

Counting Is as Easy as 1,2,3...Or Is It?

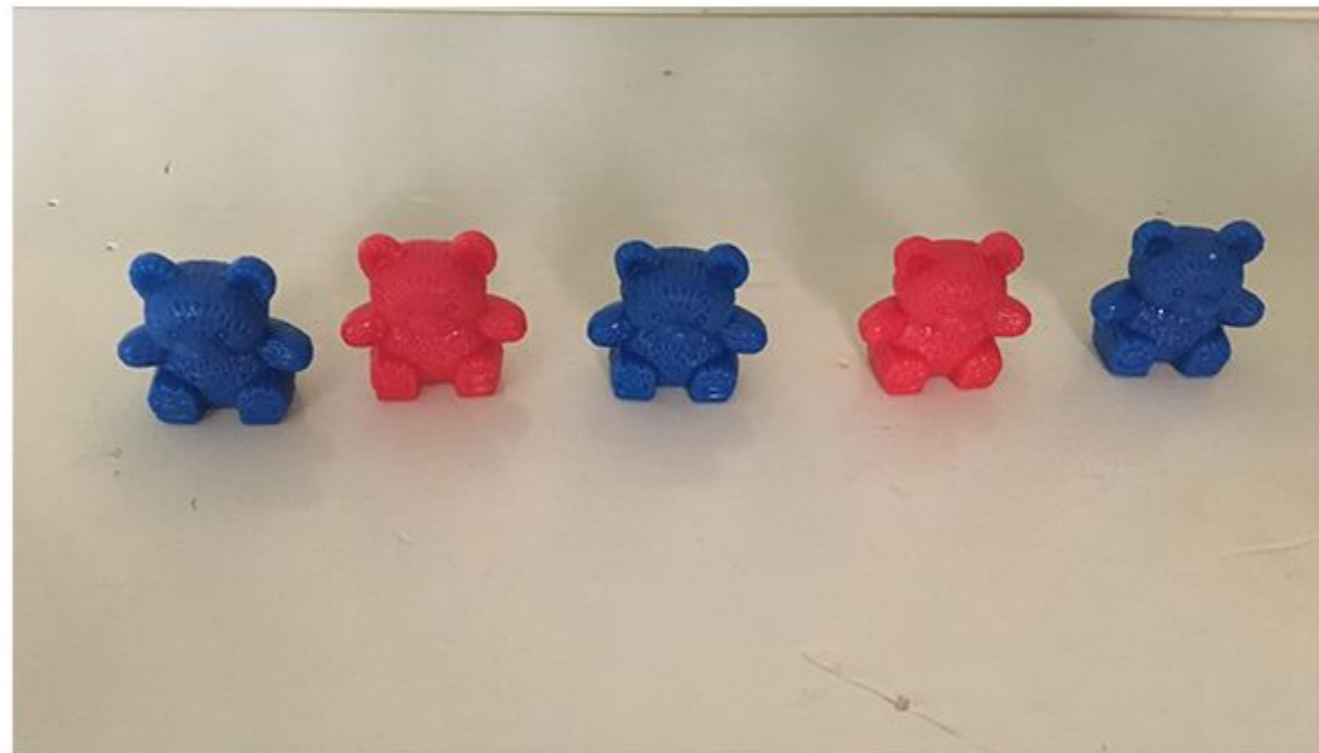
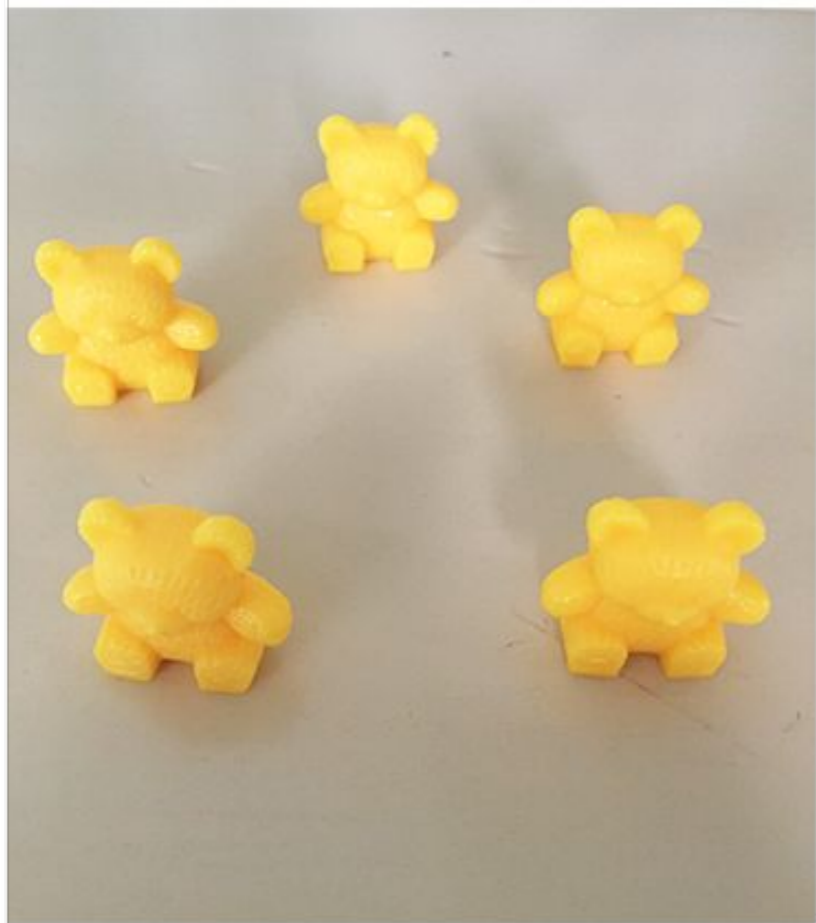


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Warm up: Same But Different



The Counting Principles

- Gelman, R. & Gallistel, C. (1978)
- <https://countingcollections.files.wordpress.com/2012/10/counting-principles-package.pdf>

1:1

Correspondence

This involves the assigning of one, and only one, distinct counting word to each of the items to be counted.



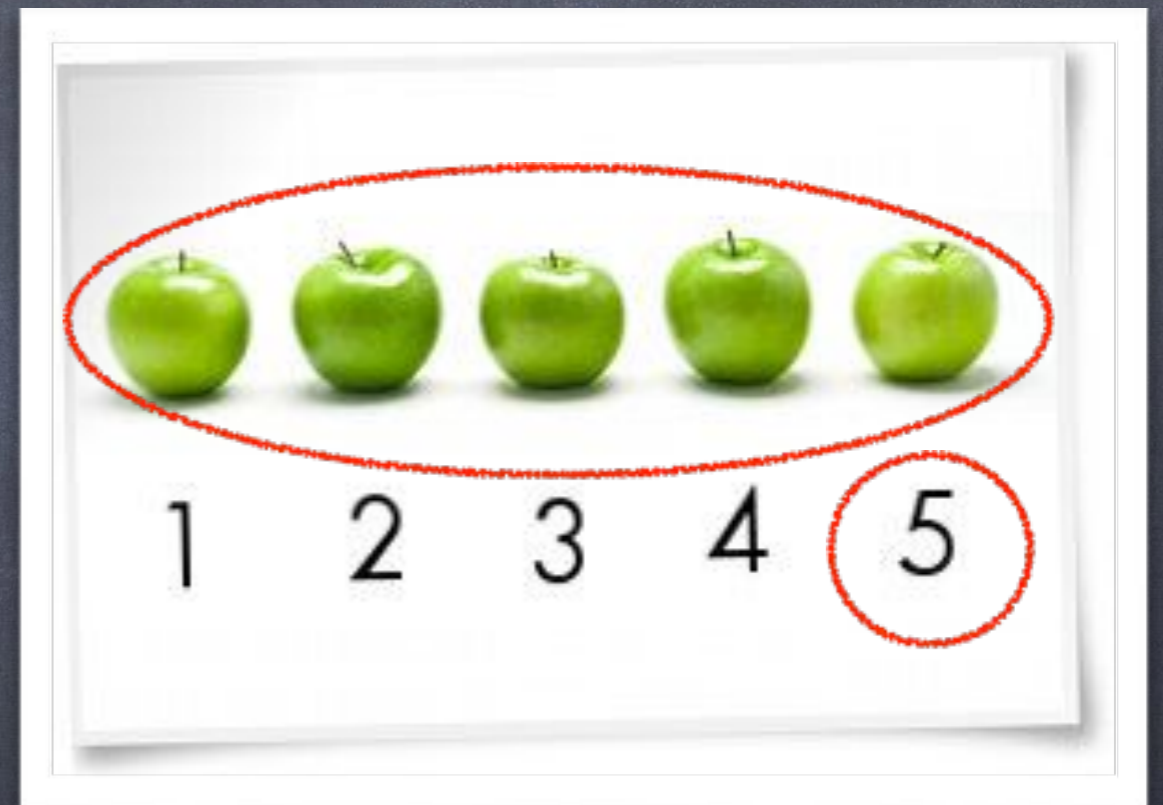
Stable Order

To be able to count also means knowing that the list of words used must be in a repeatable order.



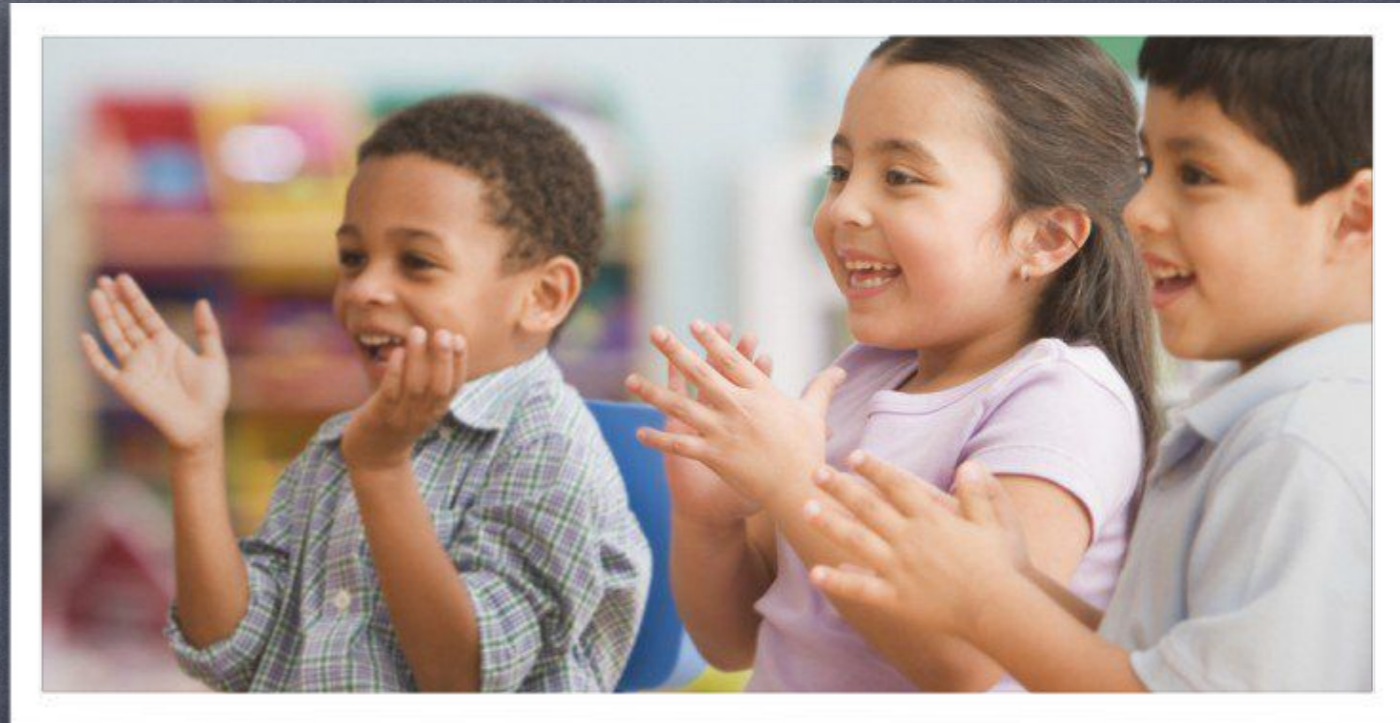
Cardinality

This principle says that, on condition that the one-one and stable-order principles have been followed, the number name allocated to the final object in a collection represents the number of items in that collection.



Abstraction

This states that the preceding principles can be applied to any collection of objects, whether tangible (physical objects) or not. (sounds, imaginary objects, etc.)



Order Irrelevance

This principle refers to the knowledge that the order in which items are counted is irrelevant. It does not really matter whether the counting procedure is carried out from left to right, from right to left or from somewhere else, so long as every item in the collection is counted once and only once.



Simulation of Learning to Count

Let's pretend you're a preschooler...

- . Stable Order Principle

Finger Images and Bunny Ears

- . Cardinality
- . Subitizing
- . Decomposing
- . Classroom routine

Counting Bags

- 1:1 Correspondence
- Order irrelevance
- Stable Order
- Cardinality



Increasing Complexity

How many objects are in the bag?

- . Oral (1:1)
- . Match the quantity to the numeral
- . Record quantity with a written numeral
- . Order and compare bags
- . Larger quantities with recording sheet
- . Encouraging students to organize their quantity in groups

Tools

- . Finger patterns
- . Five/Ten frames
- . Unifix towers to five/ten
- . Dice patterns
- . Domino patterns

Summing It Up...

Learning count is highly complex endeavor

- . Take care to develop throughout the year
- . Build routines that support this work through grade 2 and beyond
- . Use tools to develop mental imagery

Identify Your Quick Win

THANK YOU!!!

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