

Fun with Counting



Children enjoy the rhythm and pattern of reciting numbers in order, or rote counting. Frequent counting practice helps children learn the correct sequence of number words and builds foundation for other mathematics skills.

Encourage your child to count as far as he or she can and, from time to time, help him or her go a little further. Counting is a fun way to pass the time while waiting for the bus or standing in line at the grocery store, especially if you count in funny voices.

Another fun way to practice rote counting is to play Hide and Seek. Have your child be the Seeker and count to a particular number while you hide (or hide a stuffed toy). After counting to the chosen number, your child should look for you (or the toy). When you are found, take a turn counting while your child hides.



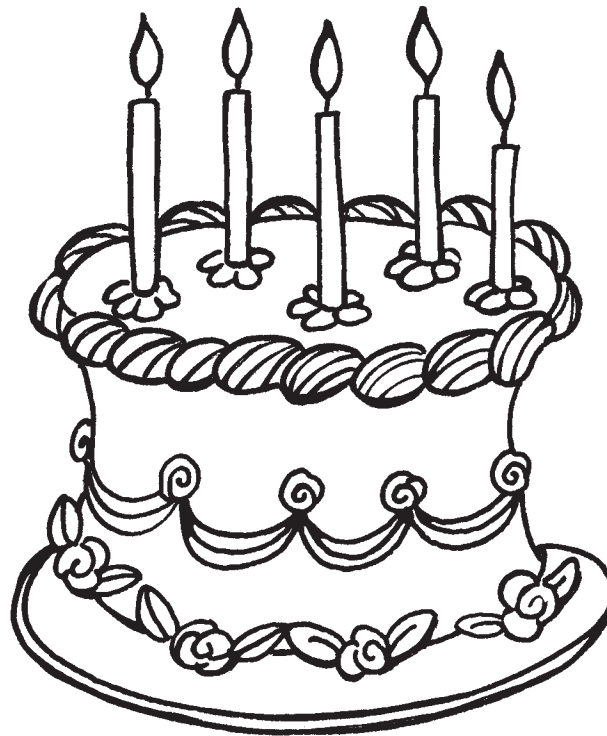
Birthday Counting



Birthdays provide an excellent opportunity to count and learn about numbers. As you prepare for family celebrations, you can find many pleasurable counting experiences to share with your child:

- Count the number of people coming to the party.
- Set the table with the right number of napkins, cups, and utensils.
- Count candles for the cake.
- Make a card or birthday banner. (*Grandma is 60!* or *Happy 1st Birthday!*)

As you celebrate birthdays together, talk about the ages of people in your family. Ask questions like “How old will you be on your next birthday?” or “Which cousin is older?” Informal conversations like this help children use numbers in ways that have meaning for them.



Playing Games



Many games reinforce children's emerging mathematical skills and concepts. Children have fun playing games while learning at the same time.

Card games such as Go Fish, Memory, and War involve dealing out an equal number of cards at the beginning of the game, recognizing numerals, and counting to determine who has the most cards.

Many board games provide counting practice and help children develop a sense of strategy. Play games with your child frequently. Try to minimize competition, and concentrate instead on playing and learning together.



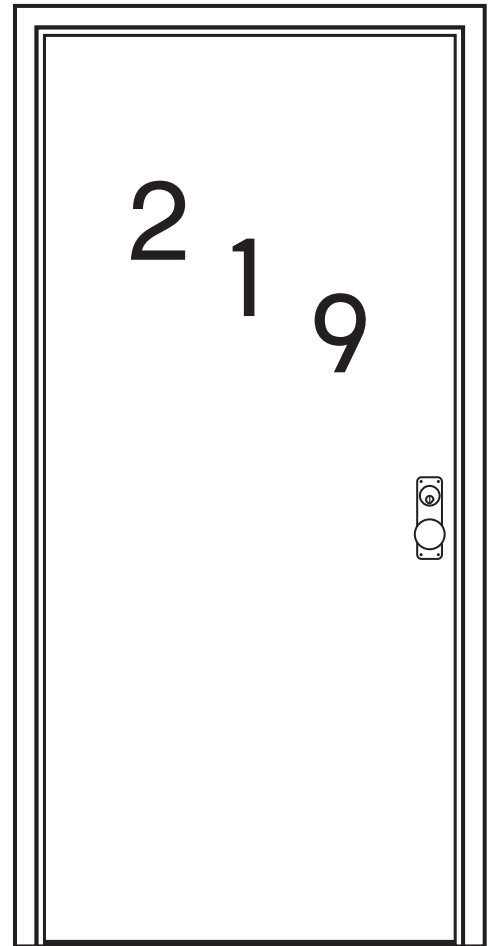
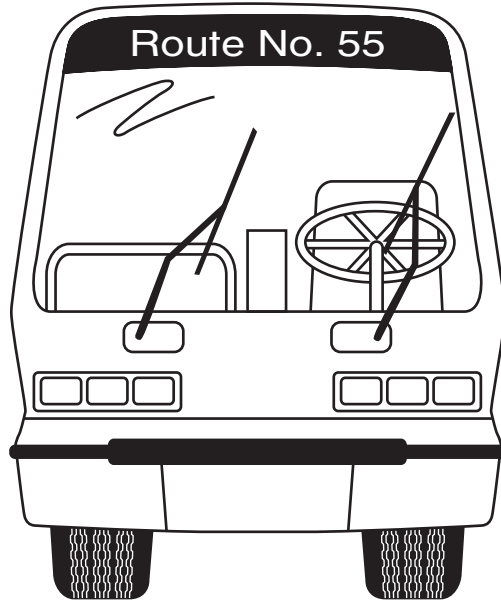
Numbers All Around



Help your child become more aware of the numbers all around. Find numbers in your home, around your neighborhood, in stores you visit, and as you travel.

- Take a walk around your home looking for numbers. Help your child find the numbers on the clock that show it is bedtime, on the television for a favorite show, or on the telephone to call Grandma. How are these numbers useful?
- In your neighborhood, look around at the building addresses. Help your child think about why there are addresses. This might be a good time to help your child learn his or her address.

Reading big (multi-digit) numbers is not expected at this time. Your child will probably read the bigger numbers by individual digits, not the whole number. This is a good way to practice recognizing numerals.



Cleaning Up Toys



Children are naturally interested in sorting things into groups. When it is time to clean up toys, encourage your child to sort the toys into groups based on the type of toy or its characteristics.

For example:

- “Let’s put all of the blocks on the shelf and all of the stuffed animals in the basket.”
- “Pick up all of the red cars first. Which color cars do you want to pick up next?”
- “Your books go on the shelf and your sister’s books go back to her room. Let’s make two piles.”

You can label baskets or boxes with the name and picture of a type of toy (such as Trains or Doll Clothes). Many children enjoy matching toys with the containers in which they belong, which makes clean-up more fun!



Counting and Movement



Be on the lookout for opportunities to count all sorts of things that your child does. Connecting counting with movement helps children develop counting skills as well as coordination.

Try some of these ideas (and make up your own!).

- Help your child count the steps needed to walk from the sidewalk to your front door. Suggest trying to walk the same distance with fewer steps or with more steps.
- Count stairs with your child.
- When you take a walk, have your child hop, skip, or jump a certain number of times.
- Practice rolling or tossing a ball with your child. Count how many times the ball goes back and forth. See how high you can count.
- Count how many times you and your child can bop a balloon to keep it in the air.



Solving Problems at Home

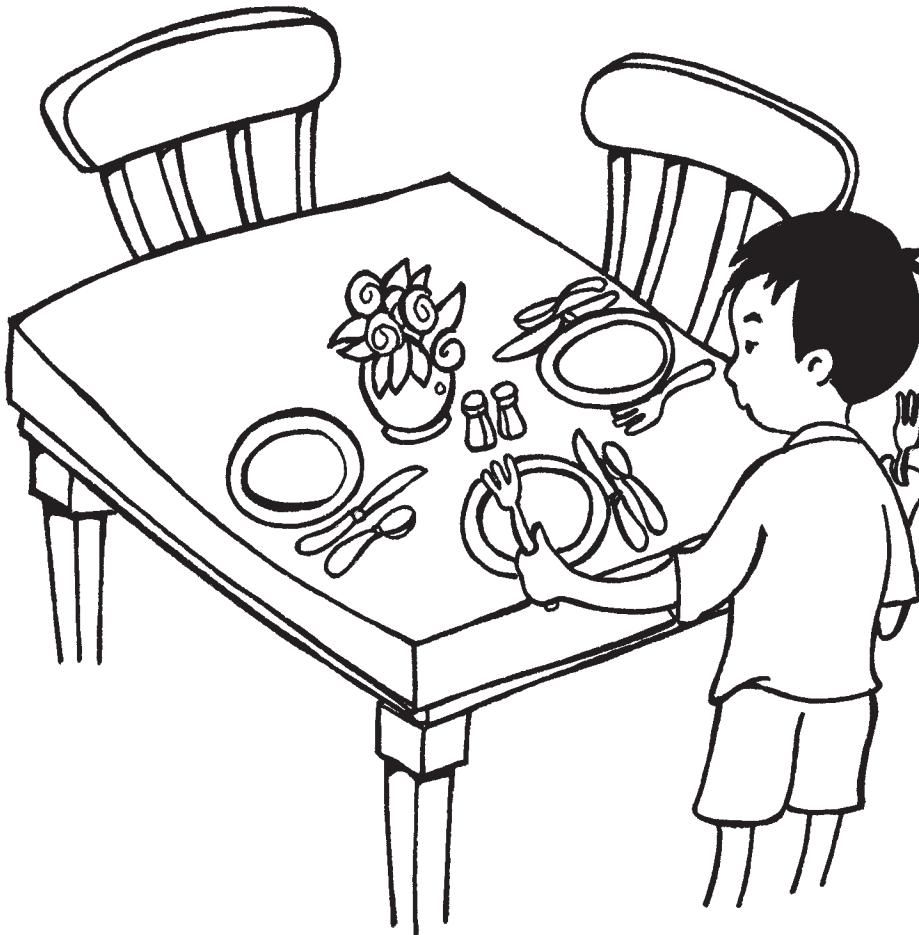


Help your child use mathematics to solve problems in everyday situations.

Setting the table can be a natural opportunity for your child to practice counting and problem-solving skills. You might ask your child questions such as:

- How many spoons and cups do we need so everyone has one of each? How many forks do we need if the baby only uses a spoon?
- How many cookies should we serve so everyone gets two cookies?
- How can we share the bread evenly? How many pieces should each of us get? What should we do with the leftover pieces?
- How many more chairs do we need if the neighbors come over to eat?

Look for other natural and informal ways to engage your child in problem solving at home.



Solving Problems at the Grocery



Use everyday situations to encourage your child to practice counting and use problem-solving skills. A trip to the grocery store can provide an opportunity to solve problems in a new setting. As you shop, ask questions such as:

- We have one box of cereal, but we need three. How many more boxes do we need to choose?
- How many apples do we need to buy so everyone has one for lunch?
- Do you think the apples or the grapes will weigh more? How can we check?
- Do you think we should buy two small cans of soup or one large one?
- Do we have too many items to go through the express lane? How many bags do you think we will need?



Comparing Lengths and Heights



Children's first experiences with measurement focus on direct comparisons and understanding the concepts of *big* and *small*, *longer* and *shorter*, *taller* and *shorter*, and *the same as*.

Help your child by using comparison language in everyday conversation. For example, "You must have grown taller because now you can see out the window."

You can also explore measurement by helping your child mark the heights of family members on a door frame or a large sheet of paper. Compare the marks and talk about who is the tallest, who is the shortest, and which people are closest in height.

Measure and mark heights again in a few months. Note whether anyone has grown taller. How much taller?



Bath Time Math



Bath time provides an excellent opportunity to experiment and learn about capacity and volume. Together with your child, collect unbreakable containers that are different shapes or sizes, such as margarine tubs, plastic bottles, and juice containers. At bath time, let your child fill the containers and pour water back and forth, experimenting with how much water each container holds. Ask questions such as the following:

- Which of these containers holds more? How can you find out?
- Are there containers that hold about the same amount?
- What happens when you pour the water from this container into that one? Why does it spill over?
- How many times can this small container be filled and poured into the largest container before it overflows?



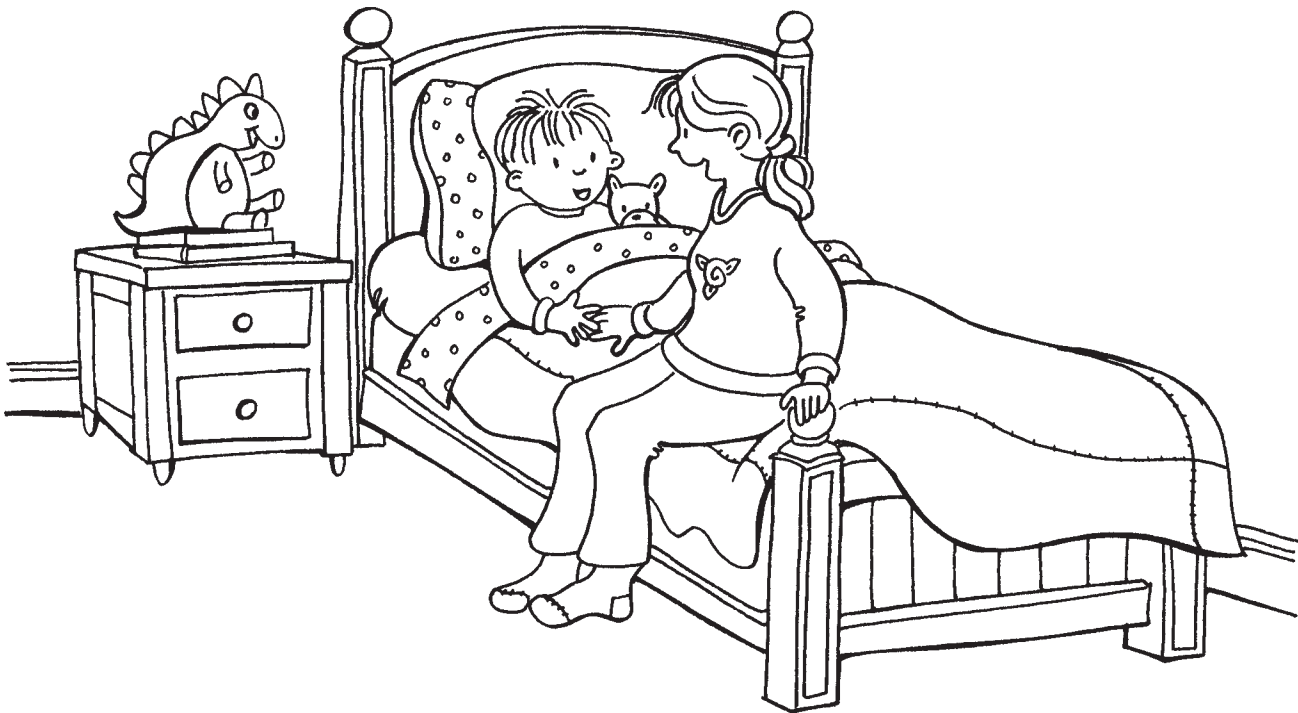
Ordering Daily Events



Thinking and talking about the order in which things occur helps children develop a sense of time and an understanding of sequencing and patterns. As your child talks about things that happen during the day, encourage him or her to use words such as *before*, *after*, *later*, *first*, *next*, and *last*.

At the end of the day, ask your child to tell you about three things that happened that day. Help your child order the events by asking questions such as: "What did you do first?" "What happened next?" "Which was last?"

Thinking and talking about the day's activities can become an enjoyable part of your child's bedtime routine.



Cooking at Home

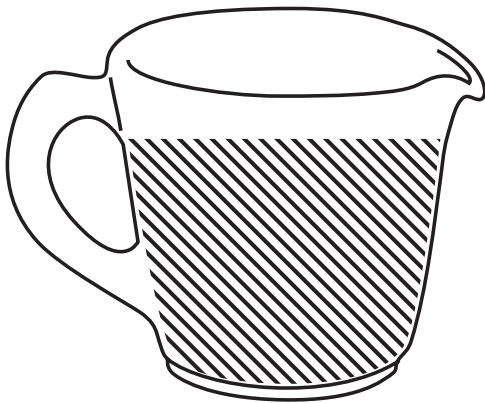


Cooking together is fun, and as children help in the kitchen they practice counting and become more aware of different ways to measure.

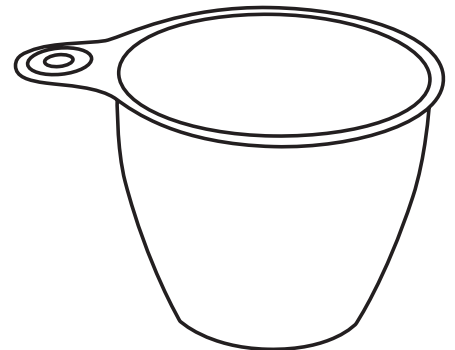
Let your child help as you prepare a meal. Children enjoy following a recipe and measuring the ingredients. Help your child use measuring cups and spoons by showing how to level off the cups or spoons and how to measure ingredients to the right line. Encourage your child to count the number of cups or spoonfuls added.

Your child can also help by measuring the water needed to boil pasta, by counting the cans of water needed to make the orange juice, or by measuring the chocolate and milk for hot cocoa.

Your child will begin to learn about temperature and time (and ways we measure them) by helping you set the temperature on the oven, or set the timer to measure how long something should cook.



1 cup



1 cup



1 tablespoon

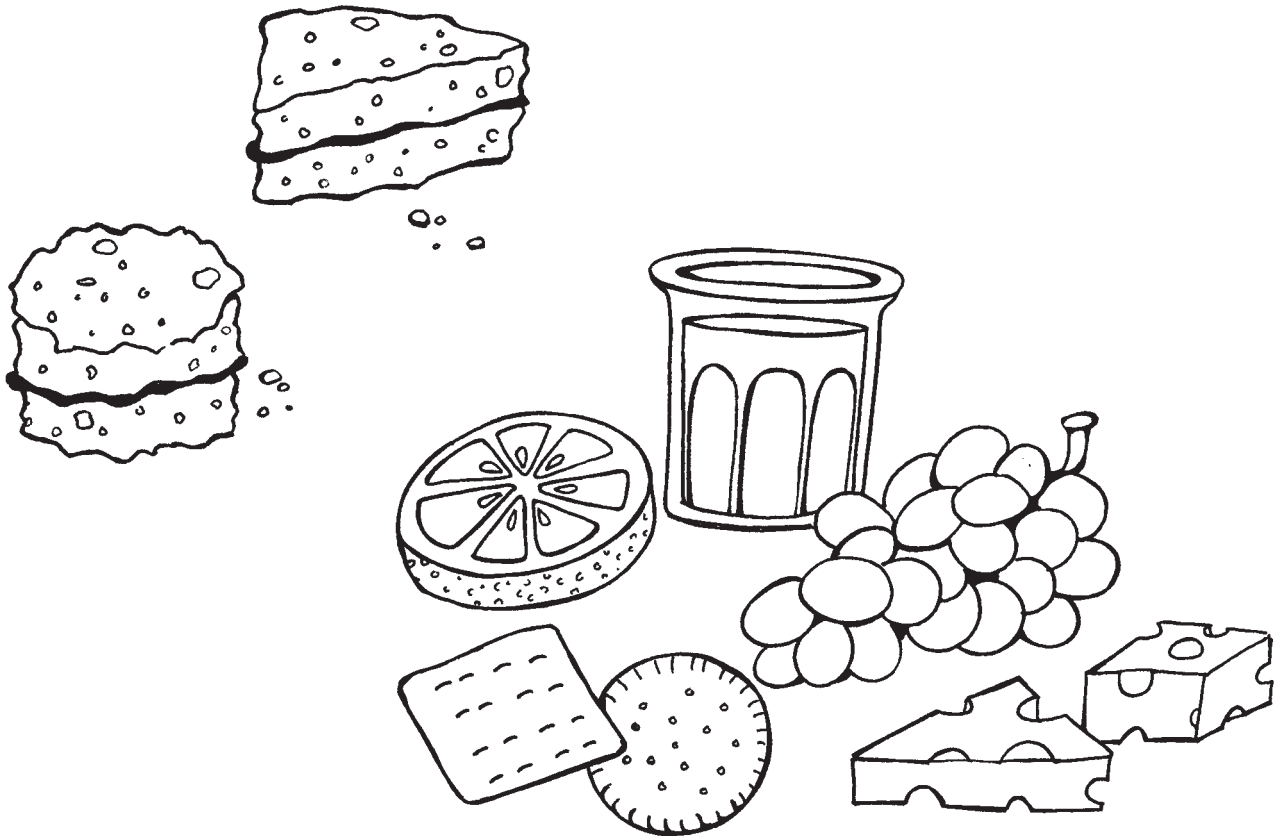
Eating Shapes



You and your child can explore geometry by preparing food in different geometric shapes. For example:

- Cut cheese into squares and triangles.
- Choose crackers that are squares and circles.
- Notice that grapes are like spheres.
- Slice oranges into circles.
- Use a glass of milk or a cheese stick for a cylinder.
- Make a square peanut butter sandwich and cut it into triangles. (Or, your child can nibble it to make a triangle, circle, or other shape.)

As you eat, talk about shapes. You might ask questions such as, "How many corners does a triangle have?" or "What other things can you think of that are circles?" Informal conversations help children recognize the similarities and differences among geometric shapes.



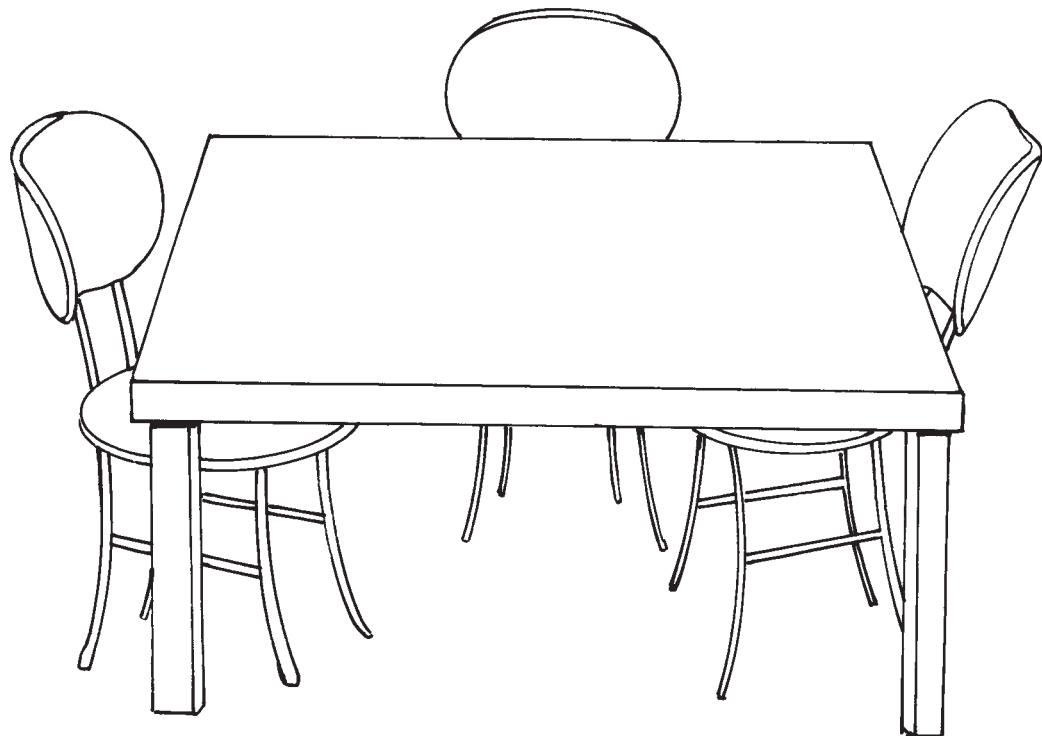
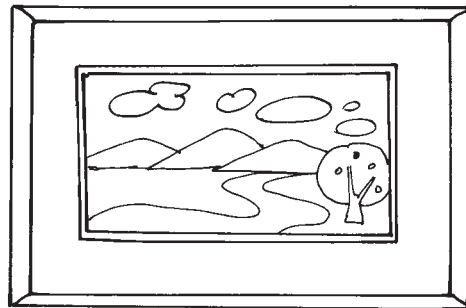
I Spy with Shapes



Play an I Spy game that encourages your child to find shapes in common objects. Give a clue such as, "I spy a rectangle." Give additional clues until your child guesses the object. For example, if you are thinking of the tabletop, you might add, "The rectangle I am thinking of is very large." If you are thinking of a picture frame, you could say, "There is a little rectangle inside the bigger rectangle."

Children are most familiar with the names of common 2-dimensional shapes such as circles, rectangles, squares and triangles. However, they also have experience with 3-dimensional shapes, such as balls (spheres), dice (cubes), and boxes (rectangular prisms). As they play I Spy, children may point out 2-dimensional shapes that are part of 3-dimensional objects. Informally begin to use 3-dimensional shape names, as well.

To pass the time while waiting in the doctor's office or grocery store line, you and your child can count all the squares, cubes, or other shapes you see.

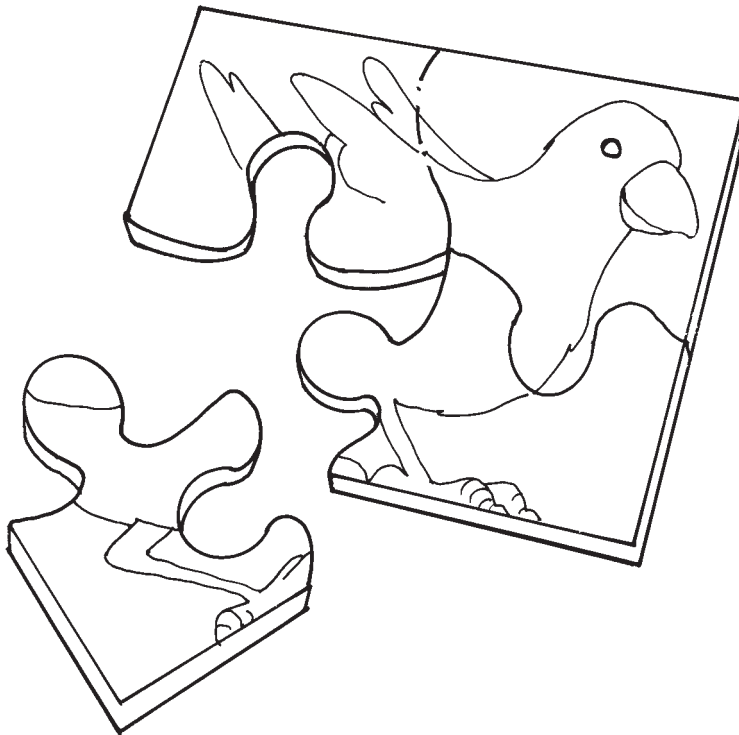


Puzzles



Puzzles help develop children’s spatial reasoning skills, an important part of geometry. As children work on puzzles, they build an understanding of directionality, order, position, and how shapes fit together.

Try a variety of puzzles with your child. The easiest puzzles are “insert” puzzles where pieces are whole objects. More complex puzzles require children to interlock pieces in order to complete the picture. As your child’s ability to put together puzzles progresses, try puzzles with more pieces and smaller pieces. Help your child assemble larger puzzles on heavy cardboard or a tray, so he or she can work on them over an extended period of time.

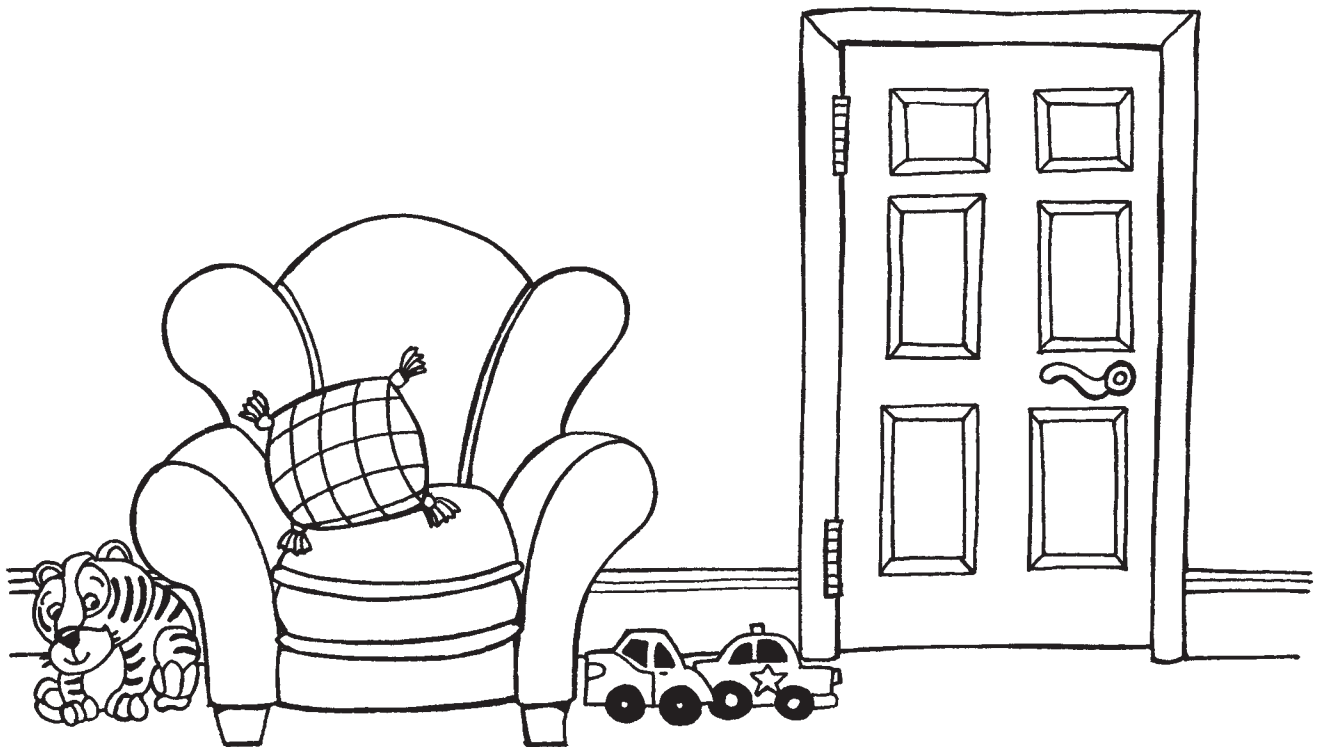


Playing a "Finding" Game



Children develop an understanding of position, direction, and location by using words such as *over*, *under*, *next to*, *between*, *behind*, *in front of*, *inside*, *outside*, *top*, and *bottom* in everyday life. Use these words often as you give directions or ask your child to find objects. Examples are: "The umbrella is *next to* the *front door*" or "Put your pajamas *in* the *top* drawer and your socks *in* the *bottom* drawer."

Play the following finding game with your child: Hide a small toy or stuffed animal. Give clues that use position words to help your child find the hidden object, such as, "Your toy tiger is *next to* the chair" or "It is *under* the TV." Reverse roles for each round.

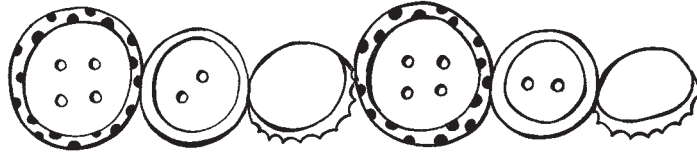


Creating Patterns

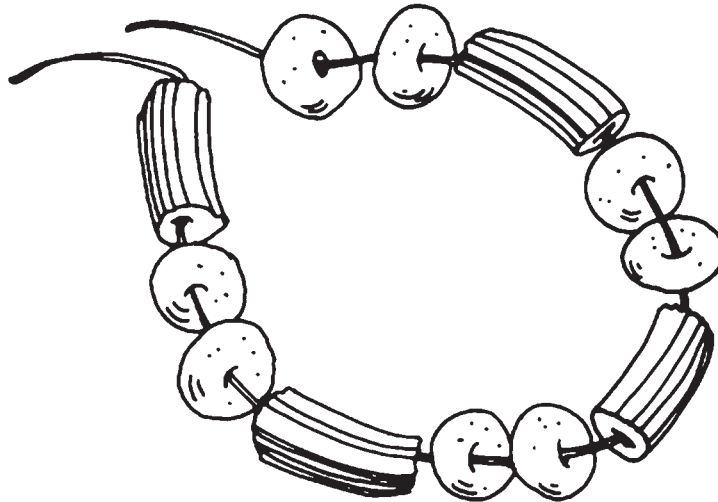


Patterns are an important part of mathematics. One type of pattern is an arrangement that repeats so that you can predict what comes next.

Together with your child, collect different kinds and sizes of objects, such as bottle caps, buttons, and coins. Use these objects to make patterns on a large piece of paper or tabletop. Ask your child to describe the pattern. For example, a pattern might be button, button, bottle cap; button, button, bottle cap; and so on.



Your child can also make pattern necklaces using colored cereal with holes or different kinds of tube-shaped pasta. Children can string cereal or pasta patterns on yarn.



Sorting Laundry

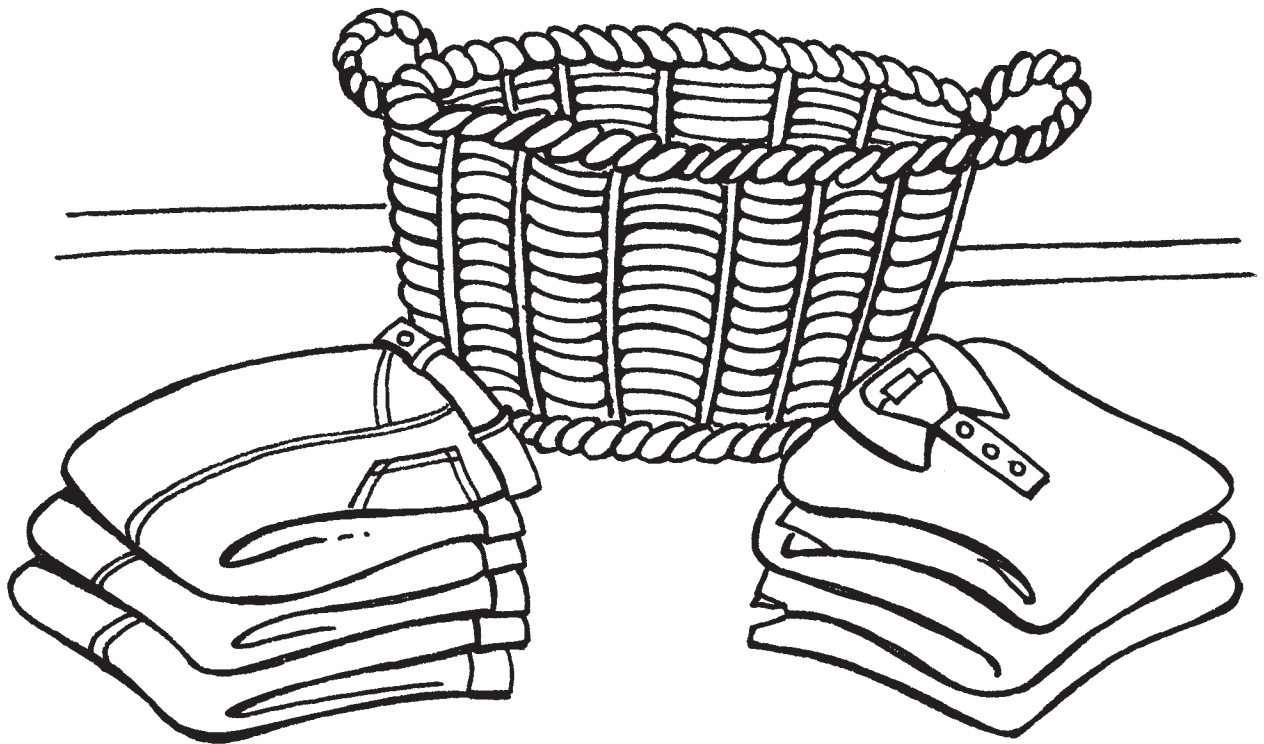


Helping with the laundry provides practice for sorting and classifying objects and gives children a meaningful opportunity to help around the house.

Your child can help sort the laundry before washing by separating light colors and dark colors into piles.

After laundry has been washed, children can sort in many ways. For example, by matching pairs of socks; sorting each person's clothes into separate piles; or arranging adults' clothing apart from children's clothing.

Encourage children to find other ways to sort when putting away the clothes. For example, pants might go in one drawer and shirts might go in another drawer, or hanging clothes might be separated from folded clothes.

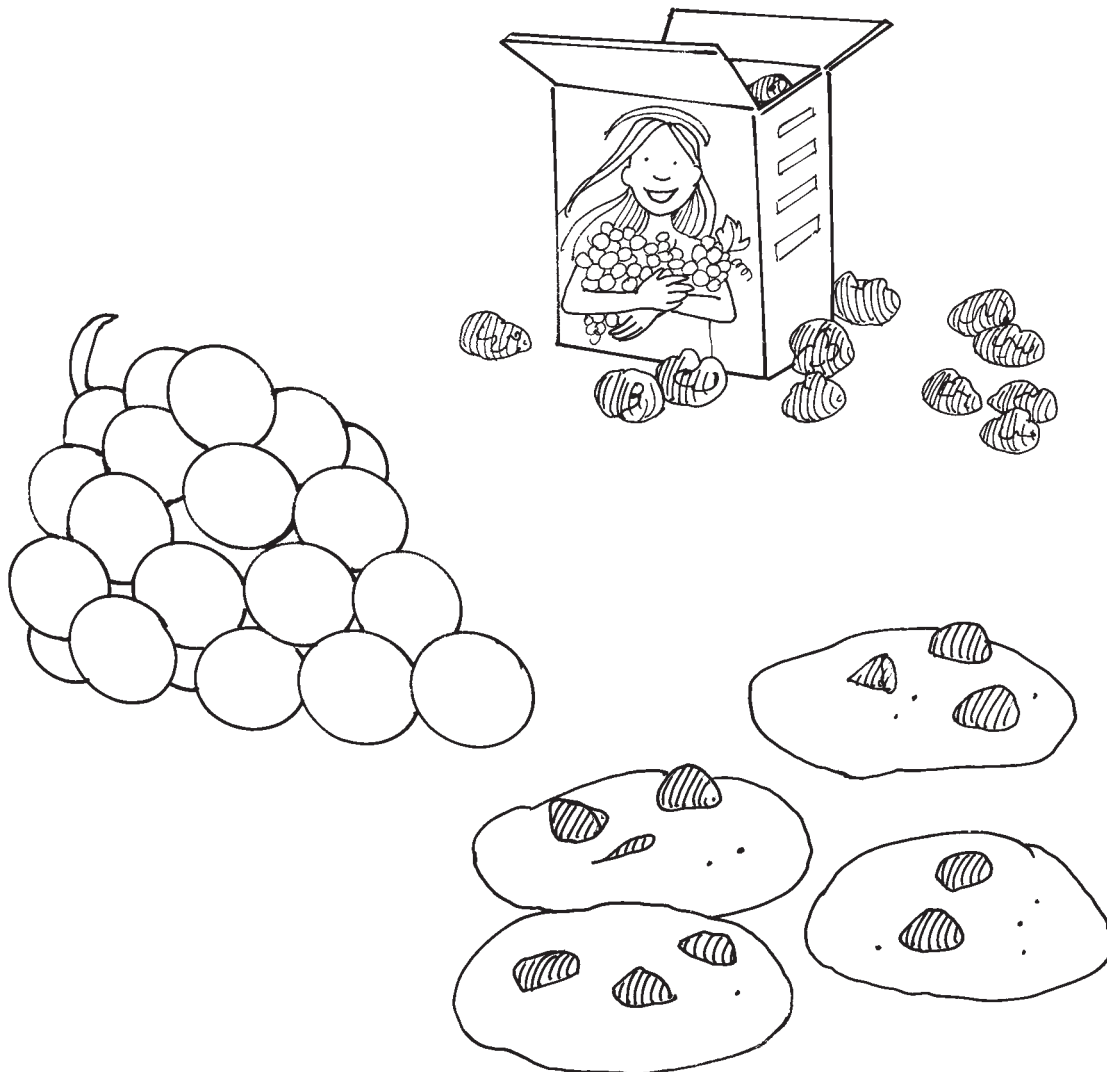


Sharing at Home



Sharing is a common practice at school. Children want things to be fair, and they help make sure that everyone has the same amount of food at snack, or the same number of playing cards for a game, for example. Most young children use a divvy-up strategy to deal out items into equal groups (“one for you, and one for me”).

At home, you can find many opportunities for your child to divide a group of items into equal parts. For example, children can help share food at mealtimes. Ask your child to put the same number of carrots on each plate. If you are sharing a bunch of grapes, have your child figure out how many you each can eat. Then count together to make sure that the same number of grapes is in each group. Also help children use fair sharing to solve problems with friends or siblings. For example, “You have 5 cars and I’ll have 5 cars.”



Taking Surveys



Children love to ask questions. Involve your child in finding out information your family needs. For example, your child can determine how many people want vanilla ice cream and how many want strawberry ice cream for dessert, or find out which book most family members want to read before bedtime.

For quick surveys, children can keep track of results on their fingers (one hand for vanilla and the other hand for strawberry, for example). Children might try writing the responses down with pictures or other systems they invent. (Playing waiter or waitress with a pad and pencil is fun and mathematical!)

Children may also enjoy asking other questions that interest them, such as, "Do you like cats?" Help your child find ways to track and show the responses. He or she could put a red block in a pile for *yes* and a white block in a pile for *no*. Or, you might make a simple chart that your child can mark with the responses. Help your child count, compare, and share the results!

Do You Like Cats?

Yes	No
X	X
X	X
X	X
X	