



Counting Forward to 10

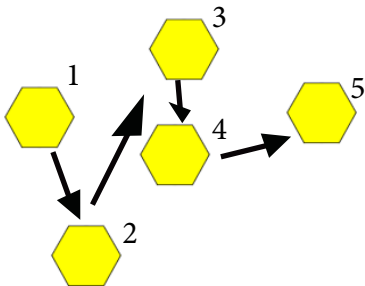
Mathematical Ideas

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.



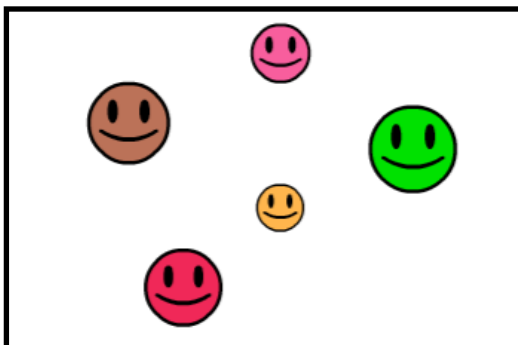
As you count forwards, the quantity increases.

As you count backwards, the quantity decreases.

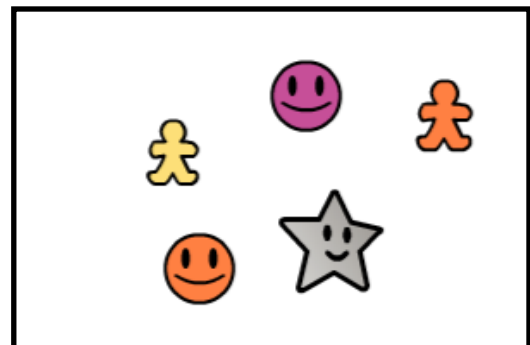
The last counting word tells us how many are in the set.

“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



Set of 5 Objects



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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)

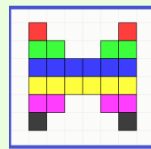
Set – a collection of objects or numbers

Materials

Activity 1 and 4:

- Colour Tiles

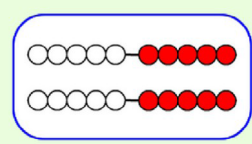
Colour Tiles



Activity 2:

- Rekenrek

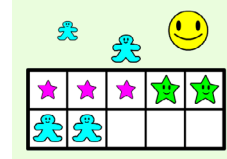
Rekenrek



Activity 3 and 5:

- Set

Set Tool





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Making Tile Sets

Activity 1

Set Up for the Activity:

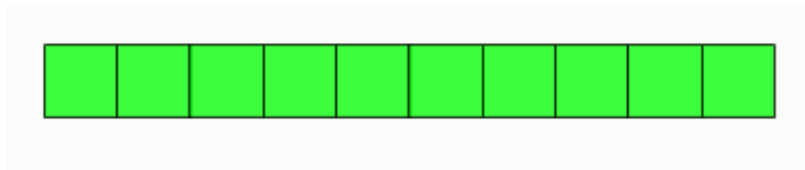
- Open the Colour Tiles learning tool.
 - » Place 10 tiles of the same colour in a row on the workspace.

How to Do the Activity:

1. Ask your child to count the tiles on the workspace and tell you how many there are.
2. Have your child rearrange the tiles into two rows.
3. Have your child count the number of tiles in each row.
4. Ask your child to tell you how many tiles there are altogether.
5. Repeat steps 1 to 4 a few times.
6. Repeat activity using more than one colour of tiles.

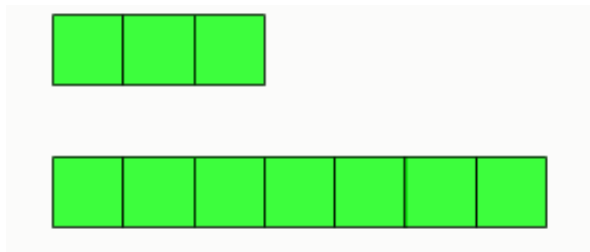
Example:

Original Set:



Your child may, point at each tile as they count.

Rearranged Set:



Let's Talk About It

- How do you know you counted your tiles correctly?
If you have zero tiles in a set, what would that look like?
Did your count change when the colour of the tiles changed?
What do you notice about the total number of tiles?




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Count My Beads

Activity 2

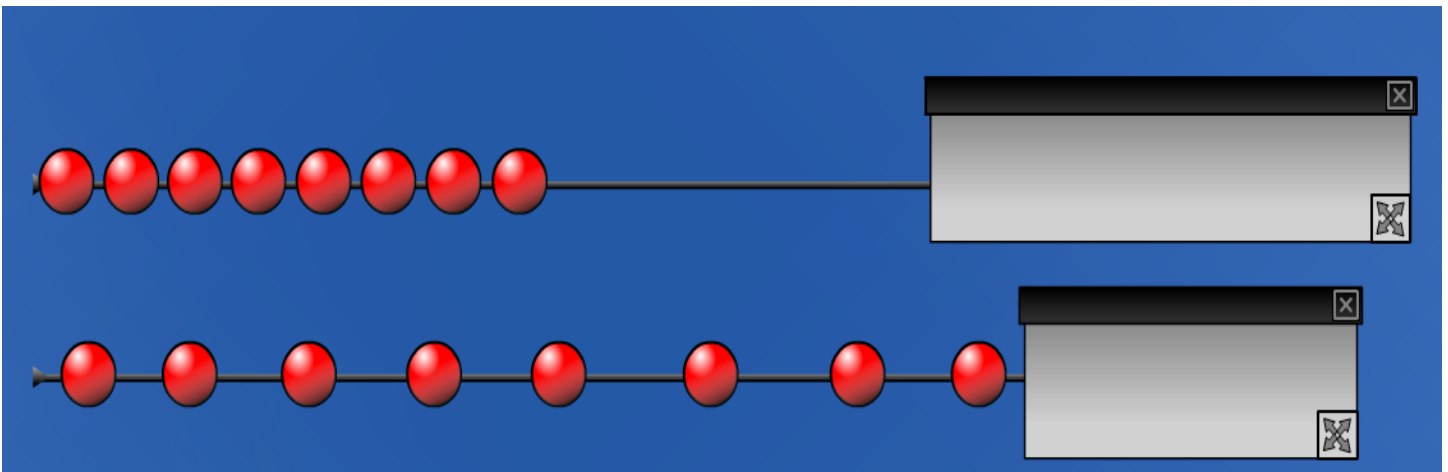
Set Up for the Activity:

- Open the Rekenrek learning tool.
 - » Show two racks.
 - » On rack 1, place up to 10 beads close together. Hide the other beads on this rack using the shade feature of the tool. 
 - » On rack 2, place the same number of beads as rack 1, but spread the beads apart. Hide the other beads from this rack using another shade.

How to Do the Activity:

1. Ask your child which rack has more beads or if the two racks have the same amount.
2. Have your child count to confirm.
3. Repeat with other quantities of beads and with different spacing.

Example:



Count: 1, 2, 3, 4, 5, 6, 7, 8 beads

Your child may match the beads one by one from the two racks to show the total quantity is the same.

Let's Talk About It

How do you know each rack has the same number of beads?
Make another rack showing the same number of beads. Why don't they all look the same?




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How Many Objects Now?

Activity 3

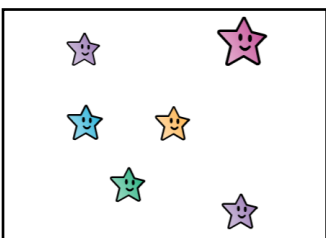
Set Up for the Activity:

- Open the Set learning tool.
 - » Select the Auto mode.
 - » Select one of the three shapes (happy face, star, gingerbread).
 - » Set the number of objects to a number 10 or less.
 - » Close the picker using the arrow  so the number of objects is hidden.

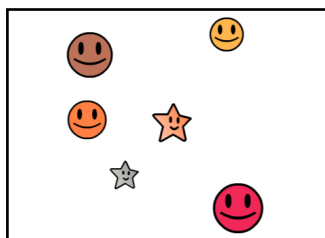
How to Do the Activity:

1. Select one of the three shapes (happy face, star, gingerbread).
2. Ask your child how many objects are in the workspace.
3. Scramble the objects on the workspace by using the scramble  button.
4. Ask your child how many objects are now in the workspace.
5. Repeat scrambling the objects and have your child count until your child sees that the location of the objects does not affect the count.
6. Open the picker palette and click another shapes so that two are selected. The number of objects should remain the same. Select New.
7. Ask your child how many objects there are now in the workspace. Also ask how many of each type of object.
8. Select all three shapes. The number of objects should remain the same.
9. Ask your child how many objects there are now in the workspace. Also ask how many of each type of object.
10. Repeat activity as desired for other number of objects.

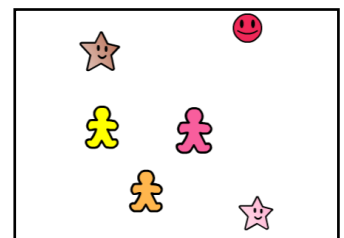
Example:



Count: 1, 2, 3, 4, 5, 6 objects



Count: 1, 2, 3, 4, 5, 6 objects
2 stars, 4 happy faces



Count: 1, 2, 3, 4, 5, 6 objects
2 stars, 1 happy faces, 3 gingerbread

Your child may sort the objects by attribute when counting.

Let's Talk About It

- Does your count match the number on the Set tool? Why or why not?
How can you be sure you counted all the objects?
How does sorting the objects help with counting? When?
Why does the number of objects stay the same?
Why does the number of objects stay the same when we shuffled the objects in the workspace?



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Counting Tiles

Activity 4

Number of Players: 2

Object of the Game: The player, who places the last tile to make 10 tiles in the workspace without going over, wins.

Set Up for the Game:

- Open the Colour Tiles learning tool.
 - » Each player picks a colour.
- Make five number cards labelled 1, and five labelled 2. Shuffle and place face down on the table.

How to Play the Game:

1. Player 1 picks up a card from the pile and moves that many tiles onto the workspace.
2. Player 2 picks up a card from the pile and moves that many tiles onto the workspace.
3. Have your child count all of the tiles on the workspace.
4. Players continue to take turns picking up a card and move the 1 or 2 tiles onto the workspace.
5. After each turn have your child count to see if there are 10 tiles.
6. The player, who places the last tile to make 10 tiles in the workspace without going over, wins. If the last turn results in 11 tiles in the workspace, the game is a tie.
7. Clear the workspace and play again.

Example:

Player 1's First Turn: **1** Player 2's First Turn: **2**



Count: 1, 2, 3

Last turn, **2**



Count: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

Your child may move the tiles to a new location while counting to ensure each tile is counted - especially if the tiles were placed randomly on the workspace

Let's Talk About It

- How do you know you have counted all the tiles?
- How many tiles did you put on the workspace?
- How many tiles did I put on the workspace?



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Copy Your Objects

Activity 5

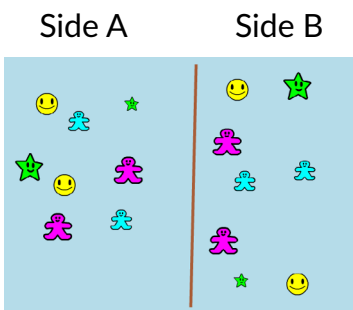
Set Up for the Activity:

- Open the Set learning tool.
 - » Have the tool in the create mode.
 - » Use the annotation tool to draw a vertical line to separate the workspace into two, and label Side A, Side B.

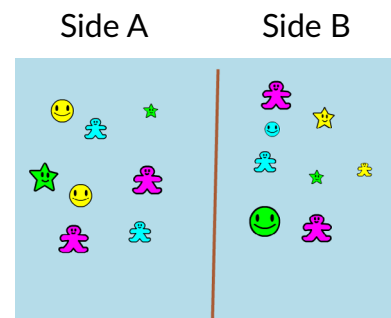
How to Do the Activity:

1. Ask your child to put 6, 7, 8, 9, or 10 objects on Side A of the workspace.
2. Tell your child that now you will put the same number of objects on Side B.
 - a. move identical objects onto Side B
 - b. have your child count the objects to confirm that both sets have the same number of objects
3. Repeat steps 1 and 2 a couple of times.
4. Now, repeat but this time when you place objects on Side B put one more or one fewer object than Side A. After your child checks the count for each side, work together to make the number of objects the same by adding or removing objects.
5. Repeat again, but this time when you place objects on Side B, place the same number of objects but ones that look different than the objects on Side A. Have your child count the objects to confirm the sets both have the same number of objects.
6. Repeat as desired.

Example:



8 identical objects on each side



8 objects on each side with different attributes

Your child may touch the objects while counting one by one.

Let's Talk About It

How do you know if the number of objects is the same on both sides?

How do you know if the number of objects is different on both sides?

Why do the two sides have the same number of objects even though they do not look the same?