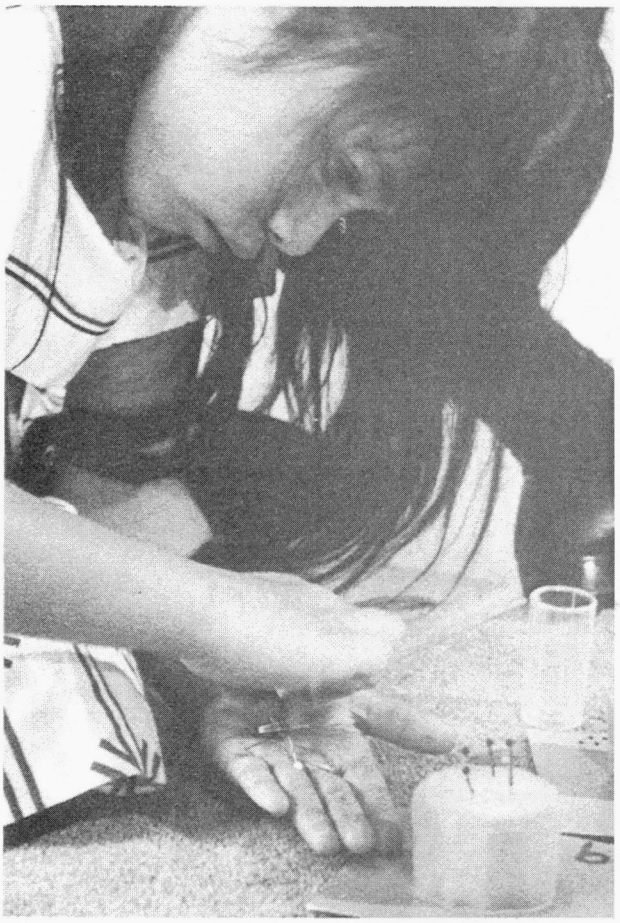
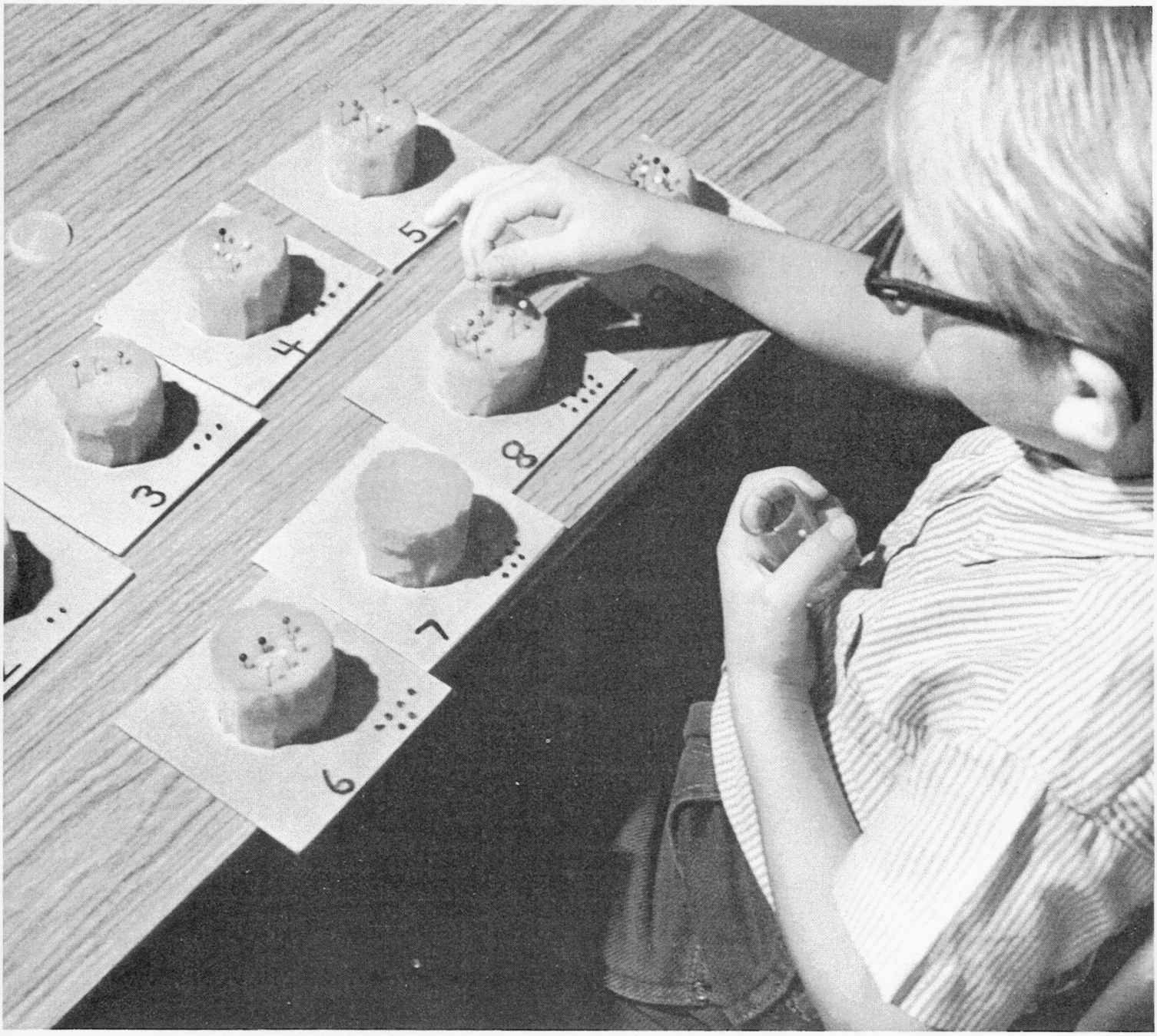
Sets



Pincushions

Skills Counting; forming sets of objects; ordering numerically.



ACTIVITY

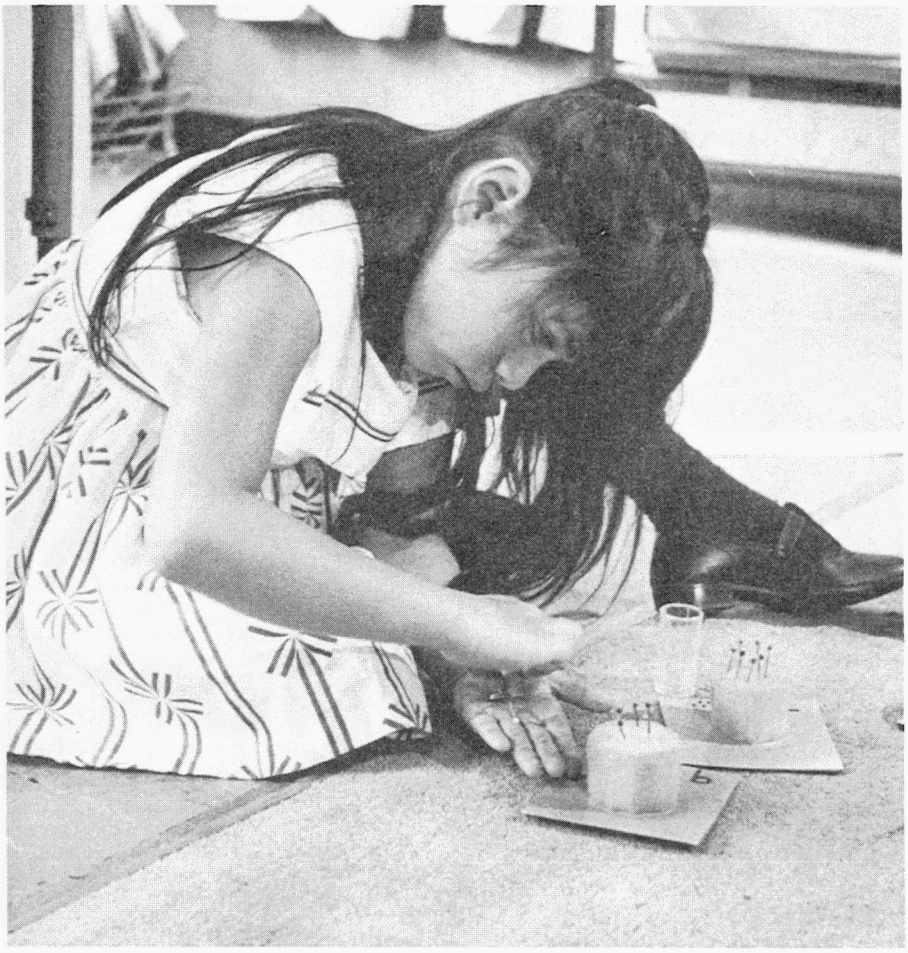
The child puts the appropriate number of pins into the pincushions. He then orders them 1 through 10.

GETTING STARTED

The teacher might ask the child, "How many pins would you stick into this pincushion? Why?"

IDEAS FOR FOLLOW-UP DISCUSSION

What did you do with the pins and pincushions?
Show me the pins you like best. What color are they?
Count the pins in the pincushion with the numeral 9 on it. How many are left?
Without doing it yet, how many pins do you think would be left from the pincushion with numeral 7 on it if you removed six of the pins? Take them away and see if you are right.



MATERIALS

3″ squares of cardboard.
Pincushion shapes cut from foam rubber.
Glue.
Spray paint.
55 large-headed pins.
Container for pins.
Container for pincushions and boxed pins.

The Safety Pin Game

Skills Forming sets of objects; counting; ordering numerically.

ACTIVITY

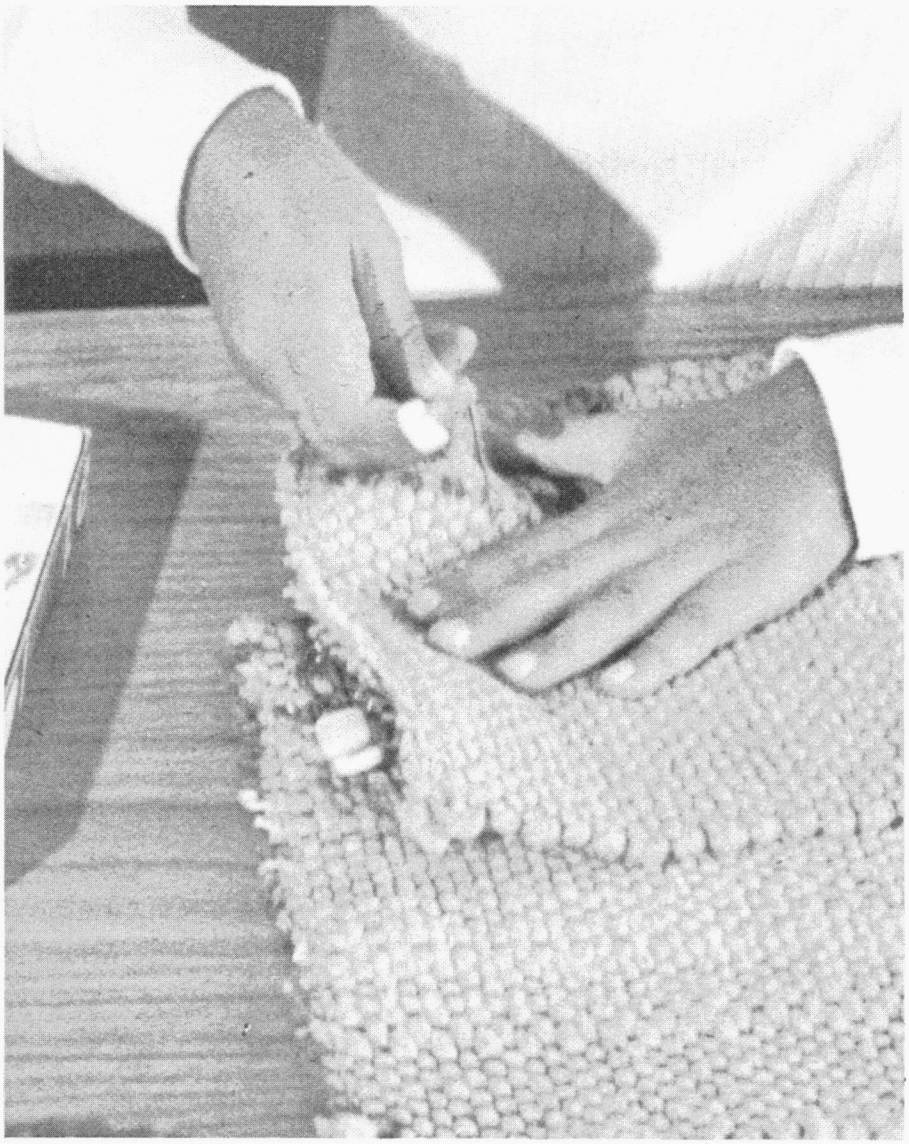
The child fastens the appropriate number of pins to the material.

GETTING STARTED

The teacher might ask, "How many pins will you pin onto this piece of material, Antoinette? Why?"

IDEAS FOR FOLLOW-UP DISCUSSION

What have you been doing, Antoinette?
What are these called? What are safety pins made of?
Count the pins on this material, please.
What color is this material?
Do you have any clothes this same color? What?
Does anyone in our classroom have this color on right now?

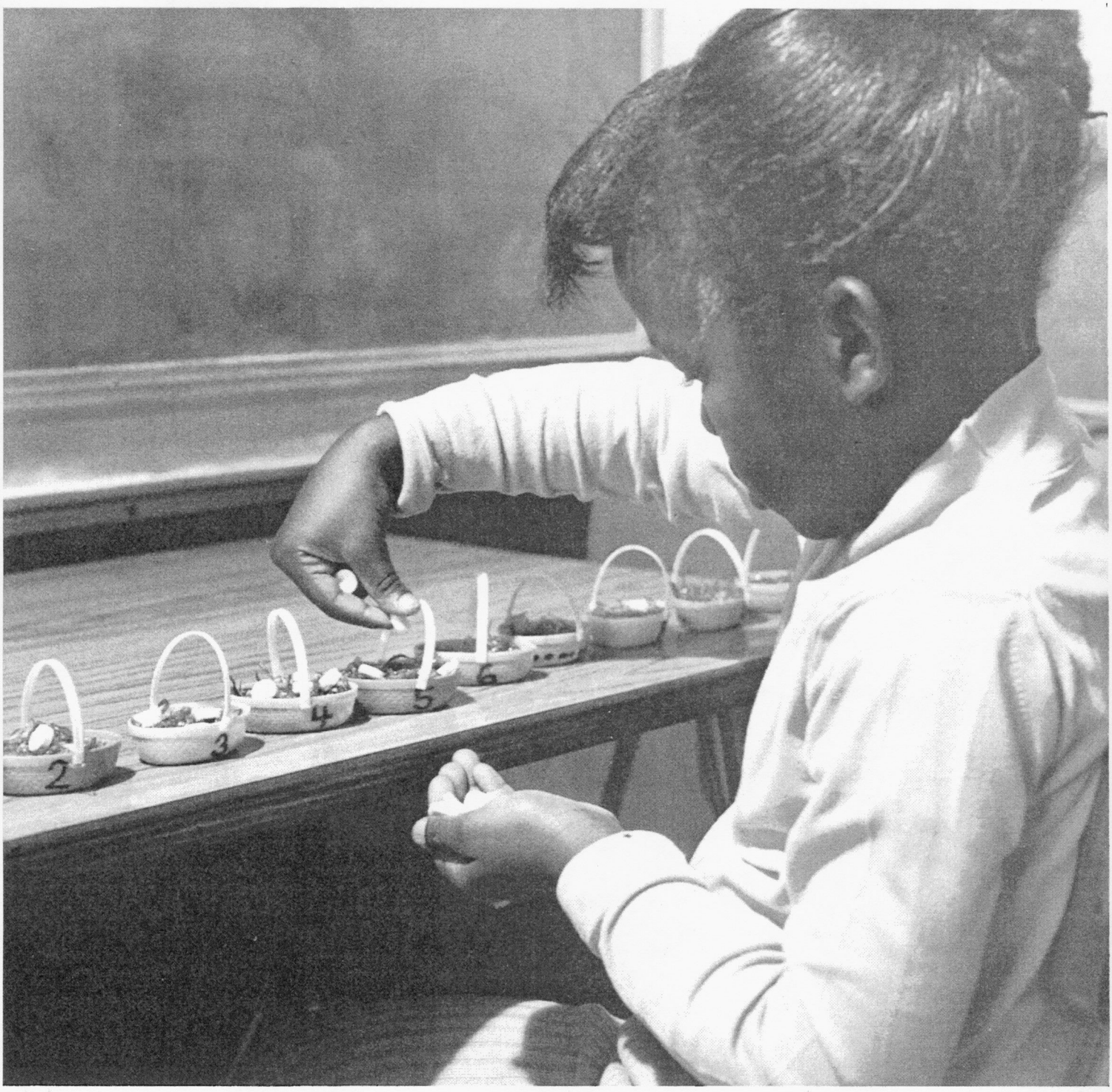


MATERIALS

Felt or material pieces, approximately the size of the box used.
Large safety pins.
Felt marking pen to write numerals on the felt.
Container for pins.
Container for felt and boxed pins.

Easter Baskets

Skills Forming sets of objects; counting; ordering numerically.



ACTIVITY

The child fills each basket with the appropriate number of "eggs" and orders the baskets from 1 through 10. When the work has been checked, the child places the cup of cereal in his desk until recess when he may eat it!

A child who is ready may enjoy placing two baskets together and recording the combinations formed.

GETTING STARTED

The teacher might ask the child, "How many Easter eggs will you put in this basket? And this one?"

IDEAS FOR FOLLOW-UP DISCUSSION

Tell me what you've been working on.
How did you go about doing this work?
Show me a basket that has the same number of eggs as we have doors in our room. Show me a basket that has the same number of eggs as my car has wheels. Show me a numeral that tells how many teeth you have missing in the front of your mouth.
How many eggs do you have in this basket? (Child counts.) What number is on the front of the basket? Are there that many eggs? (If not) Can you fix it so there are that many eggs?
If you eat three eggs from this basket, how many eggs would you have left? Eat them and let's see.
If you dump the eggs in this basket with these others, how many would you have?

MATERIALS

10 small Easter baskets.
Plastic Easter grass, enough to fill each basket.
White, clear-drying glue to mix with grass before filling baskets so the grass will stick to the basket.
Writing pen for writing numerals.
Small cups of sugar-coated cereal (of different colors) to look like Easter eggs.
Container for baskets.

Note: The cereal can be kept in a covered container on the teacher's desk or some other convenient place with a supply of small cups. When the child is ready for this activity he knows where the cereal is and can get what he needs.

Number Lines

Skills Forming sets of objects; counting; ordering numerically.

ACTIVITY

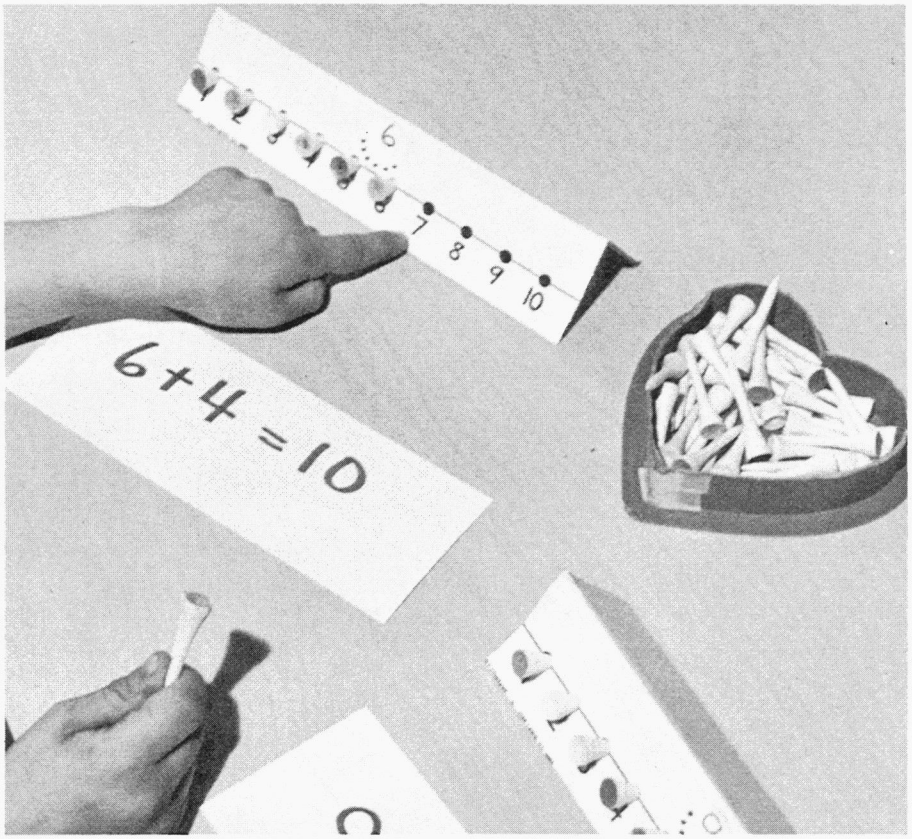
The child inserts the appropriate number of golf tees into each number line and orders them from 1 through 10.

GETTING STARTED

The teacher might discuss the activity as follows: "What does this number tell you? Can you put that many golf tees into the number line? Good!"

IDEAS FOR FOLLOW-UP DISCUSSION

Explain a little bit about what you did with this workjob, please.
Can you put these in order, starting with number 1? What number will come first? What will come after that?
Which number is the same as your age?
Which number line has the most golf tees in it? Which one has the fewest?
Which number line has more golf tees than three but not as many as five?
How many holes are not filled up on this number line? And on this one?
Is there a number line that does not have *any* holes filled up?
Is there a number line that has *all* its holes filled up?



Some children may enjoy recording the combinations adding up to ten on each number line.

MATERIALS

10 number lines from 1 through 10 made of heavy paper and mounted on cardboard with the holes punched out.
Colored golf tees.
Marking pen for writing the numerals.
Container for golf tees.
Container for number lines and boxed golf tees.

Number Boards

Skills Forming sets of objects; counting; making selections.

ACTIVITY

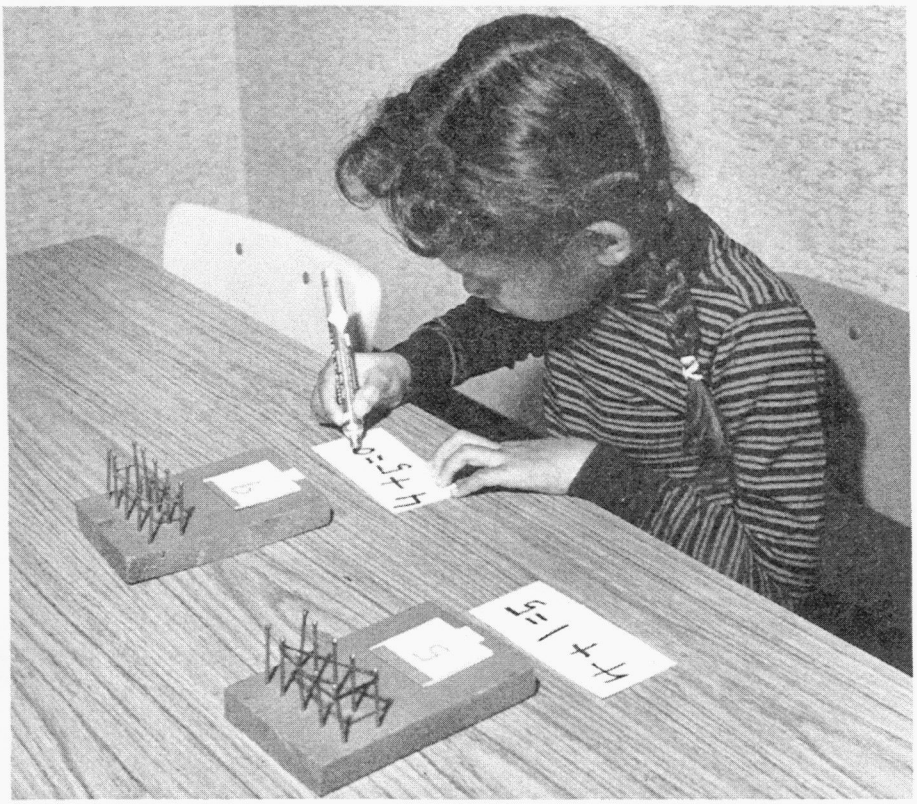
The child counts the dots or notes the numeral to determine the number of nails to band on each board. The block with the numeral 7, for example, will have a rubber band around 7 nails.

GETTING STARTED

The teacher might discuss the activity as follows: "What does this numeral tell you? What could you have done if you weren't sure what the numeral was? Where are the dots? Show me, please. Okay, good. Now, what was this numeral again? Put a rubber band around that many nails. Very good. Do the next one."

IDEAS FOR FOLLOW-UP DISCUSSION

Tell me about this work, Christine.
Why did you put the rubber band around this many nails?
Show me a board with fewer than four nails circled.
Point to all the boards that have five nails circled.
Put all the boards with fewer than three nails circled on the left side of the table, and those with three or more than three nails circled on the right side.
Show me a board with one more than two nails circled.
Show me a board that shows none circled. What do we call this numeral?



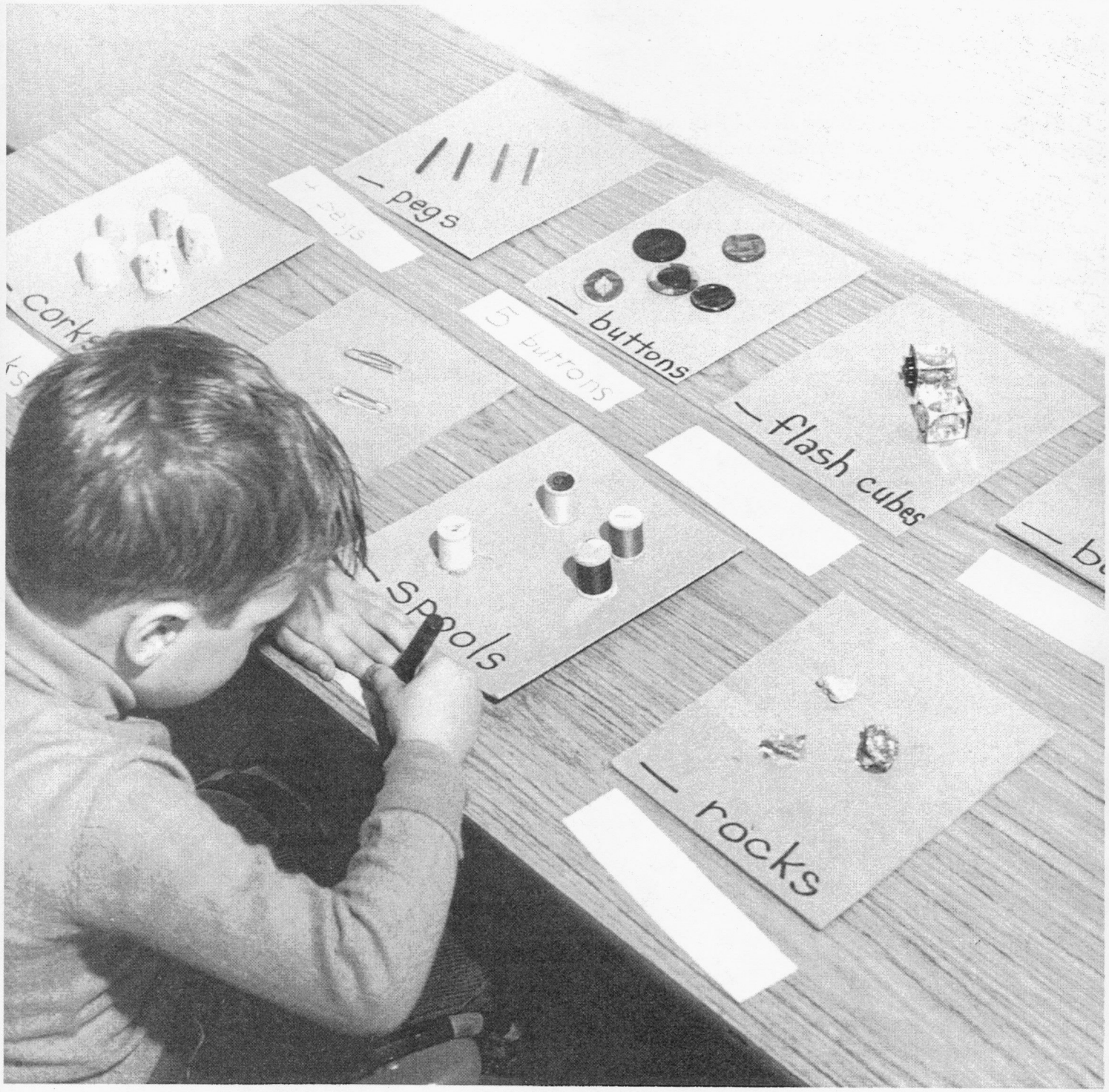
A child may use some nails on the top line and some nails on the bottom line. After talking with his teacher the child may be asked if he would like to record these combinations.

MATERIALS

Pieces of wood 3″ x 6″.
10 finishing nails for each board.
Numeral cards with a number dot card hinged underneath.
Small, but strong, colored rubber bands.
Container for rubber bands.
Container for wooden blocks and boxed rubber bands.

Math Recording Game

Skills Forming sets of objects; counting; learning to record experience with mathematical symbols; reading; making comparisons.



ACTIVITY

The child records with pictures and words what he sees on each answercard, and fills in the missing numeral.

GETTING STARTED

The teacher might discuss the activity as follows: "How many spools are on your paper. What does this word say? Why is it written here? Could you use it to tell about the spools? Where would be a good place to write it on your paper? That's fine job. Let me see you do this next one."

IDEAS FOR FOLLOW-UP DISCUSSION

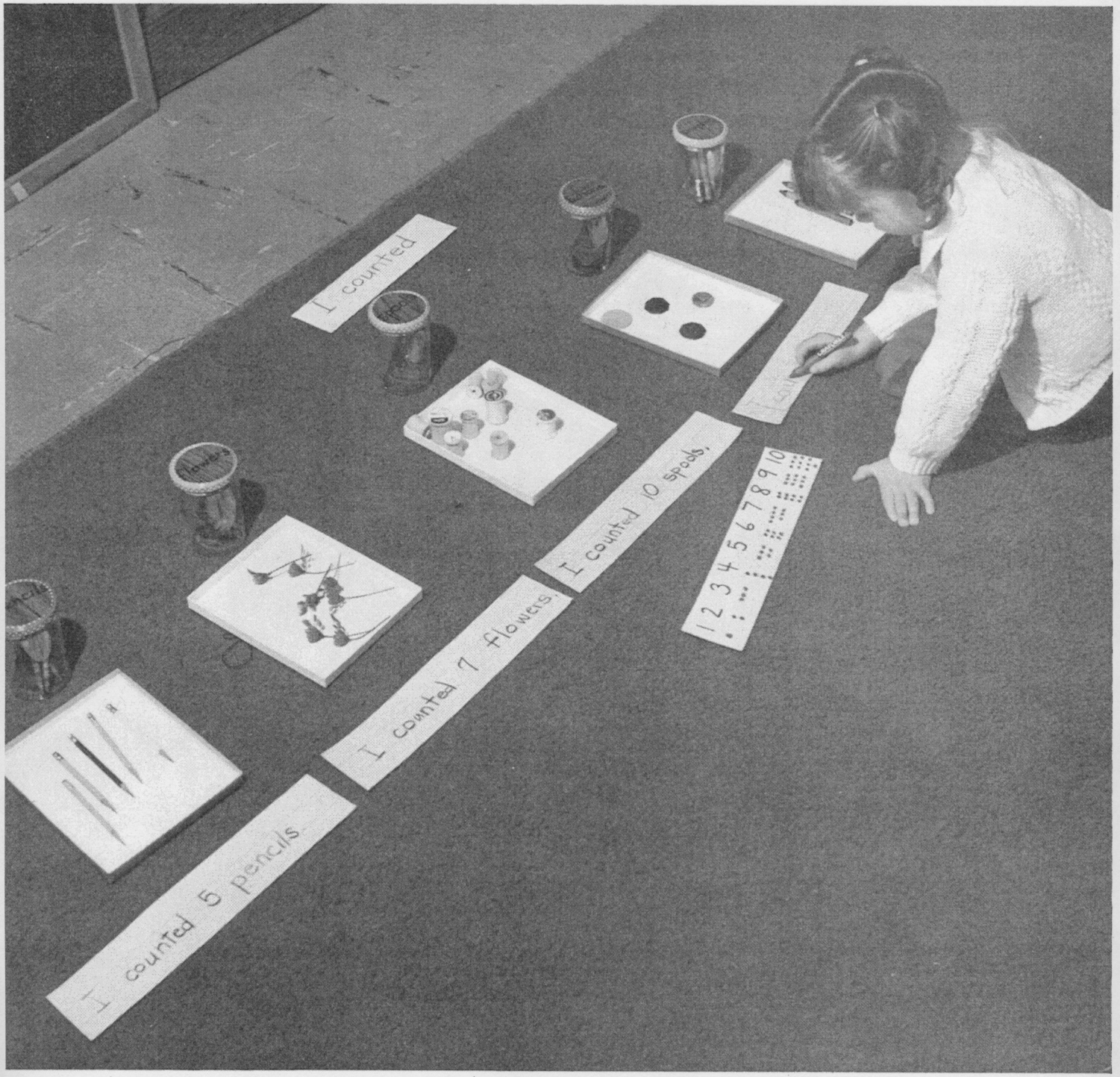
Tell me about your workjob.
What did you write on your paper? How did you know what to write? Where did you find the words to use? What do these words tell about?
Show me the answercard that your paper tells about. Read your paper to me, please.
Show me with your fingers what this numeral you've written means. Are you holding up the same number of fingers as the numeral represents?
Are there more spools or more fingers, or what? Why?

MATERIALS

6″ x 6″ squares of cardboard.
Objects to form sets.
Marking pen.
Epoxy glue.
Paper.
Crayons.
Container for cards.

"I Counted"

Skills Forming sets of objects; counting; learning to record experience with mathematical symbols; reading; making comparisons.



ACTIVITY

The child puts out the boxes and places some objects into each box. He takes a piece of paper and writes the number of objects he counted, copying the label on the container to show *what* he counted.

GETTING STARTED

The teacher might discuss the activity as follows: "Put some things in each box from the containers. (Later) Take some paper and write what you did." (Pointing to the words the teacher might say) "This says, 'I counted.' How many things did you count into the box? Write that number and then write what you counted." If the child says he can't write the word the teacher suggests, "Is the word written anywhere so that you could copy it? Yes, on the label! Let's read the sentence together . . . Try the next one now."

IDEAS FOR FOLLOW-UP DISCUSSION

What have you been doing?
Tell me about each box and read the sentences for me.
Show me the word "pencils." Show me the word "blocks." Can you close your eyes and spell "blocks?"
How many rubber bands do you have in this box?
What do you have the most of? Do you have the same number of any items? What are they?
Do you have more pencils in the box where you counted them out or are there more pencils left in this container?
What do you have three of? Seven of? Nine of?

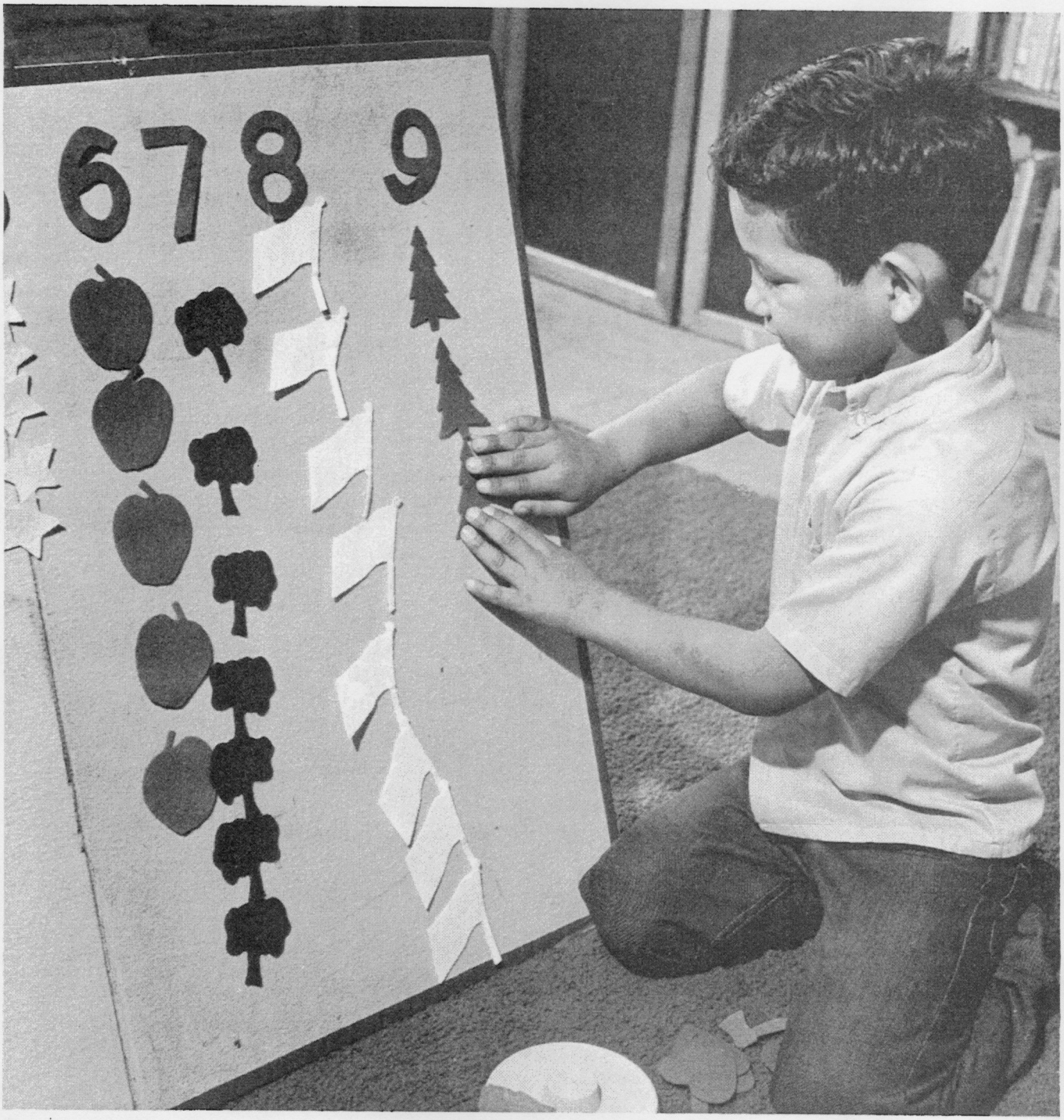
Some children may enjoy placing a small paper bag over each jar and guessing how many items are left. The child knows there were 10 items in each jar to start with, so if there are five items in the box, there must be five left in the covered jar.

MATERIALS

Eight to 10 shallow (nylon stocking) boxes.
Sets of 10 objects such as pencils, toys, nuts (in shells), old toothbrushes, blocks, large rubber bands, small jars. (Each set is in a separate labeled container.)
A label stating, "I counted."
Paper and pencil.
Small paper bags.
Large container for sets of objects and stocking boxes.

Flannelboard Groups

Skills Forming sets of objects; counting; learning to record experience with mathematical symbols; making comparisons; classifying; making selections.



ACTIVITY

The child takes the flannelboard pieces to the flannelboard, sorts them into like sets, counts the members in each set and applies the appropriate numeral.

GETTING STARTED

The teacher might discuss the activity as follows: "Put all the shapes that are the same together. Then find the numeral that tells how many shapes are in each set and put the numeral by the set of shapes it goes with."

IDEAS FOR FOLLOW-UP DISCUSSION

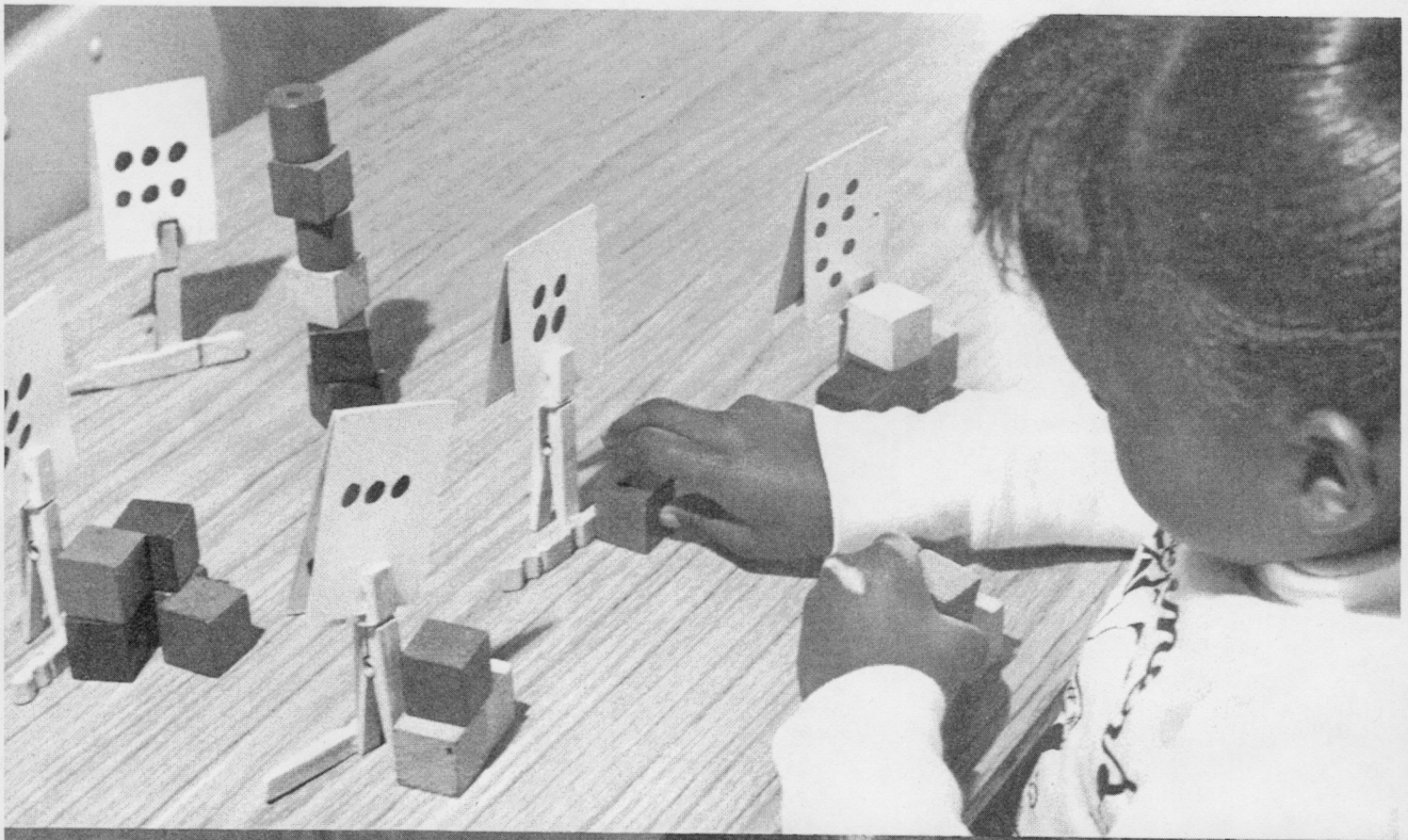
What did you do with the flannel shapes? How did you group them?
How many groups are there? How many numerals are there?
How many apples are in this set? Count them for me.
Show me a set of shapes with more shapes than you have fingers on one hand. How many shapes are there in this set? What numeral tells about this number? What is it called?
What shape are the things in the set of six? In the set of three?
What color are the stars? How many are there?
Which set has more in it, the set of birds or the set of apples?
Which set has the most objects? What has the least? Which numeral shows the most? Which shows the least?

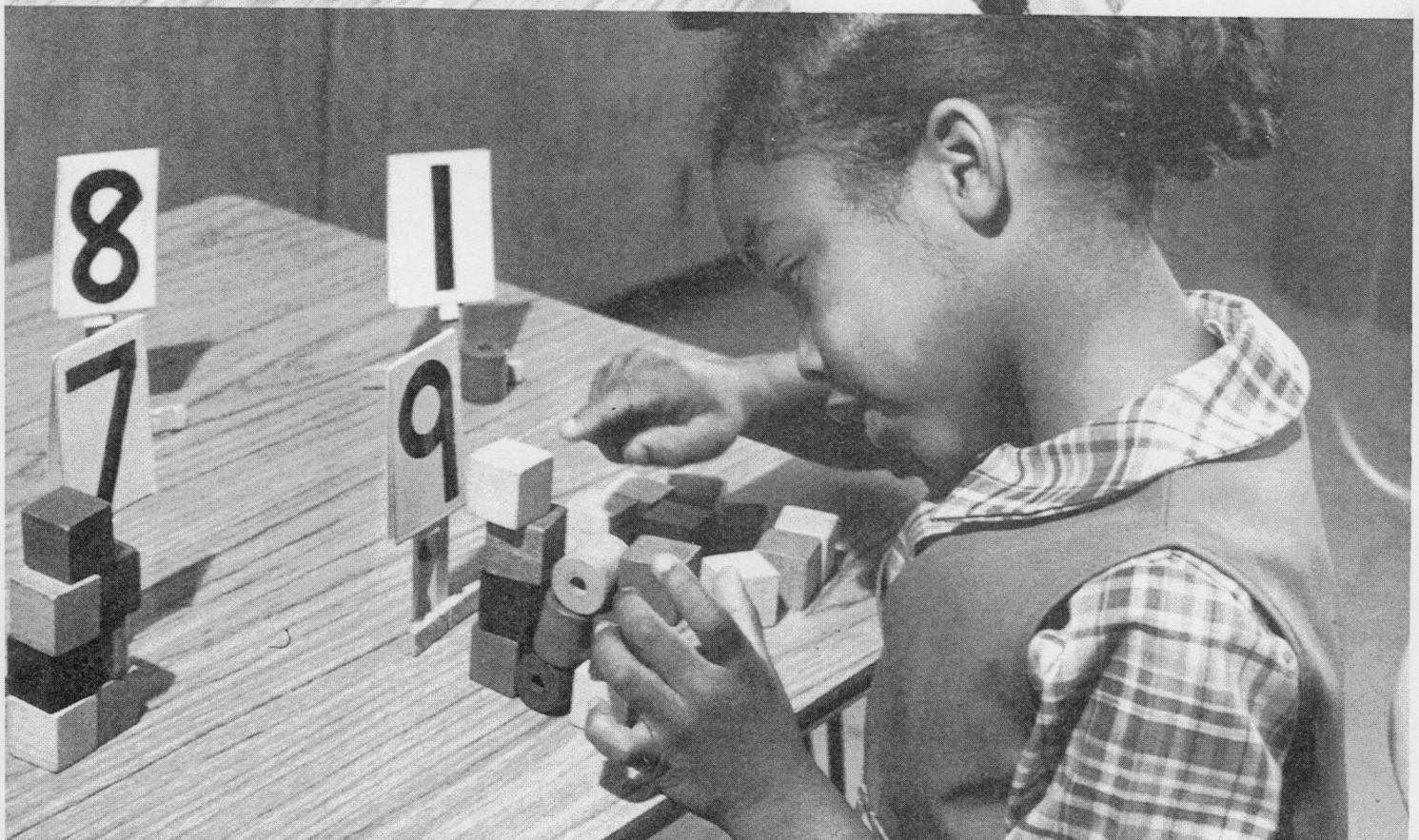
MATERIALS

Flannelboard.
Flannel shapes (six patterns with a varying number of each).
Flannel numerals, cut out, to check on reversals (with number dots on the back to make them self-correcting).
Container for flannel shapes and numerals.

Number Dots

Skills Forming sets of objects; counting; learning to record experience with mathematical symbols; one-to-one correspondence.





ACTIVITY

A child takes the numeral card stands and some blocks and "builds" the number in front of each set of dots or numeral.

When a child works easily and competently with the numerals 1 through 9, he can begin working with commercial or homemade place value blocks. A unit block is 3/4″ square, a 10s block is 7-1/2″ long by 3/4″.

GETTING STARTED

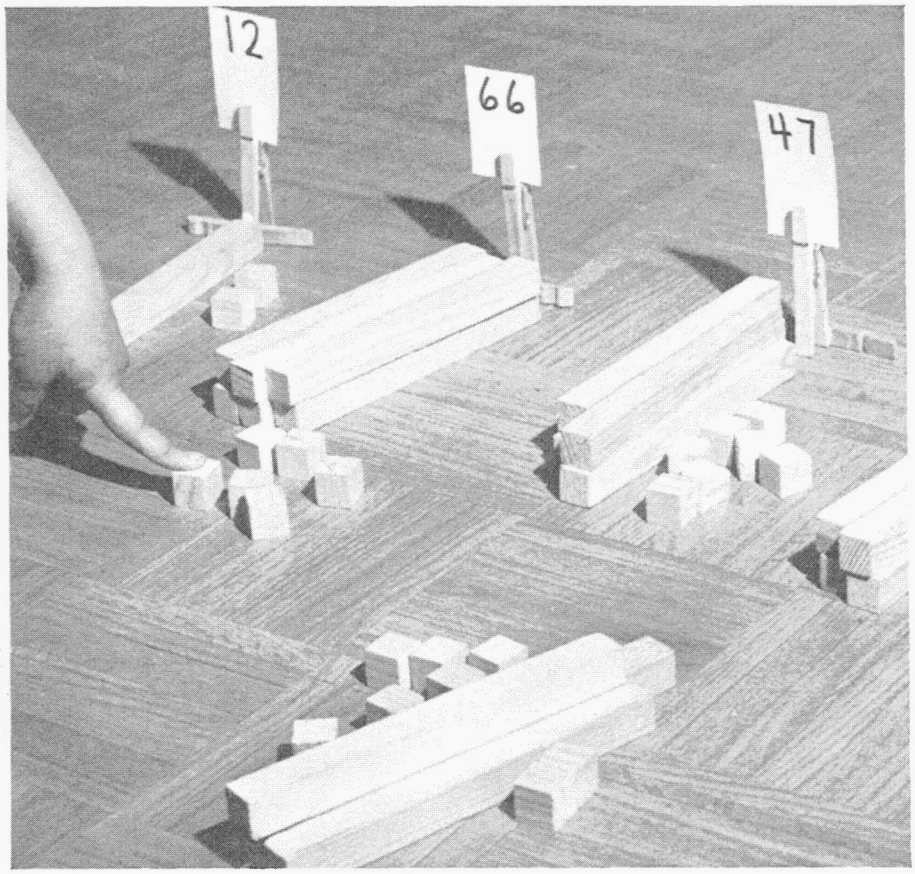
The teacher might discuss the activity as follows: "Put this many blocks (pointing to a numeral) in front of this stand, Valerie. How can you find out what numeral it is? Yes, count the dots to be sure! How many blocks are here? And what numeral is this? Are there the same number of blocks as dots? Let me know when you've finished building!"

IDEAS FOR FOLLOW-UP DISCUSSION

Tell me how you did this work, Valerie.

How many blocks are in this pile? Why are there just that number? Couldn't you have put two more here? Why not?

Point to the numeral that shows this many (holding up a number of fingers). What is that numeral called?



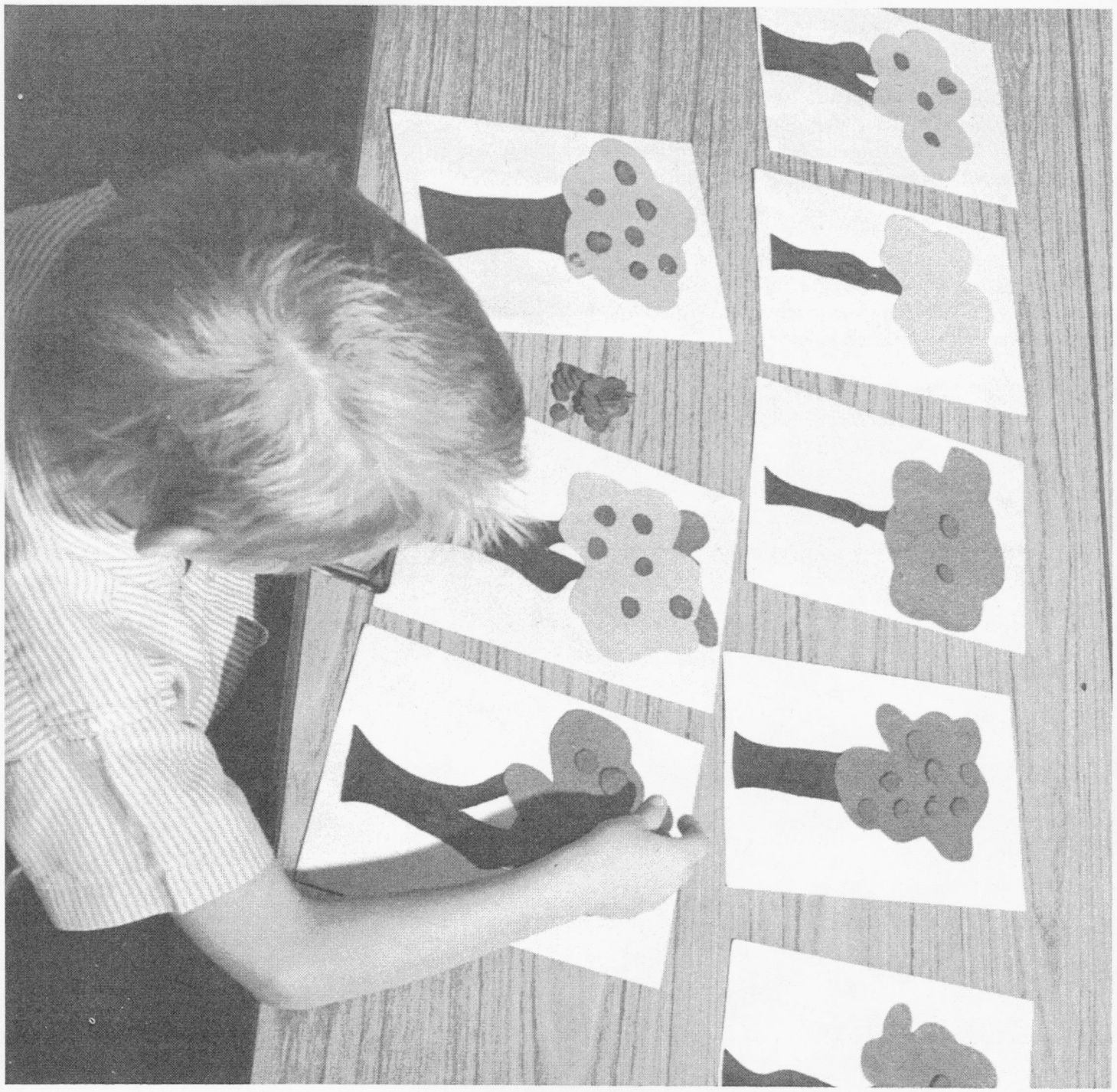
When he is ready, the child can begin working with place value.

MATERIALS

1″ cubes.
Clothespin stands made by glueing half a clothespin at the bottom of a complete one.
Cards for writing dots or numerals.
Container for numeral cards.
Container for blocks.

Trees and Apples

Skills Forming sets of objects; counting; making comparisons; combining groups.



ACTIVITY

The child places apples on each tree until the amount matches the numeral on the tree trunk.

GETTING STARTED

The teacher might ask the child, "What is this numeral, Marlvin? Are there that many apples on the tree? Can you fix it so there are enough apples?"

IDEAS FOR FOLLOW-UP DISCUSSION

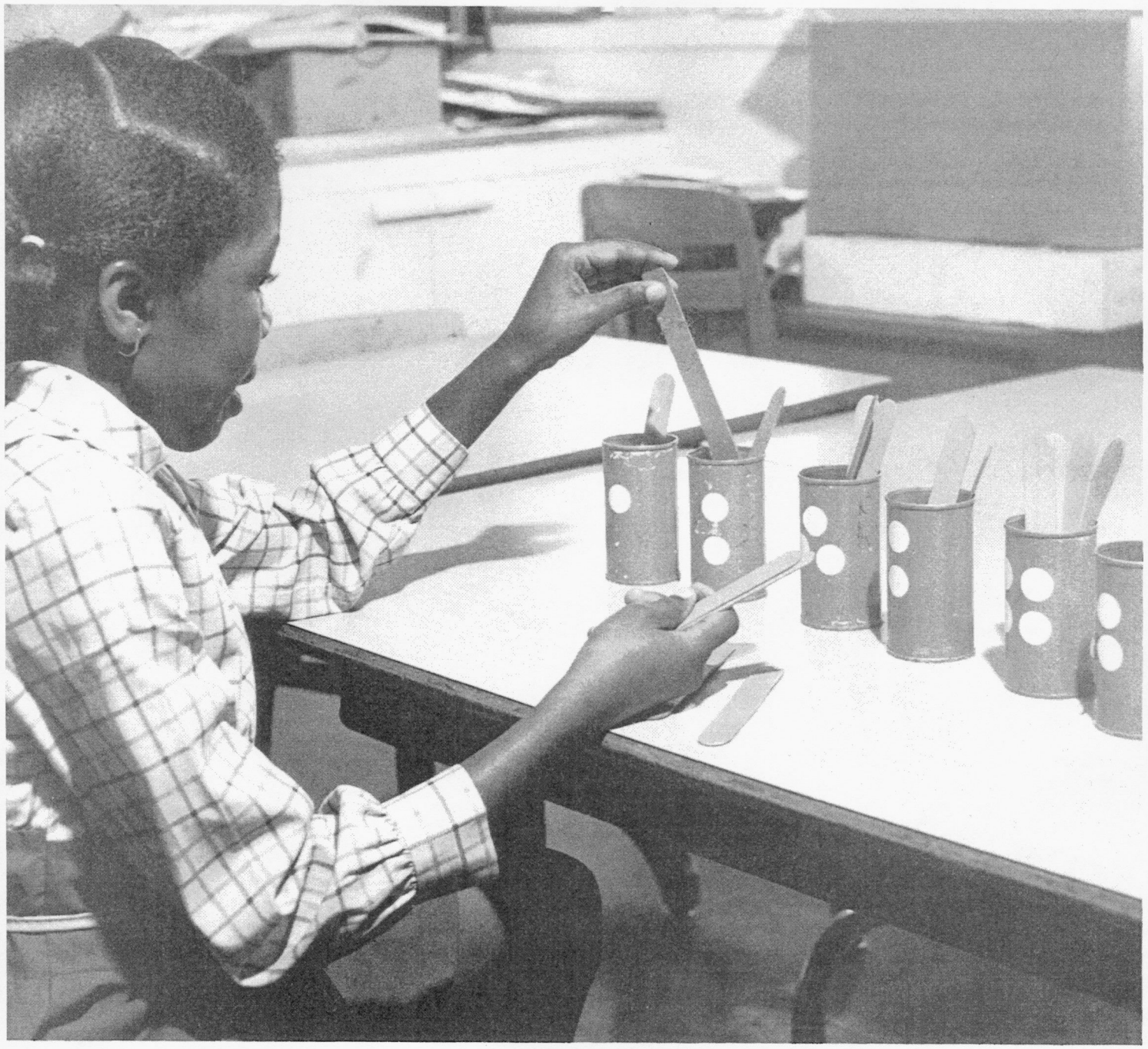
What did you do with the apples?
How many apples are on this tree?
Are there more trees or more apples?
These two trees have how many apples between them?
Which tree has the fewest apples? The most?
How many apples would need to fall down to leave only two apples on this tree?
I see a mistake on this tree. Do you see it? Can you fix it?

MATERIALS

Tagboard piece 6″ x 9″.
Marking pen in brown to make tree trunks.
Self-adhesive labels on which to write numerals.
Green felt to make tree tops.
Apples cut from red felt.
Container for apples.
Container for answerboards and boxed apples.

The Number Cans

Skills One-to-one correspondence; forming sets of objects; counting; ordering numerically; making comparisons; combining groups; subtracting, withdrawing a part from a whole.



ACTIVITY

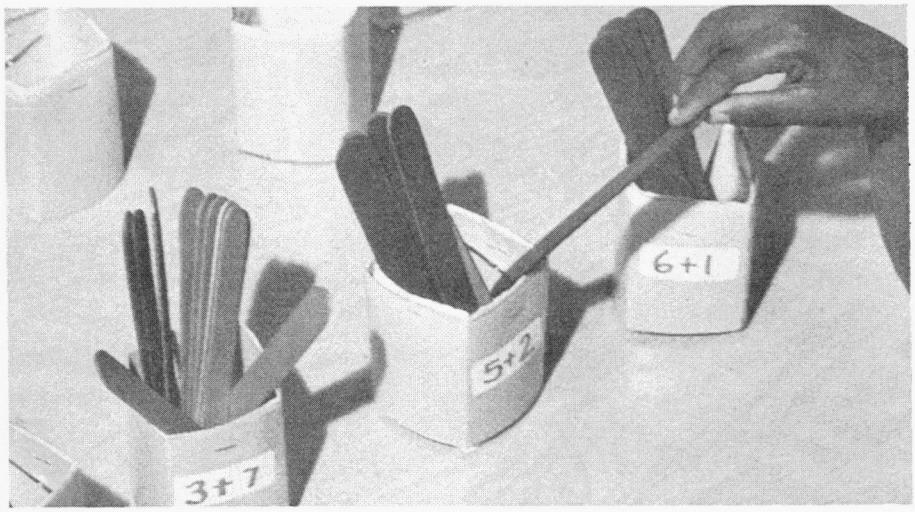
The child puts the necessary number of tongue depressors into each can or carton.

GETTING STARTED

The teacher might discuss the activity as follows: "These dots tell you how many sticks to put into the can, Eric. Try this one. Very good, Eric. That's exactly right. Try another one."

IDEAS FOR FOLLOW-UP DISCUSSION

Explain to me, please, what you did with the sticks.
How did you know how many sticks to put in this box? Show me how you did it. What if you had put in only one stick instead of three? Would that have been okay? Why?
Count the sticks in this can, please.



Children who are ready may work on addition and subtraction problems.

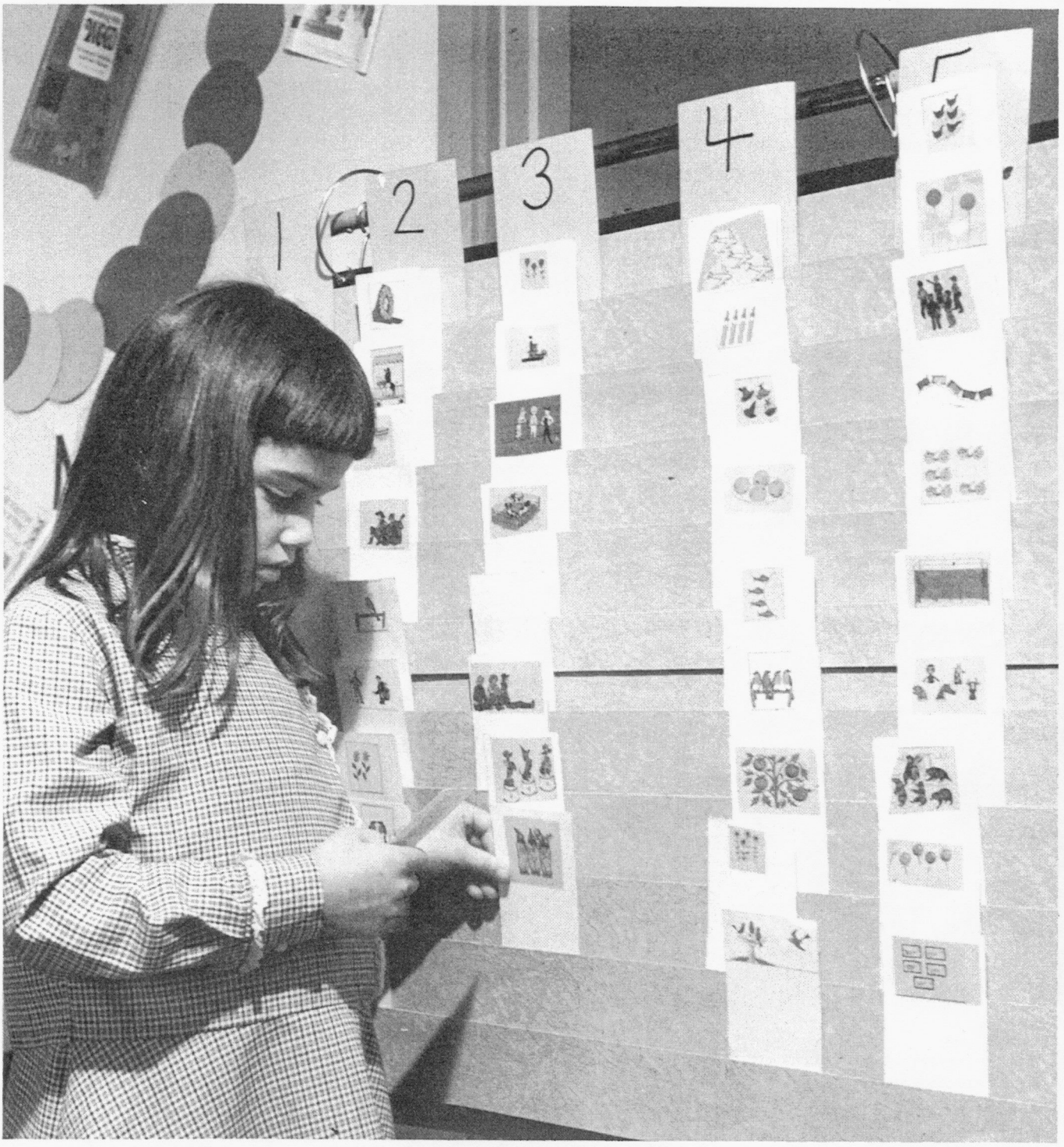
MATERIALS

Empty orange juice cans or milk cartons painted with spray paint.
Tongue depressor sticks, painted with spray paint.
Round adhesive labels.
Container for tongue depressors.
Container for cans and boxed sticks.

Note: The tongue depressors resist soil and remain attractive for years if spray painted.

Select-a-Set

Skills Counting; making comparisons; making selections.



ACTIVITY

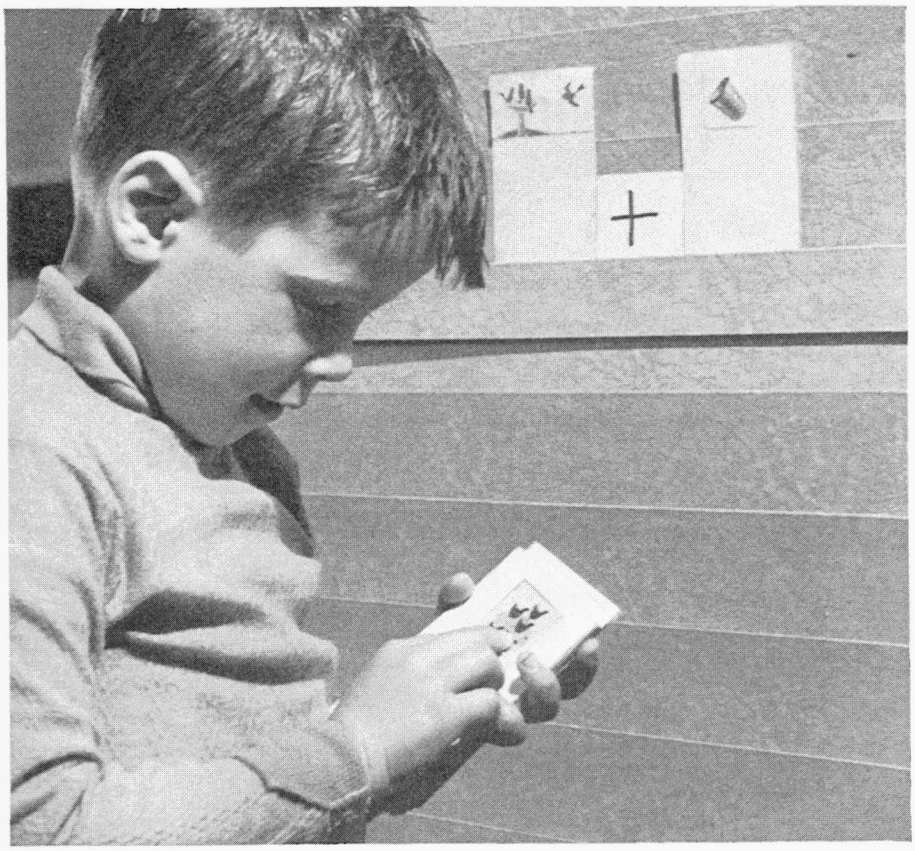
The child counts the set in each picture and matches it with the appropriate numeral. If the child counts five apples, for example, he puts the picture under the numeral 5.

GETTING STARTED

The teacher might discuss the activity as follows: "Take a card and count the pictures. Good. How many flags are there, Carol? Where do you think it should go? Why? Good thinking!"

IDEAS FOR FOLLOW-UP DISCUSSION

What numerals have you been working with?
Tell me what you did with the cards.
Are there enough balls in this picture to give one to each person in our class? How many children could have one?
Show me a card that does not have animals or people on it. What do you call these pictures?
Show me a card with five of something to eat. With three things you could smell. With four things you could hold in one hand.



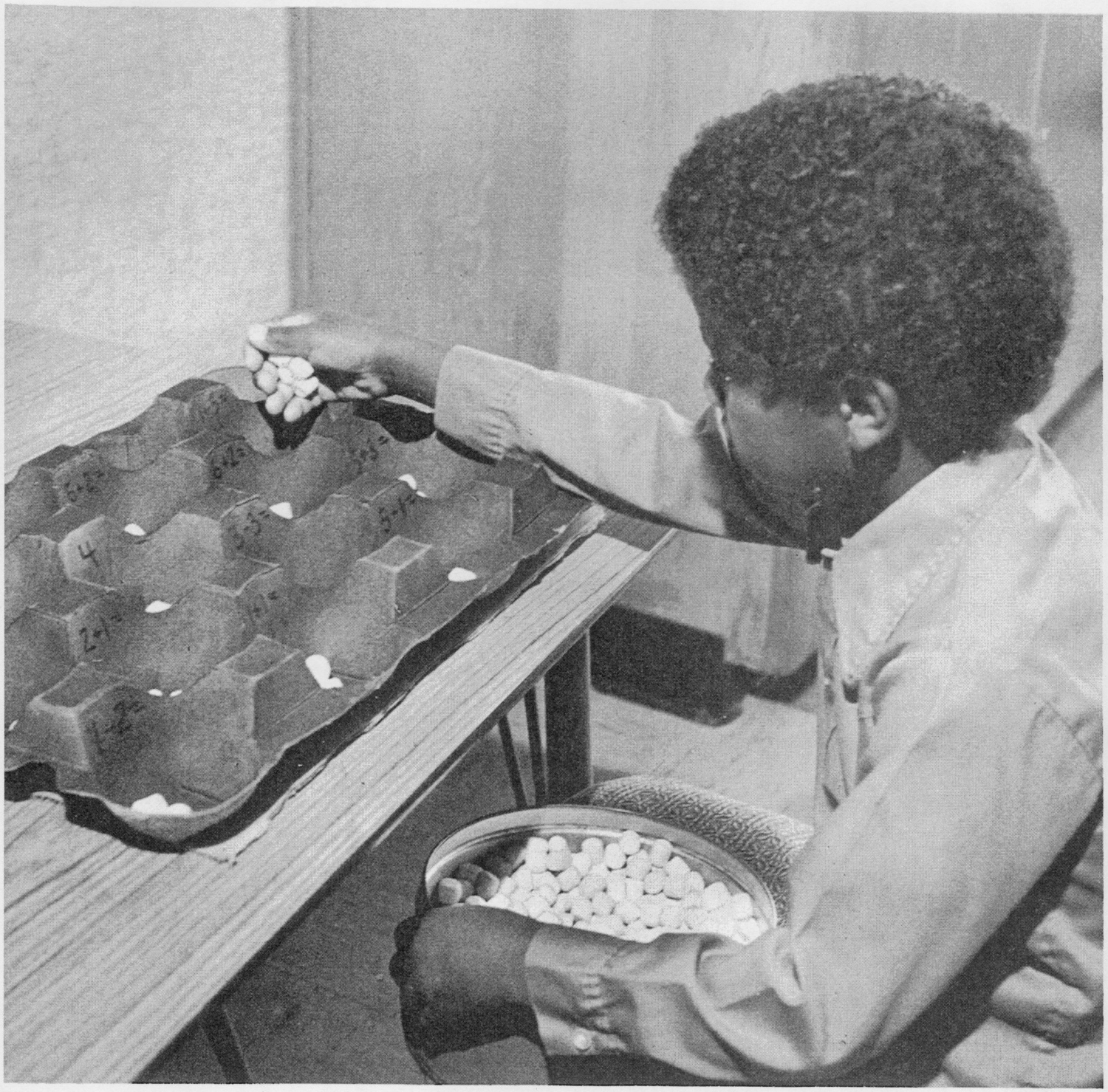
When a child is ready to work with addition, he may place two cards together and record their sum.

MATERIALS

Pocket chart.
Pictures cut from arithmetic workbooks showing sets of objects: 10 sets of one, 10 sets of two, 10 sets of three, 10 sets of four, 10 sets of five.
50 3″ x 5″ index cards for mounting pictures.
Rubber cement.
Clear contact paper to protect pictures.
Numerals 1, 2, 3, 4, and 5, written on tagboard and covered with clear contact paper.
Container for cards.

Cereal Game

Skills Forming sets of objects; counting; combining groups.



ACTIVITY

The child fills a paper cup with cereal. Then he counts the number of pieces of cereal required into the depressions in the apple separator. When the child has had his work checked, he puts the cereal back into his paper cup and puts it where he may get it at recess or snack time and eat it!

GETTING STARTED

The teacher might ask the child, "How many pieces of cereal will you put here? And here?"

IDEAS FOR FOLLOW-UP DISCUSSION

How did you decide where to put the cereal?

Do you have any cereal left in your cup? How many pieces? How many would you have to eat to have just three pieces left? Try it and see if you're right.

How many pieces of cereal should you put here? Count and tell me if you have enough. Good! Now, how about this one? Can you fix it?

If we were to put these pieces from this group together with these pieces here, how many would we have? Show me.

If you have five (indicating a group of five pieces of cereal) and add one more, how many do you have?

If you have seven (indicating a group of seven) and you take three away, how many do you have?

MATERIALS

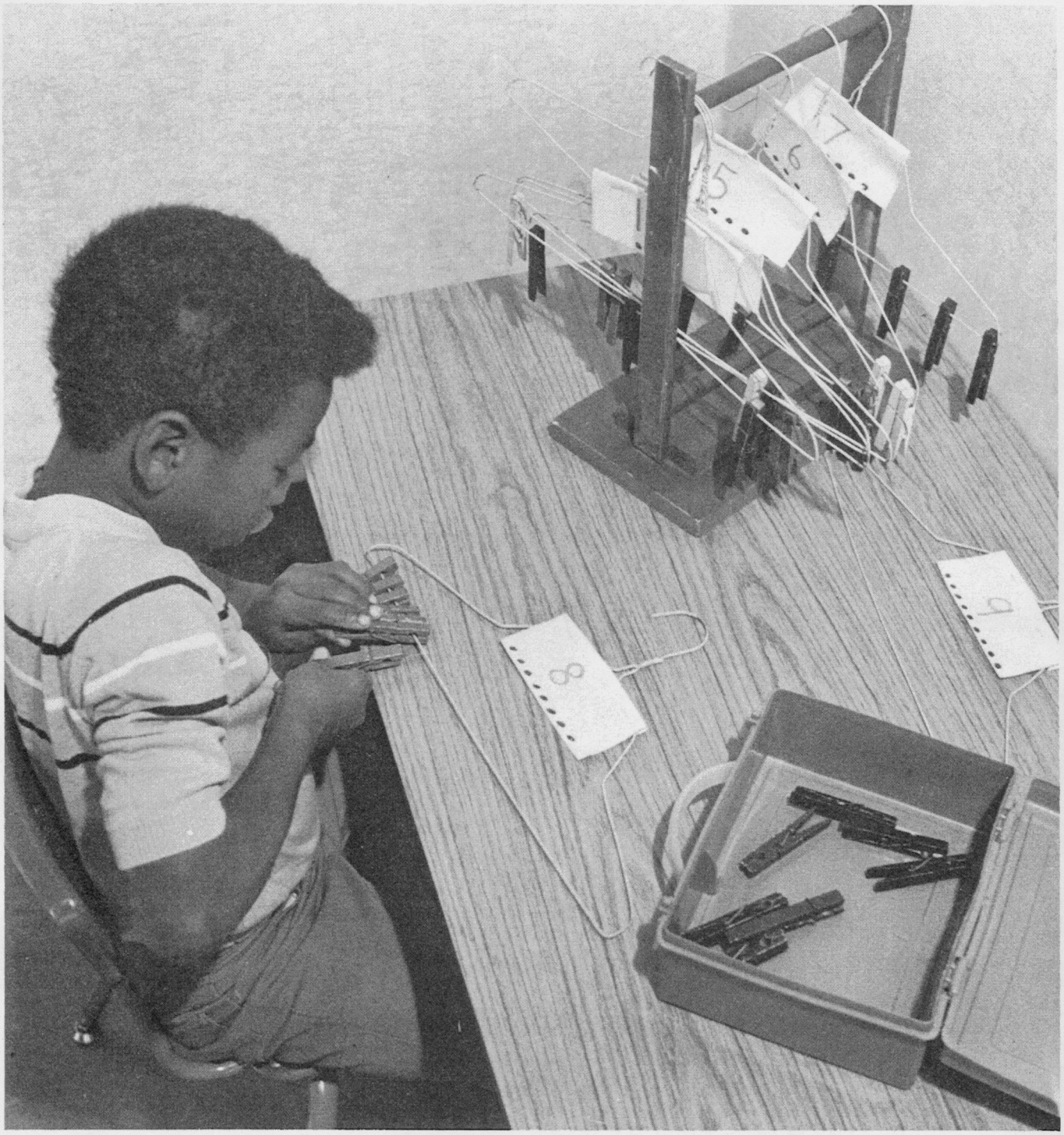
Separator from an apple crate.
Marking pen to write numerals and combinations.
Small cup of cereal.

Note: The cereal can be kept in a covered container on the teacher's desk or some other convenient place with a supply of small cups. When the child is ready for this activity he knows where the cereal is and can get what he needs.

The teacher controls the difficulty of this task by the numerals she puts in the cups. Some teachers may want to make several games—one with numbers 1 to 5, one with numbers 1 to 9, and one with addition and subtraction combinations.

Hangers and Clothes Pins

Skills Forming sets of objects; counting; ordering numerically.



ACTIVITY

The child puts the appropriate number of clothespins on the hangers and orders them from 1 through 10.

GETTING STARTED

The teacher might ask the child, "How many clothespins will you put on this hanger? And this one?"

IDEAS FOR FOLLOW-UP DISCUSSION

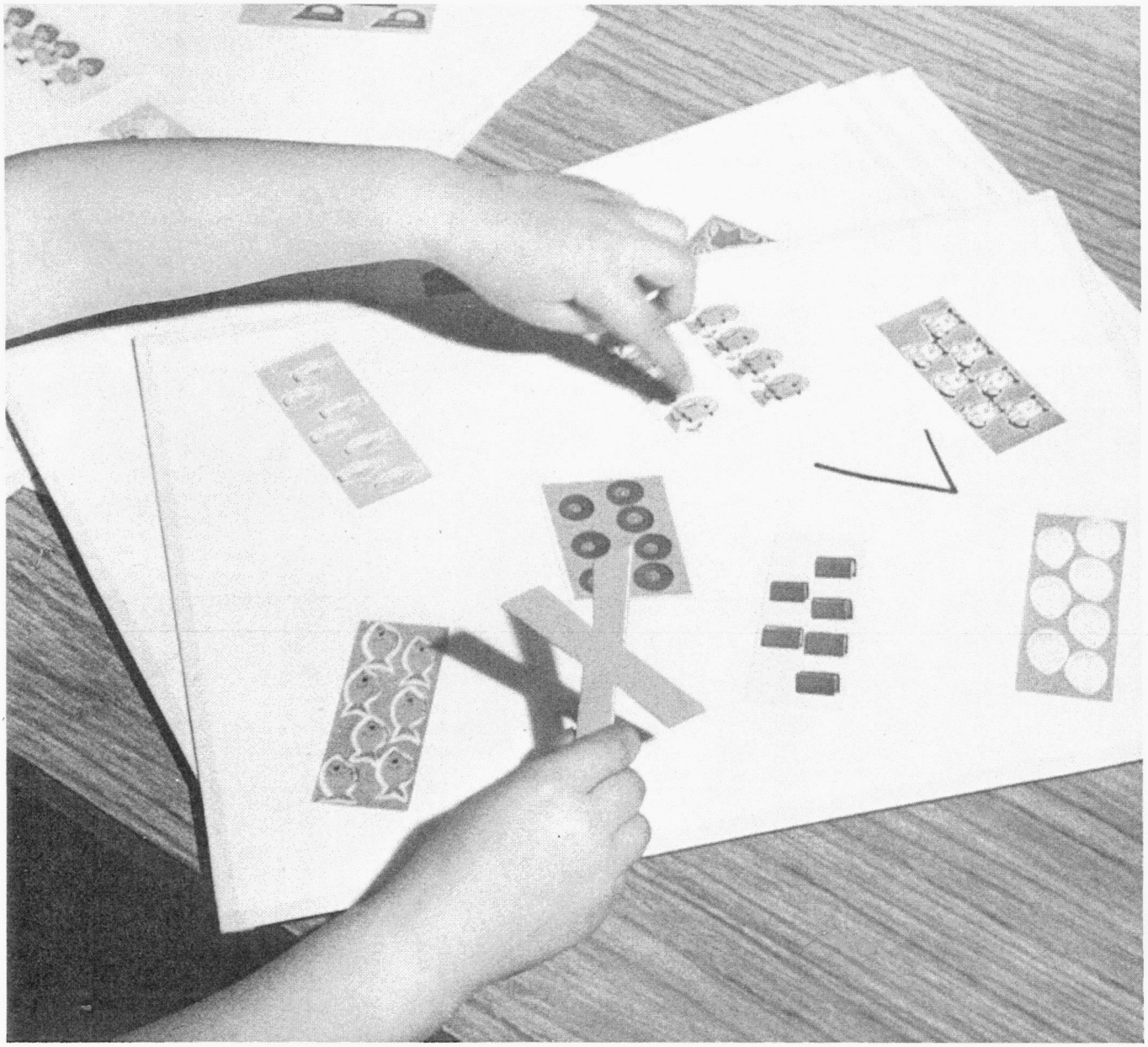
Tell me about your work and what you've been doing, Howard.
Why did you put six clothespins on this hanger?
How many red clothespins are on this hanger? How many altogether?
Let's write down how many of each color you have on this hanger. First take a red crayon. How many red clothespins are there? Can you write that? (Child writes the number or makes dots or lines depending on his readiness.) And how many yellow pins are there? What color will you use to write that many? And how many green? How many are there all together?
Which hanger has the most clothespins on it? Which one has the least? Which one has the same number as your age? As you have fingers on two hands? As you have noses?

MATERIALS

10 clothes hangers.
Colored plastic clothespins or spray painted wooden pins in four colors.
Tagboard cut into 3″ × 5″ strips covered with clear contact paper after writing numerals.
Stapler to affix numeral cards to clothes hangers.
Something in the classroom to hang the hangers on.
Container for clothespins.
Container for hangers and boxed clothespins.

The Odd Ball

Skills Counting; making comparisons; making selections.



ACTIVITY

The child looks for the "odd ball," the set that does *not* match the numeral, and crosses it out.

GETTING STARTED

The teacher might discuss the activity as follows: "Most of these are the same, but there is one set on each page that does not belong. Can you find which one is the 'odd ball' and be ready to tell me why it doesn't belong?"

IDEAS FOR FOLLOW-UP DISCUSSION

Why is this set the "odd ball"? How many are in this set?
How many sets are the same on this card? How many odd balls are there?
What would have to be done to this "odd ball" to make it have the necessary number?

MATERIALS

9″ x 12″ tagboard.
Pictures of various sets of objects.
Rubber cement for pasting pictures to the tagboard.
Masking tape to strengthen edges.
Xs cut from heavy paper.
Container for Xs.
Container for cards and boxed Xs.

Note: On each sheet, paste sets of the same quantity except for one. That set may be fewer or more in quantity, and it is the set the children are looking for.

Piggy Banks

Skills Forming sets of objects; counting; making comparisons; learning about money; developing respect for property; combining groups.

ACTIVITY

The child drops the appropriate number of pennies or disks into each "piggy bank." For instance, in the bank marked "9" he drops in nine pennies, and in the one marked "3" he drops in three.

GETTING STARTED

The teacher might ask the child: "How many pennies will you put into this bank? Why?"

IDEAS FOR FOLLOW-UP DISCUSSION

What did you do with the pennies and jars?
Could you put the banks in order from 1 through 10?
Which bank has the most money in it? The least?
If you wanted to buy a piece of penny bubble gum, which bank would you get the money out of?
If I wanted you to give me six cents from *two* banks, which two would you use? How about eight cents? Four cents?
If you wanted to buy a balloon for four cents, which bank would you take the money from?
Show me a bank that has the same number of pennies as your age.
Count all the pennies and tell me how many there are.

MATERIALS

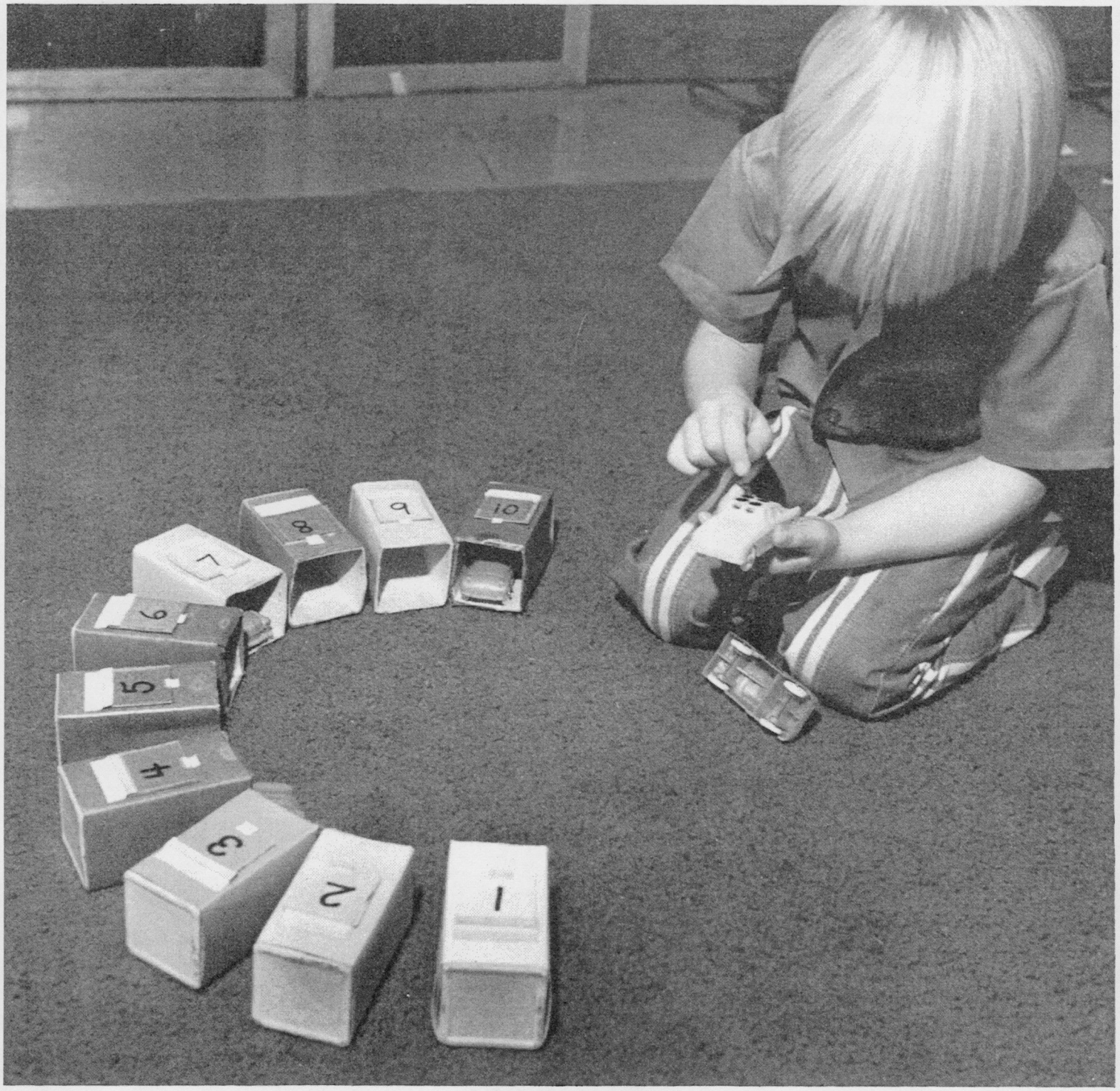
10 baby food jars with lids.
Screwdriver to punch slots in lids.
Sticker numerals glued to jars.
Cloth tape for covering the jagged metal of the slots.
Pennies, poker chips, or other small disks.
Matching board for counting the money.
Container for disks, chips, or pennies.
Container for jars.

Note: Some teachers may prefer to store the pennies in some area other than with the workjob. The child would then get the pennies when ready to begin this activity.

See text at the end of the book for a discussion on the use of real money as opposed to play money or disks in the workjobs.

Cars and Garages

Skills Counting; matching; making comparisons; making selections.



ACTIVITY

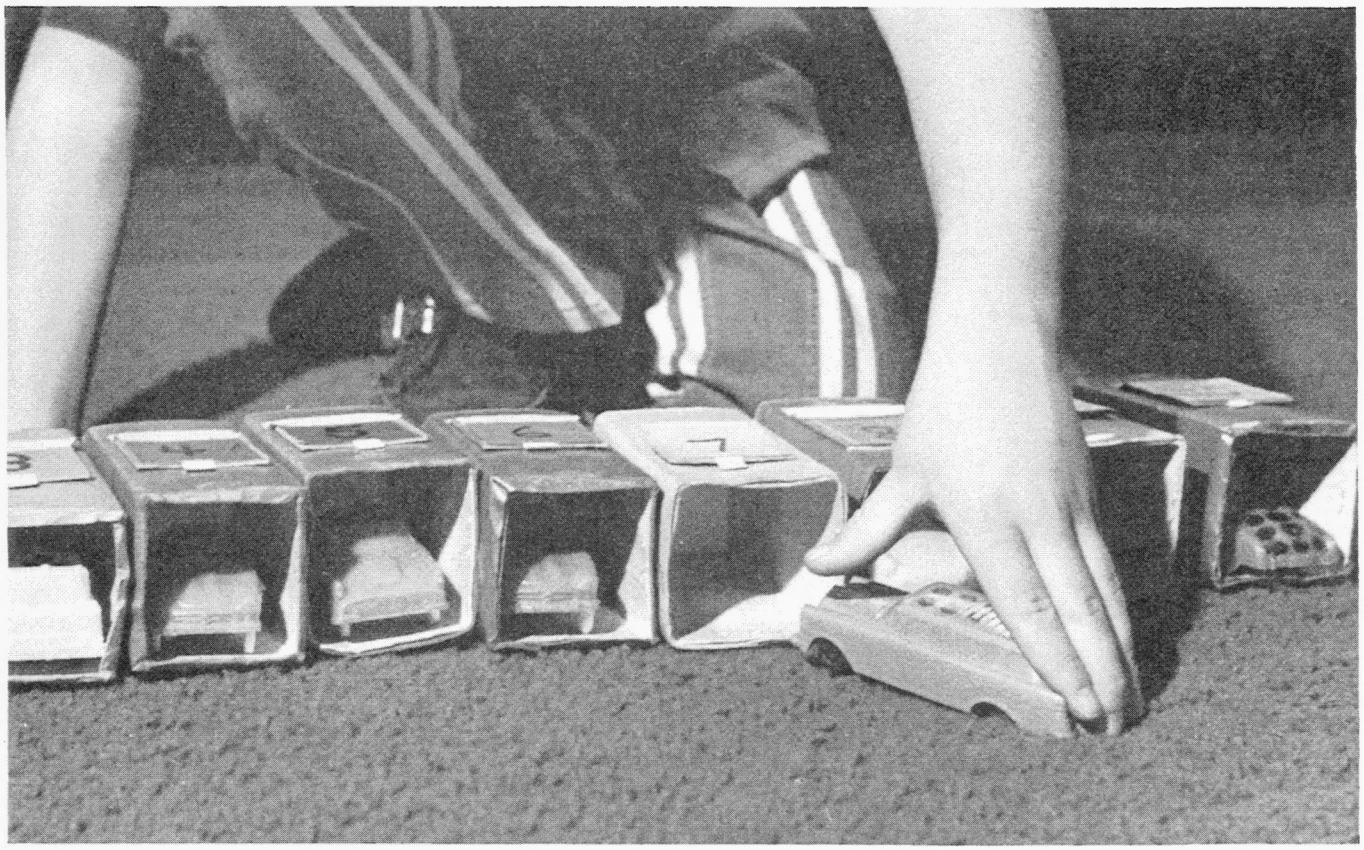
The child matches the dots on the car with the numeral on the garage and drives the car into its garage. The car with seven dots should drive into the garage with number 7. The one with only two dots drives into number 2.

GETTING STARTED

The teacher might discuss the activity as follows: "How many dots are on this car? Count them for me, please. How many are there? Can you find a garage that this car can drive into? Why do you think the car goes into this particular garage? Very good. Where do you think this car goes?"

IDEAS FOR FOLLOW-UP DISCUSSION

What did you do with the cars?
Why did you drive *this* car into *this* garage?
What is this numeral? How can you show me what numeral it is if I don't know what it is?
If I drove this car (with four dots) into this garage (with numeral 1), would it be okay? Why?
How many cars are there with three dots?



MATERIALS

Empty milk cartons.
Colorful construction paper covered with clear contact paper.
Numeral cards, hinged, with number dots underneath.
Small plastic cars.
Marking pen for drawing dots on the cars.
Container for cars.
Container for garages and boxed cars.

Flowers and Vases

Skills Forming sets of objects; counting; making comparisons; combining groups.

ACTIVITY

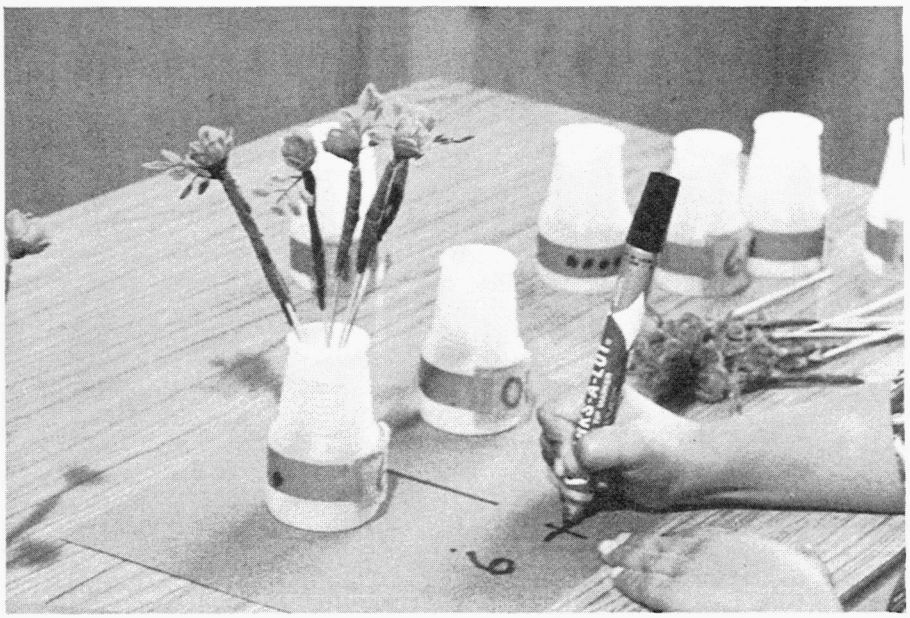
A child puts the appropriate number of flowers (blossoms are counted, not stems) into each vase.

GETTING STARTED

The teacher might discuss the activity as follows: "Choose a vase, Suzanne. How can you find out how many flowers to put into this vase? That's right; look at the numeral. How many will go into the vase you've chosen? Fine, Suzanne. Put that many blossoms into the vase. How many is that altogether? And what does the numeral say? Good. Try another one."

IDEAS FOR FOLLOW-UP DISCUSSION

Explain what you did with the flowers and vases, please.
How many flowers are in this vase?
How many blossoms are on this stem? And this one? How many is that altogether?
Point to a vase with four flowers.
Point to a vase that has less than three flowers. One with more than two flowers.
Show me a vase with the same number of flowers as fingers I am holding up.
Show me a vase that does *not* have two, three, or six flowers in it. How many is that? Could you have pointed to any other vase? How about this one? Why?
Take two flowers away from each vase, and tell me how many flowers are left in each as you do it.



Children can put two vases together and record their sum.

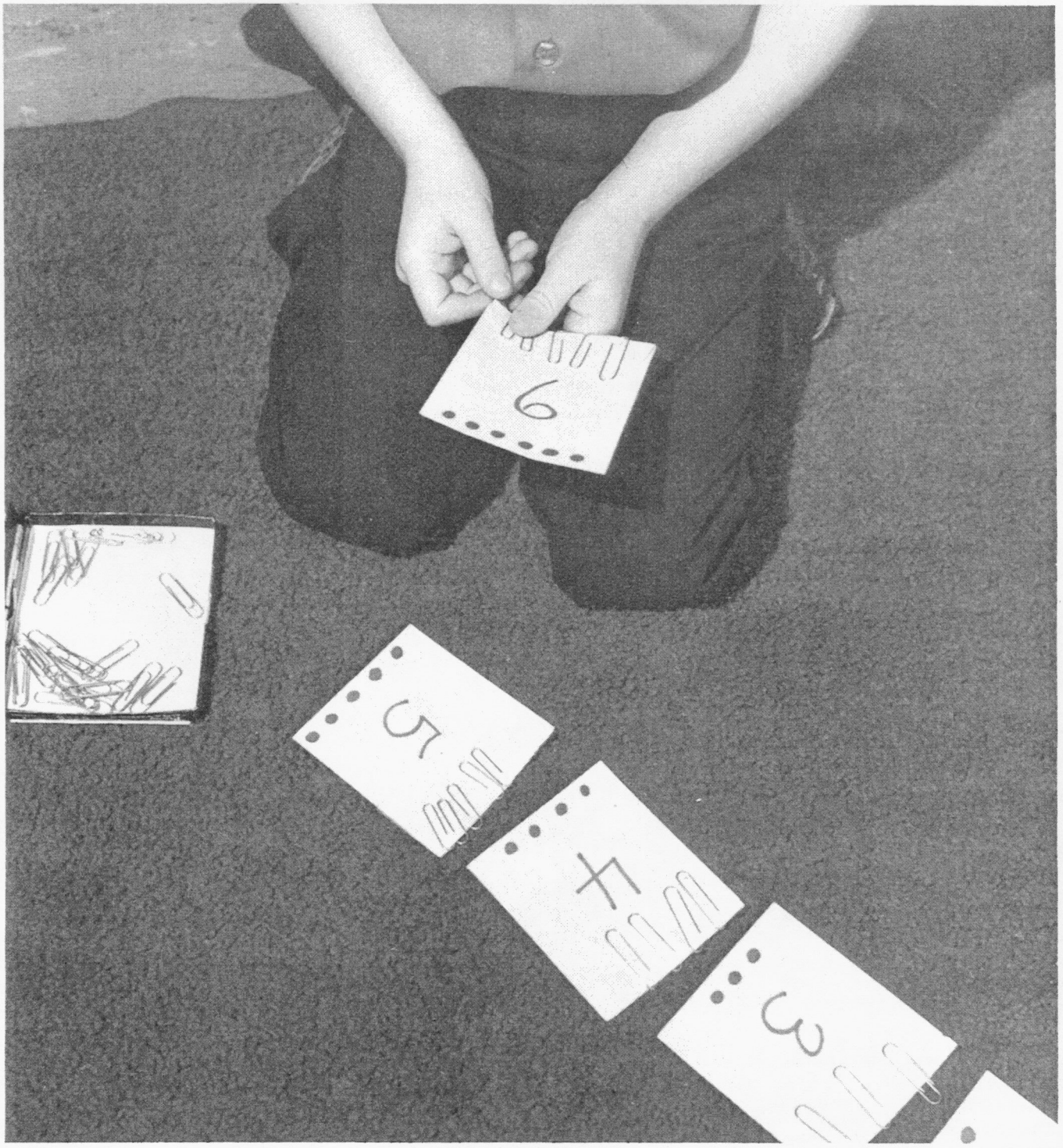
MATERIALS

Small plastic juice bottles suitable as vases.
Marking pen.
Artificial flowers.
Container for flowers.
Container for vases and boxed flowers.

Note: Plastic flowers with more than one blossom on the stem are excellent for forming combinations, as 2 + 3 or 4 + 1, and so on.

The Paper Clip Game

Skills Forming sets of objects; counting; learning to use a paper clip.



ACTIVITY

A child clips as many paper clips to each square as the numeral shows him.

When he is able to do so, the child can put two cards together and record the combinations formed.

GETTING STARTED

The teacher might discuss the activity as follows: "How can you find how many paper clips to clip to this square? Good for you! Put on that many paper clips."

IDEAS FOR FOLLOW-UP DISCUSSION

What did you do with the paper clips? How did you know how many to put on each square?

Tell me about this card. What does this "3" mean?

This has a mistake. Can you find it yourself and fix it?

Show me a card that has the same number of paper clips as your age. Show me a card that has less than your age. How long ago were you that old? Can you write that subtraction problem and the answer on the board?

MATERIALS

4″ x 4″ tagboard squares covered with clear contact paper.
Marking pen to write numerals.
Masking tape to strengthen edges.
Large paper clips.
Container for paper clips.
Container for squares and boxed paper clips.

Number Combination Board

Skills Counting; matching; making comparisons; making selections.

ACTIVITY

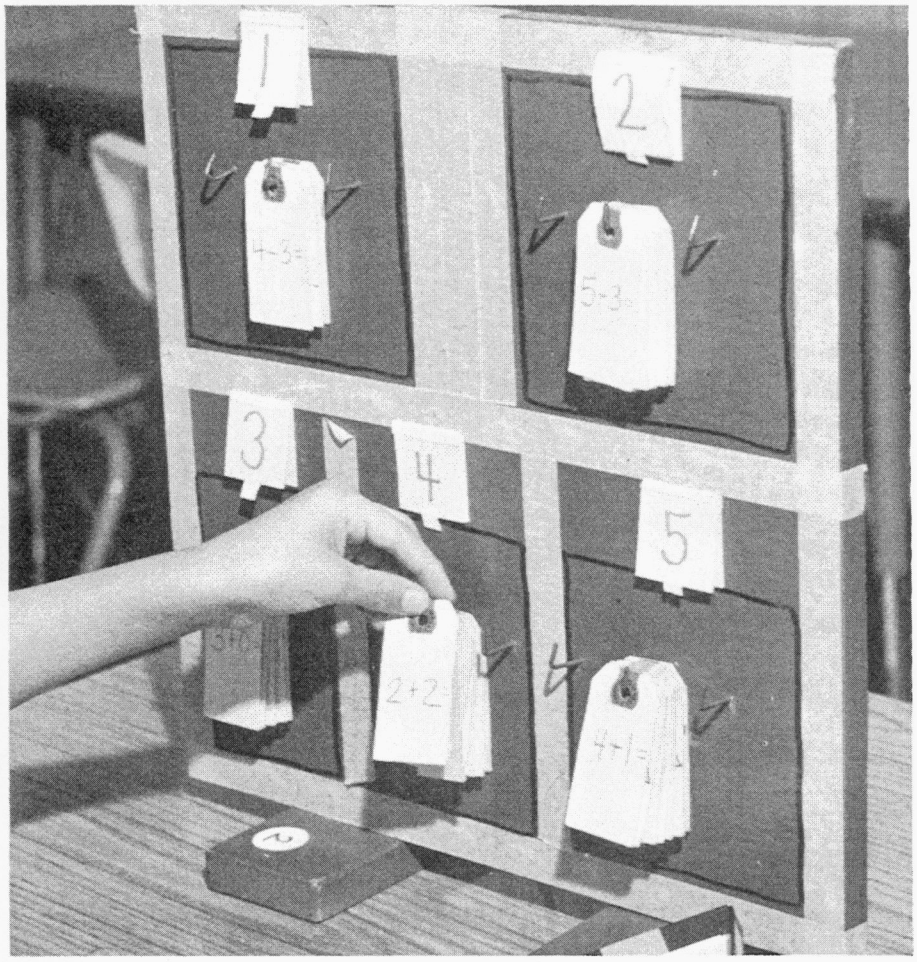
The child counts the set of objects on each tag and hangs it up on the appropriate hook on the answerboard.

GETTING STARTED

The teacher might discuss the activity as follows: "Count the glasses on this card, Danny. How many glasses are there? Where is the numeral which shows how many there are? Check to be sure you have the right one. Hang the card up. How about the next card?"

IDEAS FOR FOLLOW-UP DISCUSSION

What did you do with the cards?
How many sets of five are there?
Show me all the pictures that are in set 2. What are they pictures of?
What numeral is above the glasses? Above the stars?
Are there more ice cream cones or more kites?



The child who is ready to work with written combinations can be asked to sort cards with addition and subtraction problems.

MATERIALS

18" x 24" plywood.
Pieces of wood 2-1/2" x 7" nailed to bottom edge of the plywood to make it stand up.
Five "L" hooks.
Five numeral cards, hinged, with number dots underneath.
Spray paint for board.
1" x 2" postage tags with hole reinforcements.
Colored pencils to draw sets or sets cut from workbooks.
Container for cards.

The Nail Board

Skills Seeing patterns and combinations; matching; forming sets of objects; making comparisons; one-to-one correspondence; making selections.

ACTIVITY

A child takes the pins and hammer, and pounds the pins into the answerboard, reproducing the various patterns.

GETTING STARTED

The teacher might discuss the activity as follows: "Look at this first pattern, Carol. What colors are there? How many of each color? Take that many colored pins. Very good. Now, hammer them into the answerboard making the same pattern as you see here. Very good. Try another pattern."

IDEAS FOR FOLLOW-UP DISCUSSION

Tell me what you did with the pins, Carol.
How did you know what colors to use for each pattern? Show me, please.
Point to a pattern that has three red pins in it. What other color pins does it have?
Show me a pattern that has all green pins. Is there any other pattern that has all the same color pins in it?
Show me a pattern that does not have any red pins in it.
Tell me how many pins there are altogether in some set that has red and yellow pins.
I am looking at a set that has five pins altogether, and three of the pins are green. Which one might it be? What color are the other two pins?
Do you have a favorite pattern? Why do you like it? Does it have your favorite color in it? What is it?

MATERIALS

12″ x 24″ insulation board, cork, or bulletin material.
Colored marking pens for coloring patterns.
Cloth tape to strengthen all edges.
Colored pushpins, as needed to complete the patterns.
Small hammer.
Container for the hammer and pins.

Birthday Cakes

Skills Forming sets of objects; counting; ordering numerically; making comparisons; relating life experiences to mathematics.

ACTIVITY

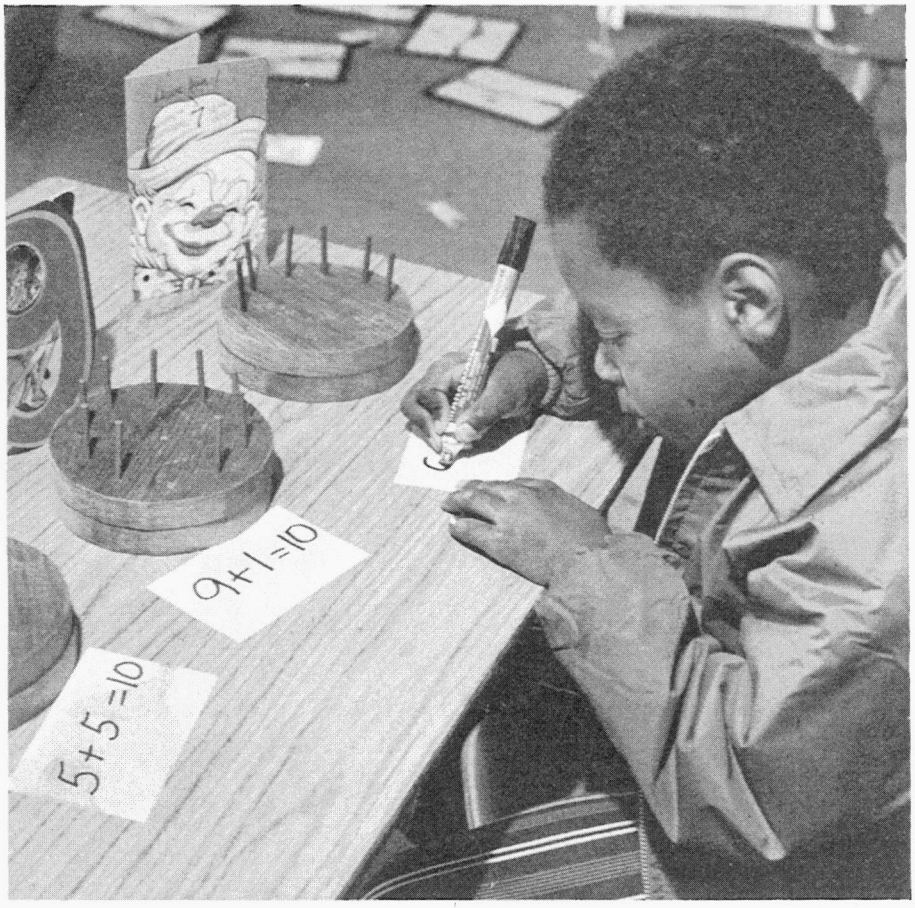
The child puts one birthday card in front of each cake and puts the correct number of candles on each birthday cake. The cakes may be ordered from 1 through 10.

GETTING STARTED

The teacher might discuss the activity as follows: "Set a birthday card up in front of each cake. How old is the person who is going to get this cake? Can you put that many candles on his cake? Fine."

IDEAS FOR FOLLOW-UP DISCUSSION

What have you been doing?
Which cake is for the youngest child?
At your next birthday, which cake will you get? Do you know when your birthday is? Which cake shows your age right now?
Do you have any brothers or sisters that are the ages on any of these cakes? Show me.
If you were two years younger, how old would you be—and which would be your cake?



The child who is ready may enjoy recording the combinations of candles and empty holes that add up to 10.

MATERIALS

Wooden "cakes," 4″ in diameter.
Drill for making 10 holes in each "birthday cake."
Birthday candles or small pegs to resemble candles.
Birthday cards covered with clear contact paper for ages 1 to 10.
Small container for cards.
Small container for candles.
Container for "cakes," boxed cards, and boxed "candles."

Fences

Skills Forming sets of objects; counting.

ACTIVITY

The child puts the animals into the fences. Then he records the number of each animal in each fence. For example, one may have five horses and three cows and the child would record 5 + 3 = 8.

GETTING STARTED

The teacher might discuss the activity as follows: "Pretend you are a cowboy going on a round-up. How many animals will you put in this fence?"

IDEAS FOR FOLLOW-UP DISCUSSION

Tell me about your work, Amalia.
How did you decide how many animals to put in each fence?
Are there any fences that have the same number of animals inside?
Which fence has fewer than six animals inside it?
How many of each kind of animals are inside this fence?
If three of these animals got away, how many would be left? What would happen if two animals broke out of their fence and got into this fence?

MATERIALS

4″ x 4″ pieces of tagboard.
Popsicle sticks glued together to form fences.
Spray paint.
Small animals of two types, such as cows and horses, to be placed inside fences.
Paper and pencil.
Small container for animals.
Container for fences and boxed animals.

Vitamins

Skills Forming sets of objects; counting; ordering numerically.

ACTIVITY

The child fills the vitamin bottles with the correct number of "vitamins." The pill bottles may be ordered from 1 through 10. After checking his work with the teacher, he puts the cup of cereal in his desk or in some other place until recess when he may eat it!

GETTING STARTED

The teacher might discuss the activity as follows: "Take one of the vitamin bottles and tell me how many vitamins should be inside. Now, what about this one?"

IDEAS FOR FOLLOW-UP DISCUSSION

Tell me what you did.

How many vitamins should be put inside this bottle? (If the amount inside is not the same) Count the ones inside for me, please. Is that the number you need? Can you fix it?

Which bottle has number 1 on it? Can you put it here? What number comes next as you're counting? Can you put that bottle next? Can you finish putting them in order?

Which bottle has the most vitamins?

Which bottle has more than five but less than seven vitamins?

Which bottle shows how many eyes you have? How many toes you have on one foot? On two feet?

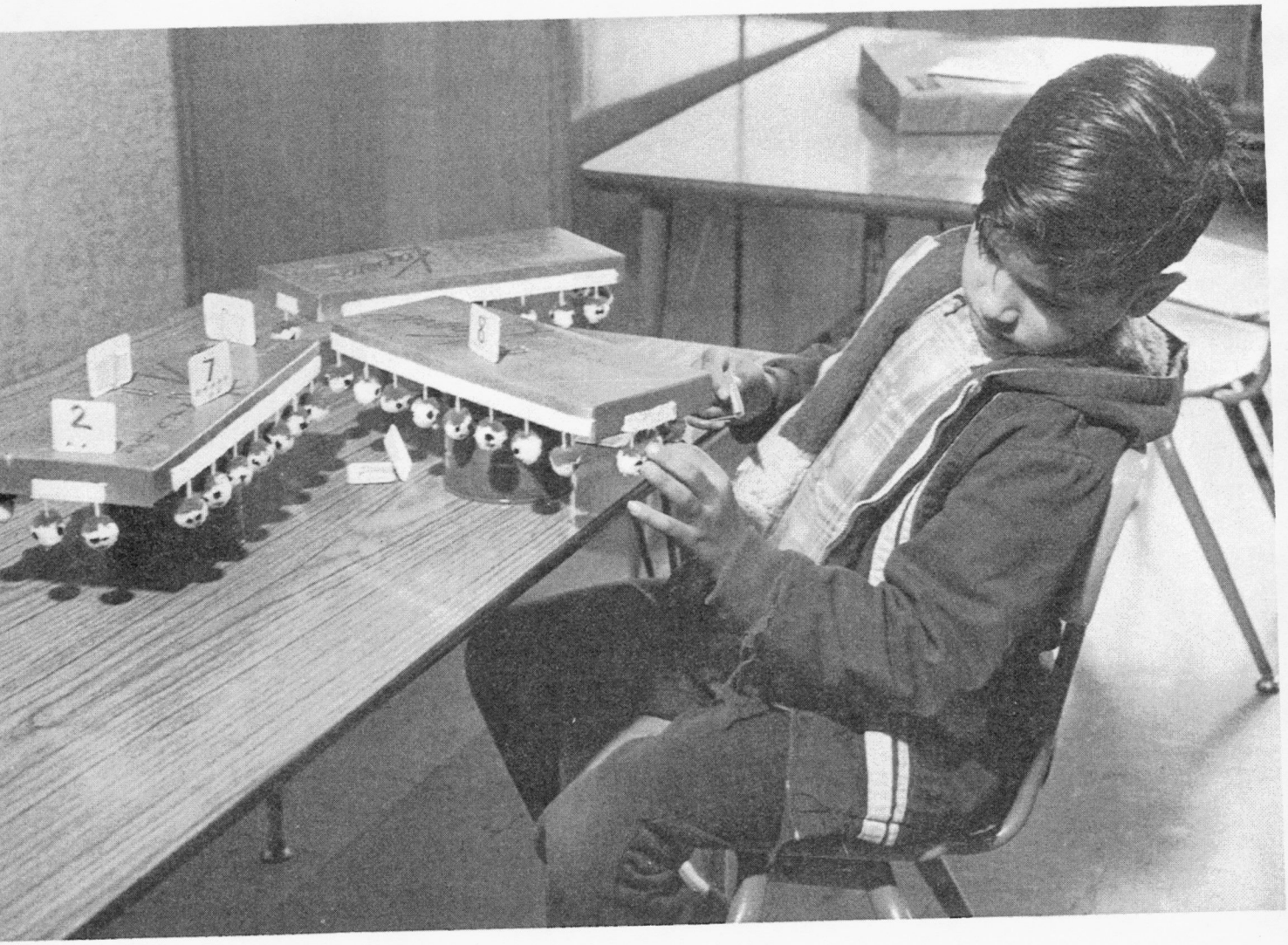
MATERIALS

Empty vitamin bottles or pill vials, with tops.
Marking pen and stickers for numbering the bottles.
Small sugar-coated cereals.
Small cup to hold cereal.
Container for vitamin bottles.

Note: The cereal can be kept in a covered container on the teacher's desk or some other convenient place with a supply of small cups. When the child is ready for this activity he knows where the cereal is and can get what he needs.

Dangles

Skills Matching; counting; learning to record experience with mathematical symbols; making comparisons; making selections.



ACTIVITY

The child counts the dangles on each side of the box top and matches a numeral to them.

GETTING STARTED

The teacher might ask the child, "How many dangles are there along this side? Can you find the numeral which shows that many and put it above those dangles?"

IDEAS FOR FOLLOW-UP DISCUSSION

Which side of this box has the most dangles?
Which side of this box has the fewest dangles?
How many dangles are on this side? (If the child has matched the incorrect numeral with this side) Does this numeral show that many? Can you find the one which does?
Which are more, these or those? How many more are over there than over here?
How many dangles are there altogether on this top? I see a mistake on this top. Do you see it? Ask Tim if he can find it. Okay, can you fix it now?

MATERIALS

Four tops from shoe boxes.
Four 1-lb coffee cans with plastic lids.
Four brass fasteners to secure coffee can lids to box tops.
Masking tape to tape over brass fasteners, on inside of the coffee can lid.
Spray paint.
White glue.
Lengths of dangles sold as trims in sewing or notion's departments.
Numerals, as needed, for matching to the number of dangles on each side of the box top.
Container for numerals.
Container for dangles and boxed numerals.

Note: To secure the coffee can lids invisibly to the box tops, insert the brass fastener through a small square of cardboard and then through the top of the coffee can lid. Spread the fastener open on the inside of the lid and tape over the spread. Glue the cardboard to the inside of the shoe box top with white glue.