



Explore countable objects through play

Students explore various materials with countable aspects through child-led play. The teacher facilitates and observes play in action and is interested in how mathematical ideas emerge from the play.

Why play?

This experience gives students time to become familiar with the physical materials that will be used in future lessons. It also provides teachers with the opportunity to assess the existing knowledge and skills of students relating to numbers through observation. It's also an opportunity to foster students' self-directed exploration and collaborative play, which will be aspects of mathematical tasks going forward.

Materials

Organise a selection of play materials that have countable aspects to them. Here are some ideas: acorns, gumnuts, pebbles, pods, shells, twigs, building blocks, counters, card decks, dice, dominoes, drawing materials, attribute blocks, paddle pop sticks, pattern blocks, magnetic letters or numbers, snap cubes, tiles.

Tip: Get students involved in collecting the materials ahead of the session. This could involve an outside task to collect natural materials like acorns, twigs, pebbles and gumnuts.

Lesson

1. Working together to create a positive play space

Set up different materials around the room. Tell students, 'We are going to spend time exploring and playing with different materials.' Explain that everyone needs to work together to create a playful, safe and supportive place for all class members.

As a class, agree on a goal or expectation to support this – the goal/s will depend on the class context. Here are some examples:

- We can talk about what we are making or doing.
- We can help each other have a positive time playing.
- We can make choices about what to create, make or do.
- We can welcome new people to our play situation.
- We can be resilient when faced with a challenge.
- We can pack up our play before leaving a play area.
- When something doesn't work, we can learn from it.
- We can practise being curious about things (like mathematicians).
- We can use kind words when playing together.

2. Supervise and observe play

Child-led play is an opportunity for teachers to make observations and notice which mathematics students naturally engage with. Model curiosity, encourage playful mathematical thinking, and gauge student understanding by asking questions like:



- How many green teddies do you have there?
- I wonder which group is bigger – the group of red teddies or the group of green teddies?
- What's a way of knowing which group is larger?
- What's a way of knowing which shape has more sides?
- How is this design different to that design?

3. Reflect and share

Providing time to reflect will support students learning through play. Reflection time can happen during or after a play session, and is a time where students gather together and listen to, learn from and inspire each other with play stories and perspectives.

Start with an open question that is relevant for all, then narrow in on the topic of counting. For example:

- What discoveries did you make when playing with certain items?
- What discoveries did you make by sorting or counting items?

Move the discussion to reflect on the goals set early. For example, if the goal was to 'help each other have a positive play experience' the following questions could be posed:

- Think about what made it a positive play experience for you.
- Was it something you did? Or was it something that someone else did?

For 'try to solve problems when they arise' or 'be resilient when faced with challenges', the following questions could be posed:

- Think about any challenges you came across. Was there something that didn't work?
- What did you do? What did it teach you?

Further information

[Learning through play: Strengthening learning through play in early childhood education programmes](#)