alternatively, buttons pressed onto a kitchen sponge that has a little paint added to it can be used to experiment with patterns on paper.