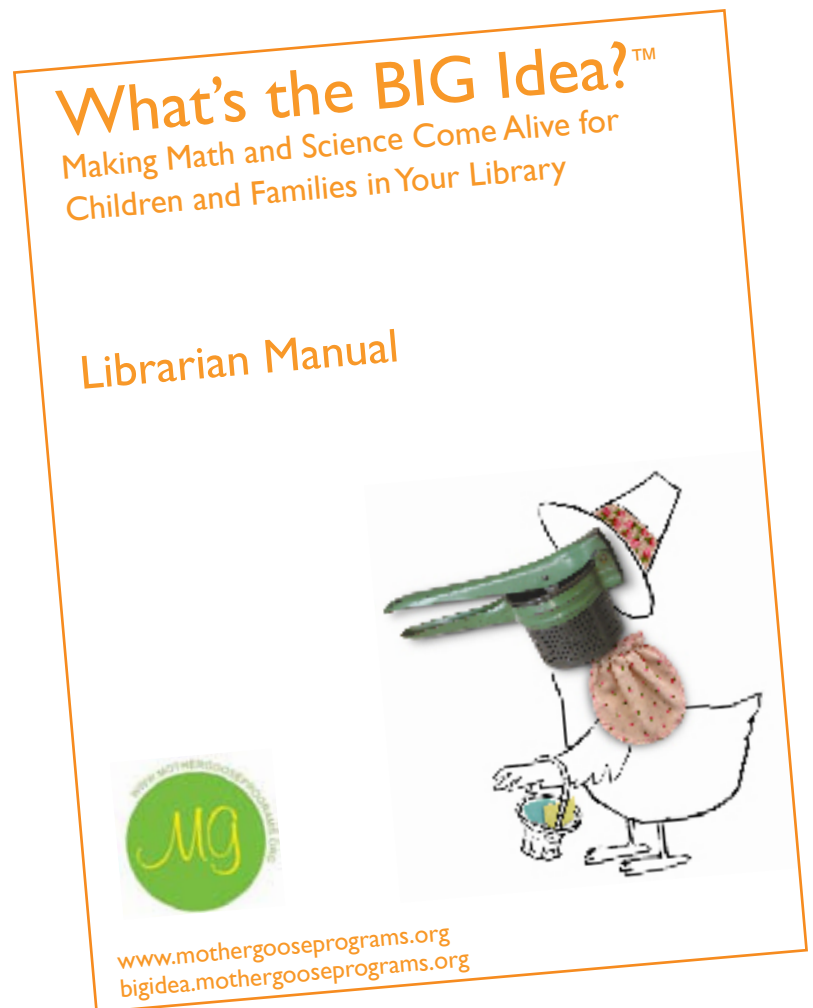


What's the BIG Idea?™

- **Get children excited about math and science**
- **Contribute to children's school readiness**
- **Use hands-on activities to make books come alive**
- **Meet national and local education standards**
- **Help children make sense of the world around them**
- **Have fun!**



**Activities and Book Suggestions
from this webinar are included in the**

***What's the BIG Idea?*
Librarian Manual
available at**

www.bernan.com

***What's the BIG Idea? Modules*
include materials to be used
in the hands-on activities.**

**20% off all
What's the BIG Idea? products**

Webinar Archive

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**What's the BIG Idea?
An Overview**

**Same and Different:
Sorting Together**

**Make a Splash with
What's the BIG Idea?
at your Library**

Finding Patterns Everywhere

**The Shape of Things:
Geometry for Young Children**

Number sense is the ability to think and work with numbers easily and to understand their uses and relationships.

Research has shown that young children are sophisticated mathematical thinkers. Children as young as age two develop oral counting skills and use number words. They acquire many more math skills and concepts before they enter kindergarten. Acquiring these skills and concepts provides an important base for future math learning.

Math and Science Skills and Concepts

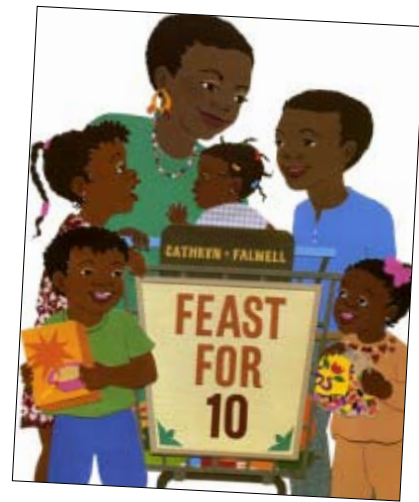
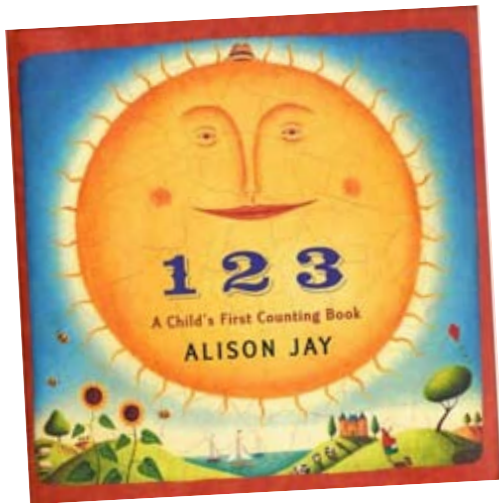
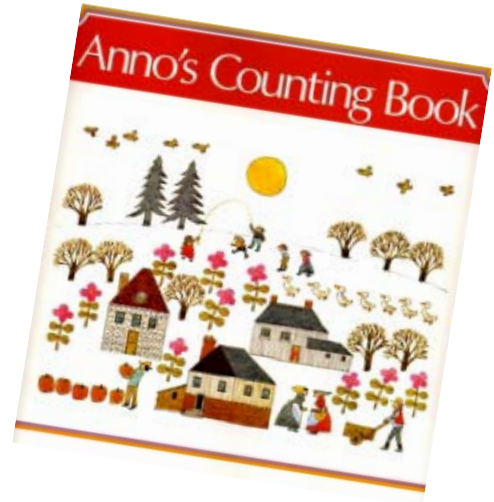
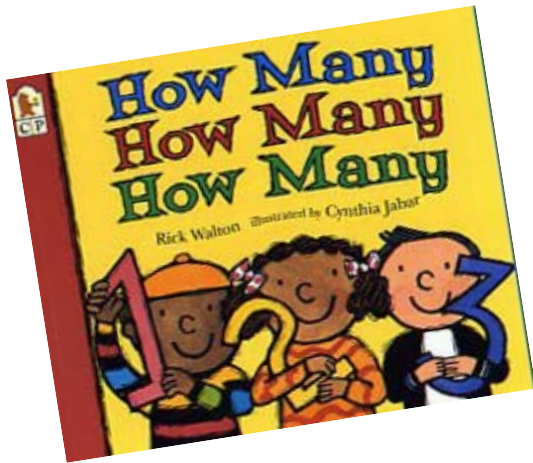
When children explore numbers, they:

- **Count and learn the sequence of numbers.**
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- Begin to understand addition and subtraction by counting groups of objects.
- Use comparative terms such as more than, less than and the same as or equal to.
- Begin to make number sentences (equations) with concrete objects and written numerals.

More Than Counting: Numbers and Operations

Reading picture books and doing hands-on activities strengthen children's math concepts and skills as you ask open-ended questions, encourage children to explain what they're doing and provide many experiences with the same number or operation, such as doing many different activities using one number or making and counting sets with a variety of manipulative materials.

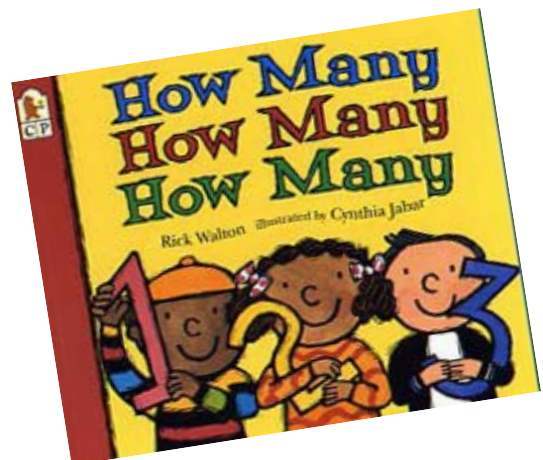
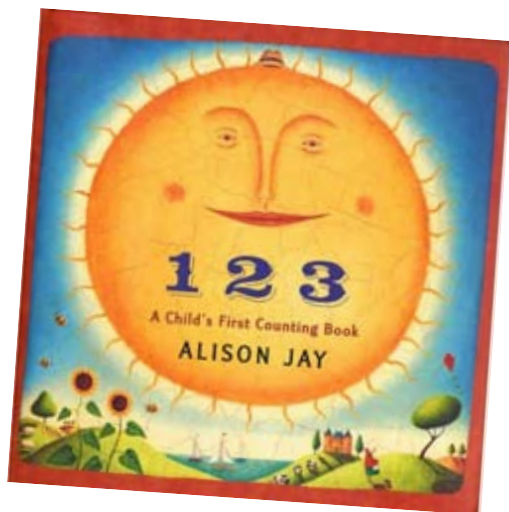
Books About More Than Counting



Assessing Number Knowledge: Counting Fingers

Oral counting skills may begin as early as age two, although very young children often say the numbers out of sequence or with some numbers missing.

Most kindergarteners are able to count in a sequence from one to 10 and understand one-to-one correspondence.



From one librarian:

I decided to plan a “Count on Mother Goose Family Night” because I’d noticed that very few children in my story hours knew traditional Mother Goose rhymes. I took this opportunity to introduce and talk about basic counting skills and traditional rhymes at the same time.

We began the program with families and children talking together about the nursery rhymes they knew. I asked if anyone knew a rhyme with numbers or counting in it. WOW! Did they ever! Children and adults said rhymes in English and Spanish and to my delight, three other languages were represented and those families told us their rhymes.

Next, we looked at the books and found many rhymes that were new to us, and families read, counted and acted them out.

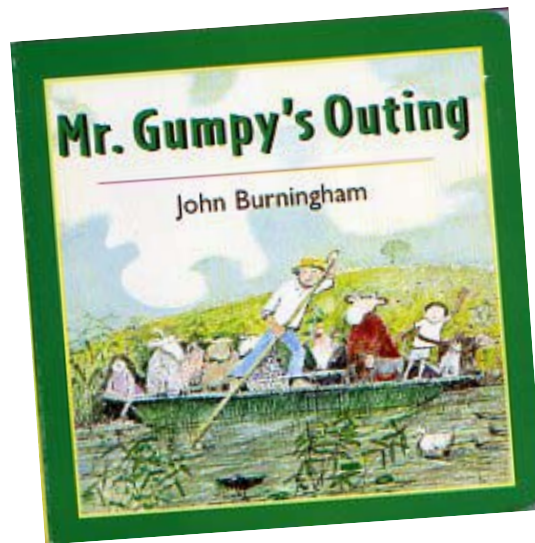
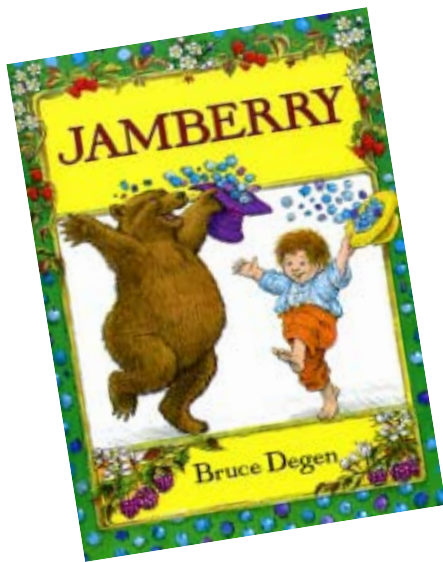
We did some of the simple activities mentioned on the What’s the BIG Idea? family cards—Counting 1, 2, 3 and Part-Part-Whole—and I gave each family a card to take home and use.

Children were asked to take a plate and select one cookie for each family member (one-to-one correspondence!).

I’d displayed over 20 books—Spanish, bilingual and English titles and all were checked out at the end of the program!



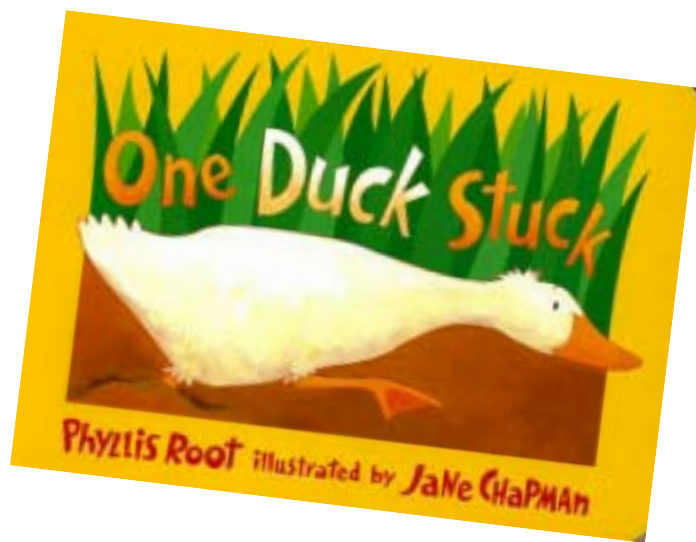
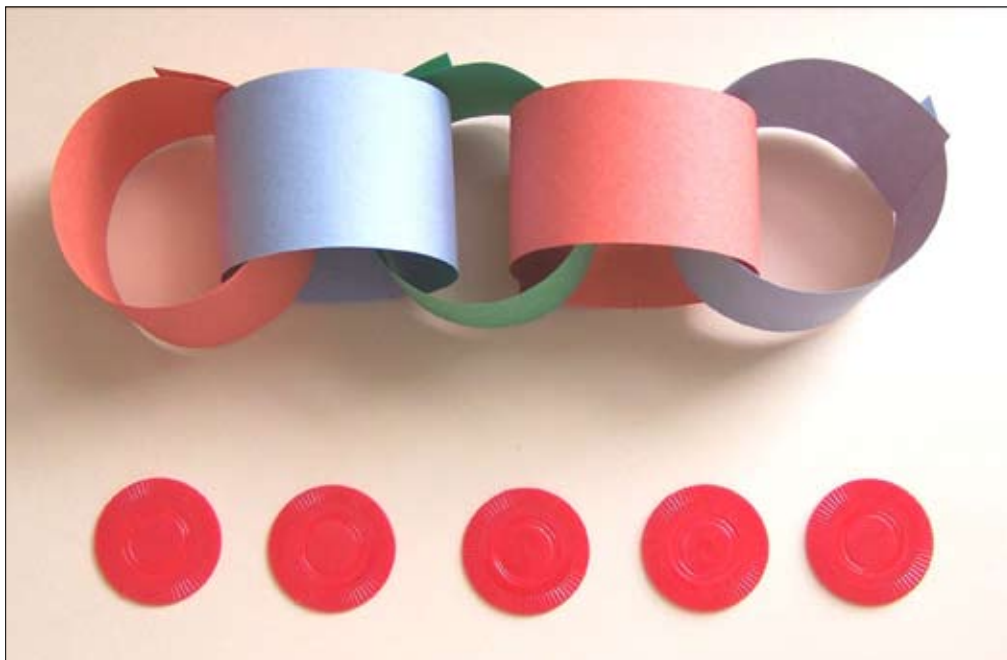
More Than Counting: A Typical Program



Make a Count to Five Book



How Many in My Chain?



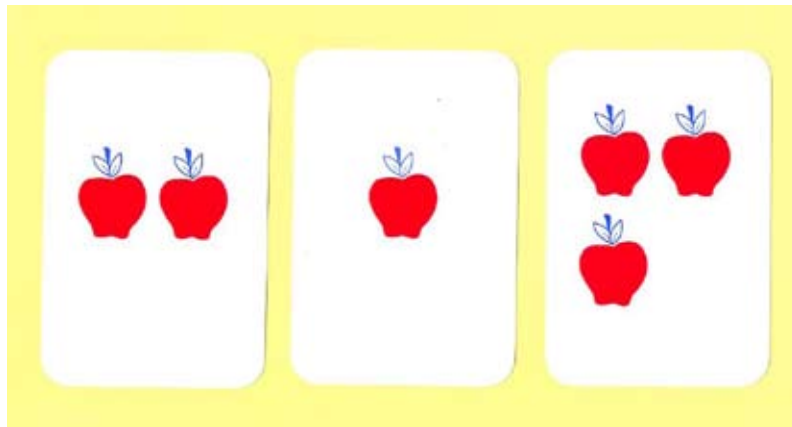
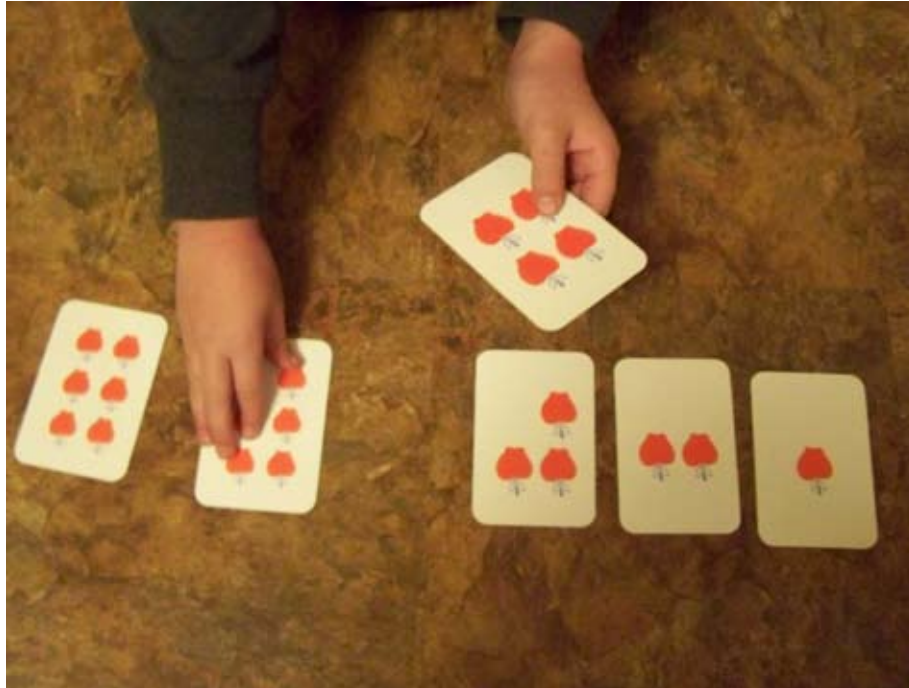
Make a Number Creature

What's needed: One number die, paper towel tubes, cut out paper shapes, stickers, feathers, toothpicks, craft sticks, chenille sticks, yarn, tape, glue sticks, scissors.

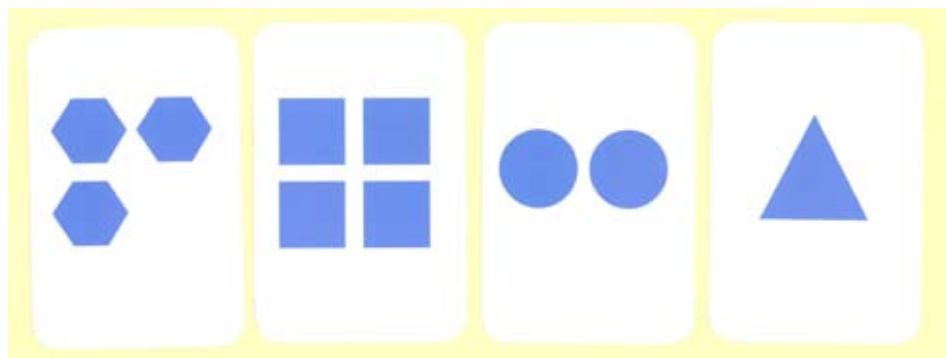
Create your creature by attaching the correct number of materials to the tube-base. For example, if you rolled a 3 with your number die, you might attach three feathers, three wings, three strips of paper for stripes, three stickers for eyes, etc. **BE CREATIVE!**



Fix My Mistake!

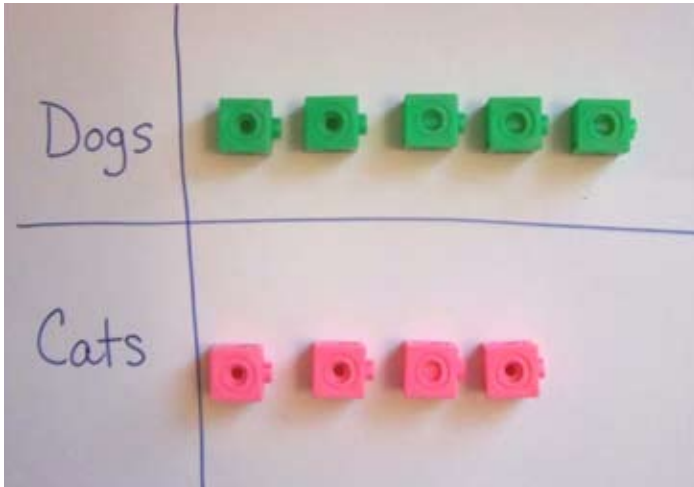


Two...one...three...fix my mistake!

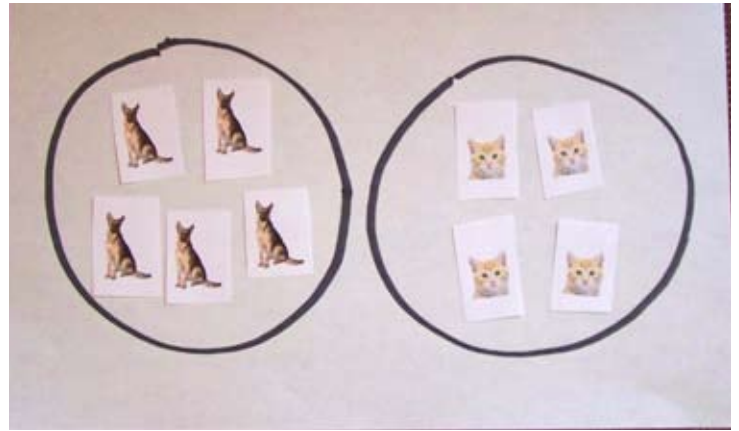


Three...four...two...one...fix my mistake!

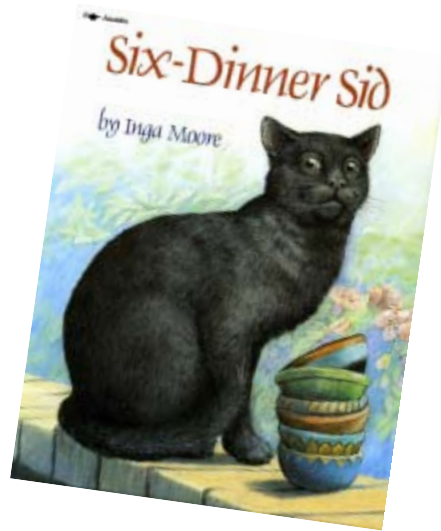
Dogs or Cats?



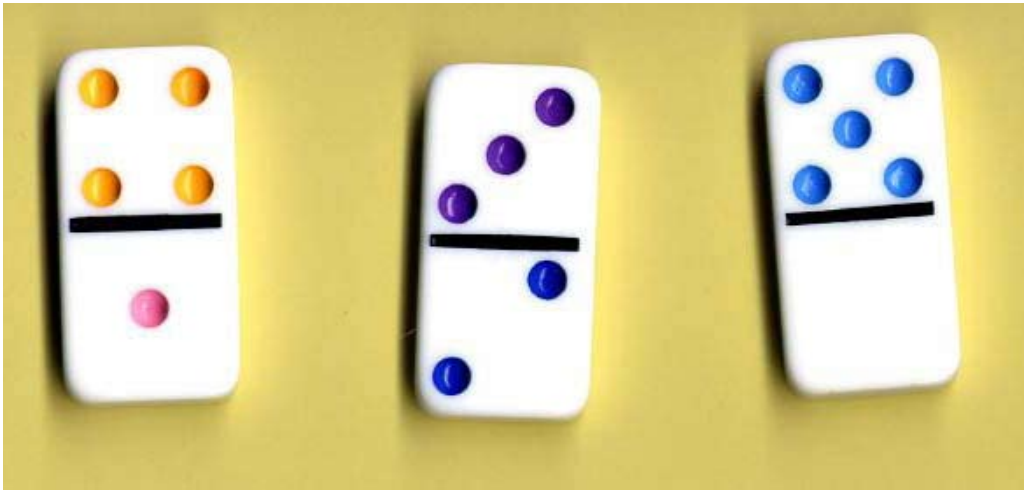
Which has more?



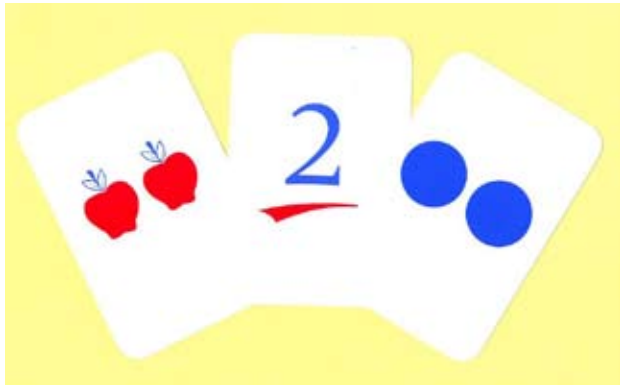
5 dogs...4 cats



Counting and Sorting With Dominoes



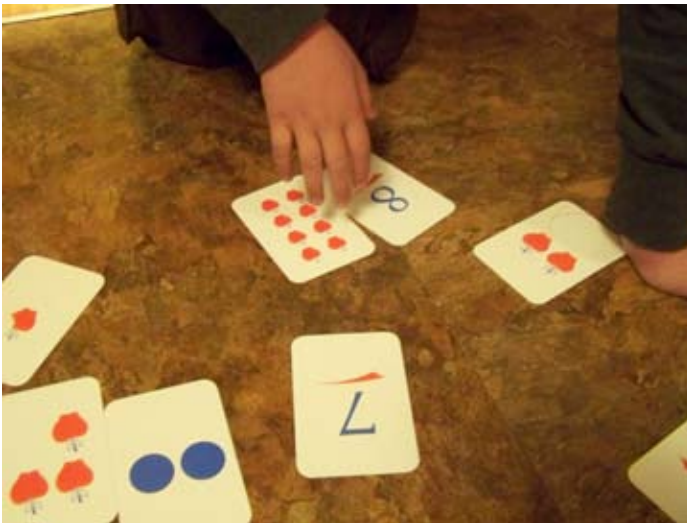
Count and Match Numerals



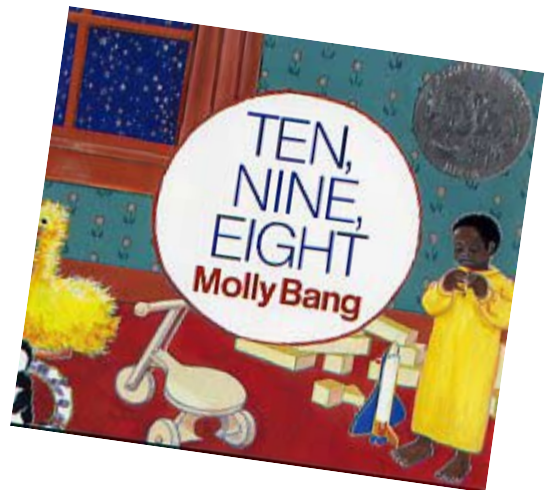
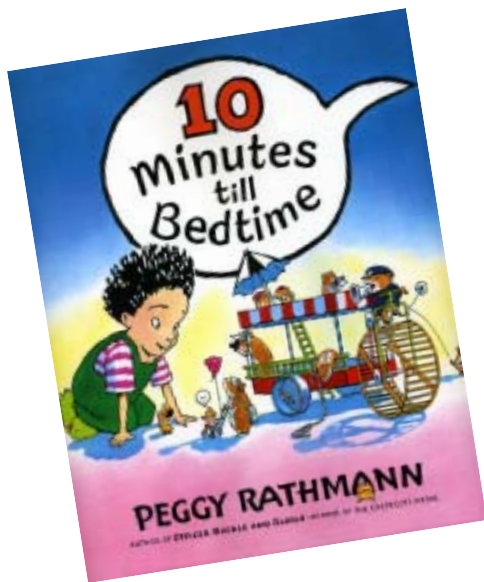
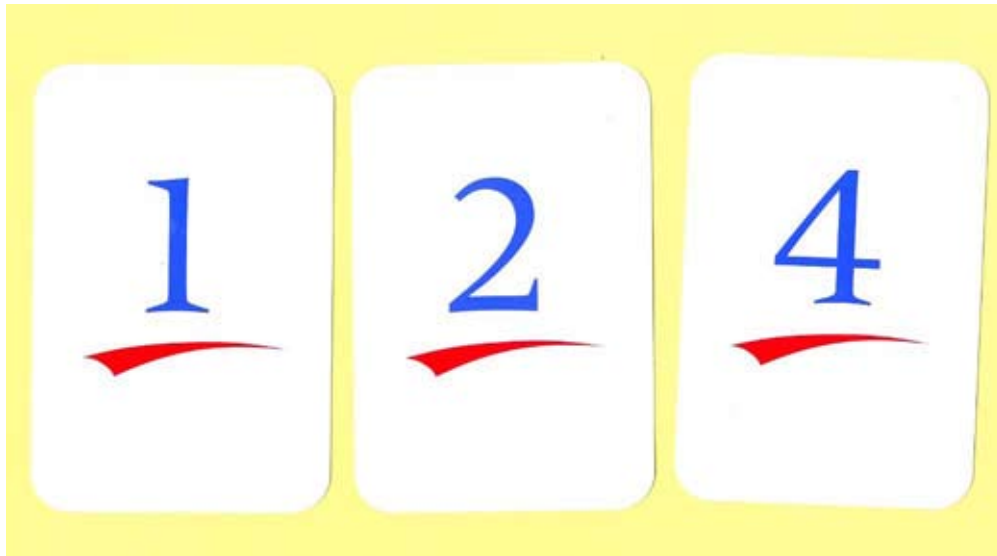
Two...2...two...



Four...4...four



What's Missing?



Vocabulary

One-to-one correspondence: Verbal-object counting skill (counting an object only once). Most children develop this skill at age three or four.

Cardinal number: Identifies “how many” in a group or set.

Ordinal number: Indicates the place or position of an object (first, second, third, etc.).

Part-part-whole: Recognizing part-part whole relationships (**composing and decomposing numbers**) is a basic in developing number sense.

Set: A collection of items.

Numeral: The written symbol referring to a number. Most children develop an understanding of numerals between the ages of three and six.

What the Research Says

Children's basic understanding of mathematics is gained long before they enter school.

Development of oral counting skills may begin as early as age two.

Children as young as age two or three may begin to use number words when they count their fingers or other groups of objects, even though they may count "1, 2, 6" for three objects and so on.

Children first begin to memorize the sequence of number words, often missing portions of the sequence.

Children begin to recognize numerals between the ages of four and five.

Kindergartners typically can count out sets (collections) of at least five items accurately.

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More Than Counting:
Making Sets

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