

TOPIC 8 Overview

Mathematical Background

The activities in this topic review and extend children's experiences with number. In Topic 6 children worked with the numbers one, two, three; here the sequence is extended to **four**. Again, songs are used for rote counting, and a variety of activities promote counting with understanding.

Children use concrete objects to represent the number four as two groups: three and one, or two and two.



Representing numbers in such ways begins to build the foundation for later work with addition and subtraction. It also helps children begin to recognize "how many" without counting.

The symbol for four is introduced in this topic. In Topic 6, rhymes were used to help children learn how to form the symbols 1, 2, and 3, and a similar approach is used for 4. At this stage, children vary greatly in their fine motor skills, and mastery is not expected. They can choose a card with the correct symbol or "write" on the floor with a finger, if they are not yet ready to write with crayons or paint.



In this topic, children also count the four sides and the four corners of a square. In this way shapes are used to build concepts of number. The activities begin to focus children's attention on attributes of shapes. Two-dimensional shapes will be explored in more detail in Topic 11.

Learning Expectations

Children will:

- ◆ count the objects in a group (up to four)
- ◆ make groups of up to four objects
- ◆ match number symbols 1 to 4 to groups of objects

Language Children Will Use

one, two, three, four, five, counting, numbers, groups, square, corners, sides

Assessment



Look and Listen

Observe the children throughout the topic, and record your observations on each child's Ongoing Assessment Record. (See *Assessment Book*.) Small-group activities, in particular, provide invaluable opportunities to gather information about children's understanding.

Save

If possible, take photographs of children arranging four objects in different ways. Note the way children describe their arrangements; for example, "They are in a row" or "They are in a kite shape" or "One is on top and three are below."

Save the drawings and paintings children will make of the number symbol 4, and four objects.

Cross-Curricular Connections

Literacy



- ◆ retelling a familiar story
- ◆ learning number rhymes
- ◆ describing illustrations
- ◆ learning and extending vocabulary
- ◆ participating in discussions
- ◆ following verbal directions and answering questions
- ◆ listening to rhyming texts

Nature and Science



- ◆ describing characteristics of different animals
- ◆ exploring simple systems of classification

Arts and Crafts



- ◆ cutting and pasting pictures
- ◆ creating play-dough shapes

Music and Movement



- ◆ learning songs by listening and joining in
- ◆ creating additional verses for songs
- ◆ moving to music
- ◆ participating in dramatic play
- ◆ tearing and/or cutting paper
- ◆ beginning to hold and use art materials and equipment effectively and safely

Related Children's Literature

Bears on Wheels. Berenstain, Stan & Jan. 1969. Random House.

Fish Eyes: A book you can count on. Ehler, Lois. 1990. Harcourt Brace Jovanovich.

My Four Book. Belk Moncure, Jane. 1985. Child's World.

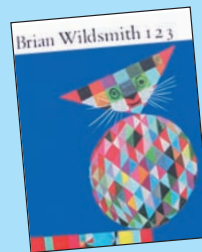
1, 2, 3. Wildsmith, Brian. 1995. Millbrook Press.

One Two Three Four. Considine, Kate and Schuler, Ruby. 1963. Holt, Rinehart and Winston.

One, Two, Buckle My Shoe: A Book Of Counting Rhymes. Haley, Gail. 1964. Doubleday.

The Noisy Counting Book. Schade, Susan. 1987. Random House.

When I Was Little: A Four-Year-Old's Memoir of Her Youth. Curtis, Jamie Lee. 1993. HarperCollins.



Transition Ideas



When you need to get children's attention between activities, give "Simon Says" instructions, including numbers. For example, quietly say, *Simon Says: Clap three times . . . hold one hand up high . . . count to four . . . show me three fingers . . . draw a number 4 in the air*, and so on.

At snack time, encourage children to show different arrangements of four. Examples: *Put four crackers on your plate. Put three near the edge of the plate and one in the middle. Stack two crackers in the middle of your plate; pretend you are giving the plate a nose. Now use the other two crackers to make eyes.*

Additional Support

Week 1

Repeat the *Circle Time Song* activity (page 8-7) and/or *Picture Chat* (page 8-9). Give each child at least four blocks (or counting toys) and a container, and provide many opportunities for children to place blocks in the container to show a given number up to four.

Week 2

Repeat *Circle Time Song* (page 8-15) and/or *Picture Chat* (page 8-16). Sing the *Kitty Plays* song without the CD. Pause for children to say the phrases that include number words (such as *two boxes*), using the pictures as clues. Provide real objects for children to count and to play with, and help them sing about these using the *Kitty Plays* song as a model. Example: *Peter plays with four cars . . .*

In *Picture Chat*, guide the children in acting out combinations that make four, such as 3 and 1, and 2 and 2. For example, a group of four children could have two children sitting and two standing.

English Language Learners

This topic reinforces children's understanding of language introduced in Topic 6, such as *counting*, *groups*, and number names. Whenever appropriate throughout the topic, provide sentence prompts to reinforce children's understanding. Example: *Let's count the (cars): one, two, three, _____*. (Encourage the children to provide the number word *four* to complete the count.) Also ask questions that include words children can use in their answers. Example: *How many buttons are there on your jacket?* ("There are [four] buttons on my jacket.")

If children are not confident enough to express themselves in English, provide opportunities for them to answer questions nonverbally. Examples: *Look at these groups of animals. Point to the group of (four) animals. Make another group of (four) animals.*

To reinforce concepts and language, use the songs and CD frequently. Activities that are particularly suitable for ELL are provided on the back of the Song Posters.

Extension



Children ready for extension could:

- ◆ arrange objects to create patterns involving numbers, such as a repeating pattern of one red cube, two blue cubes, three yellow, four green, or a pattern of three, one, three, one, three, one.
- ◆ make displays of objects and/or create pictures to show numbers greater than four (depending on the child's number knowledge). Encourage children to dictate stories or captions about their work for an adult to write.
- ◆ create their own "mix and match" pages based on the Mix and Match Number Magnets and Flip Book (number symbols, dot arrangements, and pictures).