

Mathematical Ideas

It is important for children to count forward and backwards from a variety of starting points. This will help them to understand the size of the number in relation to other numbers.

When counting, the number words are always said in the same order. One, two, three, four,... not four, two, one, three

Counting can begin with any item in a set. Each item must be counted only once (one to one correspondence). The quantity will always be the same for that set.



As you count forwards, the quantity increases.

As you count backwards, the quantity decreases.

The last counting word tells us how many are in the set.

"There are five pattern blocks in this set."

Quantity is related to 'how many' rather than size, shape, or position. The quantity of a set stays the same even if the appearance of the set changes.



Set of 5 Objects







Helpful Information

Tips

- Don't rush these activities. It is important that children become comfortable and accurate using the counting sequence.
- Encourage your child to move the objects as they are being counted so your child learns to count each item only once.
- If your child confuses the counting order (e.g., 1, 3, 2), point to the items and model the correct counting order.
- Encourage your child to state what is being counted (e.g., 1, 2, 3 blocks, not just 1, 2, 3).
- Organized concrete and visual representations can help with understanding numbers and the relationships between numbers.

Mathematical Words/Symbols

- Attribute an aspect of an object that can be used to compare objects (e.g., colour, size, thickness, number of sides)
- Set a collection of objects or numbers

Materials

Activity 1:

• Colour Tiles

Activity 2:

Whole Number Rods

Activity 3:

• Number Line







Learning Tools and Games can be accessed at mathies.ca



Count My Tiles

Activity 1

Set Up for the Activity:

- Open the Colour Tiles learning tool.
 - » Place 6 to 10 tiles on the workspace.

How to Do the Activity:

- 1. Ask your child to count the tiles on the workspace and tell you how many there are.
- 2. Then tell your child to move the tiles to the recycling bin, one at a time. Together, count backwards to 0 tiles.
 - » Begin by restating the total number of tiles on the workspace and then, as your child places each tile in the bin, say the number of remaining tiles.
- 3. Next have your child place up to 10 tiles on the workspace.
- 4. Repeat steps 1 to 3.
- 5. When your child is confident counting backwards, encourage child to count independently.

Example:





Counting Trains

Set Up for the Activity:

- Open the Relational Rods learning tool.
 - » Using the two different small rods, scatter up to 10 rods in the middle of the workspace.
 - » You may wish to use the paint palette to adjust the colours of the small rods. In particular, change the smallest rod so it is not white.

How to Do the Activity:

- 1. Tell your child that the rods are train cars in a railway yard. Your child's job is to move the rods together and make a train.
- 2. Tell your child that the first step is to make a train track using the annotation tool. Have your child draw a train track across the workspace.
- 3. Then have your child move the train cars to the track and put them together to make a train.
- 4. Ask your child how many cars are in the train.
- 5. Select the whole train and drive it near the recycling bin. Then select one car at a time and have your child count backwards as each car goes into recycling.
- 6. Repeat with a new collection of train cars (rods).
- 7. Your child may also wish to use rods from the rod tower to make an engine.

Example:





Train: 6 cars and 1 engine

Count backwards: 6, 5, 4, 3, 2, 1, 0 cars

Let's Talk About It

How do you know you counted all the cars? How can you check if we are counting backwards correctly? How many lines are on your railway track? How did you count them?



Counting Backwards From 10

Lining Up Dots

Set Up for the Activity:

- Open the Number Line learning tool.
- Select 0-10.
- Use the number line style selector to select the number ribbon.
- Put a point on one of the hash marks on the number line by clicking on that hash mark.

How to Do the Activity:

- 1. Ask your child to count the number of spaces between the hash marks on the number line from 0 (the left end) to your point.
- 2. Have your child use a number ribbon to draw a ribbon from 0 to your point.
- 3. Ask your child to count the sections on the ribbon. Point out that the number above the ribbon matches both counts.
- 4. Have your child drag the number ribbon back towards the left while counting backwards. Pause at the end of each section to allow time to match the counts to the ribbon length.

Example:



Activity 3