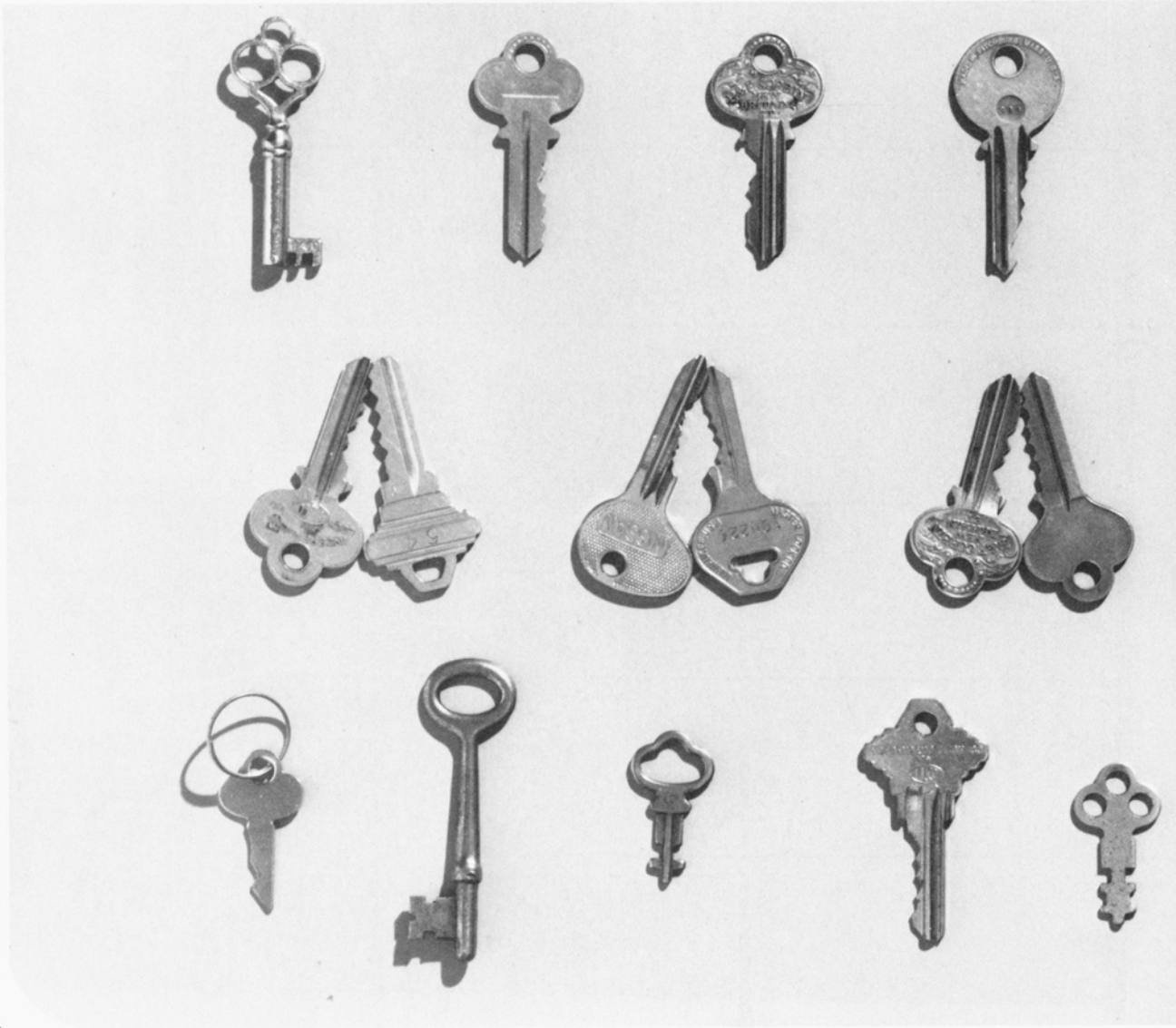


# PATTERN ONE



**SKILLS AND CONCEPTS** \_\_\_\_\_

Divergent thinking  
Extending, completing, describing, and analyzing patterns  
Translating patterns from one form to another

**SELF CONCEPT AND SOCIAL INTERACTION** \_\_\_\_\_

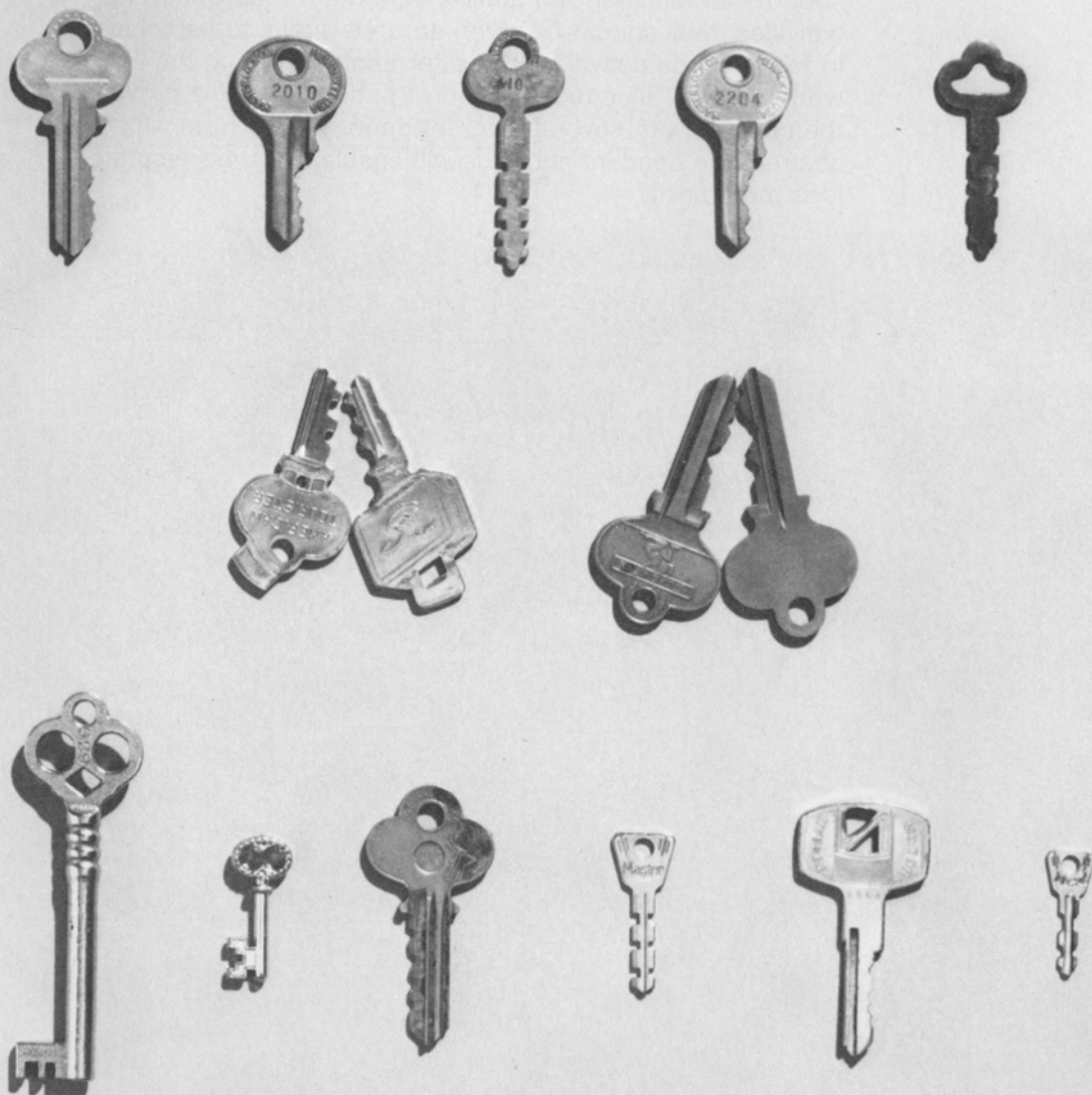
Increasing body coordination and awareness through rhythmic movement  
Sensing the value of one's own and others' ideas as these are used as the core of the curriculum  
Observing many different, equally valid, approaches to a single problem's solution  
Experiencing that one's own value is not diminished if others are valued as well

**FUTURE APPLICATION** \_\_\_\_\_

Spontaneous recognition of pattern in the real world  
Inductive and deductive reasoning  
Anticipating functions and relations  
Recognizing patterns in number

**PREREQUISITE CHAPTERS** \_\_\_\_\_

Free Exploration



## INTRODUCTION

Pattern is the underlying theme of mathematics. The skill of recognizing and using patterns is a valuable problem solving tool for a child to learn to use for it can have a profound effect on the development of a child's mathematical understanding.

The activities in this chapter give children an opportunity to experience pattern visually, auditorily, and physically. Children analyze, duplicate, and extend many different patterns, describing each pattern in a variety of ways. This verbalization helps the children *feel* the pattern they experience visually and creates great interest and enjoyment in looking at patterns.

Subsequent chapters broaden and expand the idea of pattern and give each child opportunities to use this skill with increasing sophistication.

Introduce one or two of the following activities each day. As soon as the children are familiar with the format of several activities, they should be given an opportunity to participate in two or three activities, one after another, during the same work period. This concentration of pattern activities provides the children with several different opportunities from which to abstract the concept and thus will enable them to grasp the idea more easily.





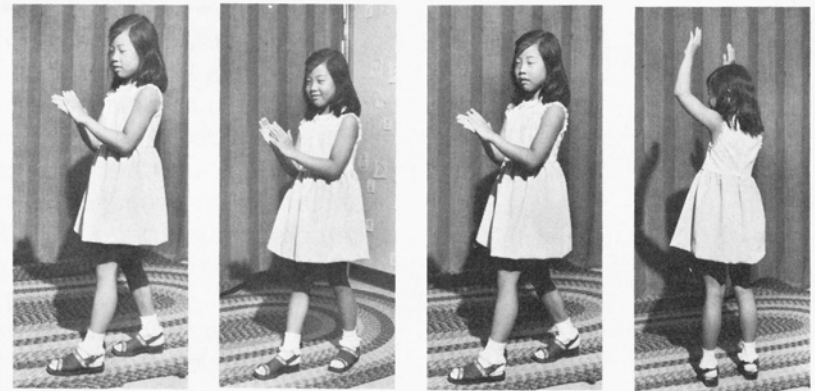
# Rhythmic Clapping

**SKILLS** \_\_\_\_\_ Reproducing rhythmic patterns  
Describing patterns creatively in many different ways

**MATERIALS** \_\_\_\_\_ None

**ACTIVITY** \_\_\_\_\_ The teacher claps a pattern and the children join in. The children's suggestions for movement are incorporated into the rhythmic clapping as the activity proceeds.

## SAMPLE TEACHING STRATEGY \_\_\_\_\_

TEACHER	CHILDREN
 <p>clap clap snap clap clap snap</p>	<p>The children join in when they think they know the clapping pattern. Clap, clap, clap, snap, clap, clap, clap, snap. . . .</p>
<p>"Who has an idea of what we could do with our bodies when we snap?"</p>	<p>One of the children bends to the side.</p>
<p>"Let's try bending like Carol!"</p>	<p>All the children clap and then bend to the side, as they snap their fingers.</p>
 <p>For clarity of action; these photos show one child; do not be misled and think children are to take turns. Every child should participate simultaneously.</p>	
<p>"Who has a <i>different</i> idea of what we could do on the snap?"</p>	<p>"We could raise our arms in the air and go the other way."</p>
<p>"Okay, let's try that."</p>	<p>All the children clap and raise their arms, turning on the snap.</p>
	

*It is important to accept whatever actions the children suggest so they experience that you value their ideas. When the children see the group performing their suggestions, they show more confidence in suggesting ideas.*

"Who has a different idea? Can you think of something to do with a partner?"

"Play patty cake and snap."



"Who has a different idea? Can you think of something to do sitting down?"

"Sit down Indian style and cross your hands on the slap."



Continue to ask the children for ideas until they begin to lose interest. It is worthwhile for the children to experience eight or nine different ways to interpret a pattern during a single work period. This stretches their imagination, forcing them to think of alternatives one after another.

Repeat this activity many times, changing the original pattern used each day. Any motion repeated a particular number of times results in a pattern. The only secret is to keep the pattern simple.

*It is very important in the beginning to give the children time to develop this skill without singling anyone out who is having difficulty. Keep in mind that children are supposed to evidence skill at the end of this work, not at the start, and be reassured that children will grow in their skill from repeated exposures to the concept. It is not necessary for every child to understand the pattern the first day or to perform it perfectly before experiencing a second pattern. This work is not sequential and children having difficulty benefit in the long run from being slightly overwhelmed. Given time, each child sorts out the elements in his or her own way.*

# The Dot Chart

SAMPLE TEACHING  
STRATEGY

# 2

PATTERN  
ONE

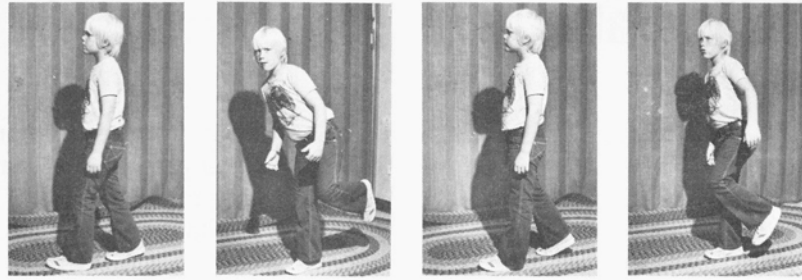
**SKILLS** \_\_\_\_\_ Reproducing and extending patterns  
Describing patterns creatively in many different ways  
Strengthening left to right progression

**MATERIALS** \_\_\_\_\_ The dot chart\*


**ACTIVITY** \_\_\_\_\_ The teacher begins a pattern on the dot chart.







"Hop, walk, hop, walk, hop, walk."

"Can you do it if I speed up?"	The children try it quickly.
"How about if I <i>slow way down</i> ?"	The children try it slowly.
"Another idea?"	"Seagulls."
"Seagulls? You'll have to show us, Robert!"	"This is his eye. Here's his head, and here's his nose."
"Ready?"	 "Seagull, seagull, seagull, seagull . . ."

On subsequent days change the original pattern and repeat this activity many times, using any simple pattern.

When this activity becomes easy for the children and they begin to lose interest, it is appropriate to let those who would like to record the extension of the pattern on their individual dot pattern cards to do so (see p. 35).







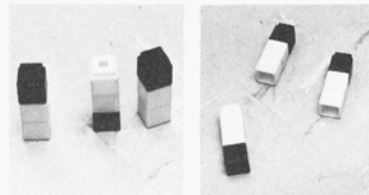


On subsequent days this activity is repeated, changing the original clapping pattern each time. The children can make trains which correspond to any simple clapping pattern such as AABAABAAB, AABBAABBAABB, AAAAAAAA, or ABBABBABBABB. When the children are confident performing this activity, substitute pattern blocks and build walls in various patterns (see p. 38).

In a few days when the children are interpreting simple clapping patterns easily with their cubes and pattern blocks, ask them to get in groups of four or five and make a group pattern.

TEACHER	CHILDREN
<p data-bbox="514 667 898 695">"Make this pattern with your cubes."</p>  <p data-bbox="523 793 904 821">clap snap snap clap snap clap</p>	<p data-bbox="929 667 1313 741">One group decides to build a blue, yellow, yellow pattern. Another group builds a brown, green, green pattern.</p>
<p data-bbox="514 846 898 940">"Stand your pattern up on the floor and make it again. Keep making your pattern over and over again until I tell you to stop."</p>	

By standing the stacks up, a child can tell immediately when she/he has reversed the pattern. It is much more difficult to catch a reversal when the cubes are lying flat.



When the children have made twenty or thirty identical stacks, ask them to snap their stacks together into a long train.

Direct the attention of the class to one of the long trains. Gather around this train so the children can all see clearly. Set the rhythm with a metronome or a bell, instructing the children to clap and slap their legs to this rhythm until they internalize the beat. Clap, slap, slap, clap, slap, slap. When the clapping is steady, point to one cube at a time and say the names of the colors out loud while maintaining the same rhythm. The children may want to drop the movements and only say the colors or they may prefer to do both at the same time. Neither is preferable; merely do what seems natural for the children each time.



# People Row Patterns

# 2

PATTERN  
ONE

**SKILLS** \_\_\_\_\_

Translating a pattern into a different form  
Reproducing and extending patterns  
Analyzing patterns  
Describing patterns creatively in many different ways  
Observing similarities and differences

**MATERIALS** \_\_\_\_\_

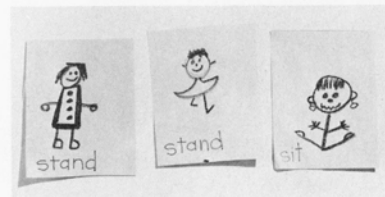
Pictures drawn by the children showing people sitting and standing

**ACTIVITY** \_\_\_\_\_

The children act out a pattern and verbalize the visual results in a variety of ways.

Spread out the children's pictures face down on the floor. Ask one child to turn over three pictures, one at a time, placing them where everyone can see them.

Let's get the pattern going:  
Stand, stand, sit, stand,  
stand, sit . . .



Using half the class as the audience and half as participants, ask five children at a time each to get a chair and form a long line.

The audience chants, "stand, stand, sit . . ." as each child in line stands or sits to act out the pattern.

~~~~~  
*Since this is the first time the children have had to deal physically with the left to right movement of a pattern, they may find it difficult. "Pointing" to each child with a flashlight helps the children keep track of their turn and keeps the beat steady. The beam should be pointed at the child's stomach, never at his or her face.*  
~~~~~



Stand, stand, sit, stand, stand, sit

# 2

## PATTERN TWO

At the end of the pattern, the children who remain standing walk away from their chairs and join the audience in order to see the pattern more clearly from a distance.



### SAMPLE TEACHING STRATEGY

TEACHER	CHILDREN
"How could we describe the pattern of people and empty chairs?"	"There are two empty chairs on each side of the kids."
"Let's go down the row as I flash the light and say 'empty chair' and . . . what do you want to say for the kids?"	"Their names."
<p style="text-align: center;">empty chair   empty chair   John   empty chair   empty chair   Ruth   empty chair   empty chair   Paul</p>	
"Who has a different idea of how we can describe the row?"	"We could clap."
"Okay, do you want to clap for the chair or for the people?"	"For the people."
"And what will we do for the chairs?"	"Slap our legs."

clap	clap	slap	clap	clap	slap	clap	clap	slap	
<p>"What else could we try? Is there any way we could say numbers to describe our pattern?"</p>					<p>"Two, one, two . . . We could do four, four, six, too."</p>				
<p>"Let's try Roger's pattern first, Janice, and then yours. What do you mean, Roger?"</p>					<p>"Two chairs, and then one chair with somebody in it."</p>				
<p>"Shall we hold up two fingers to point at the two empty chairs and then point one finger at the full chair?"</p>					<p>"Yeah."</p>				
Two,		one,		two,		one,		two, one . . .	
<p>"Now, tell us your idea, Janice."</p>					<p>"Four legs, four legs, six legs. See—one, two, three, four, five, six."</p>				
<p>"Very clever, Janice. Let's all try it."</p>									
Four,		four,		six,		four,		four, six . . .	
<p>Numbers will come up naturally in the classroom long before they are formally dealt with in this sequence. Include numbers whenever they appear, but be aware that they may not be fully understood by all the children in class.</p>									
<p>"Does anyone else have an idea? Could we tell what each thing is made of?"</p>					<p>"Wood, wood, blood and guts."</p>				
<p>"Yuck . . . are you ready for this?"</p>									
wood		wood		blood and guts		wood		wood blood and guts	

Continue working until the children begin to lose interest in suggesting alternatives.

Repeat this activity on subsequent days, drawing new pictures to change the pattern each time. It is important that all the children in class have an opportunity to participate in both the audience and the line. As the children develop their skill, some children in the audience will enjoy interpreting the pattern with Unifix cubes, pattern blocks, junk, or even the dot chart, as well as verbalizing it. When the children are very confident, turn over four cards to create a longer sequence.

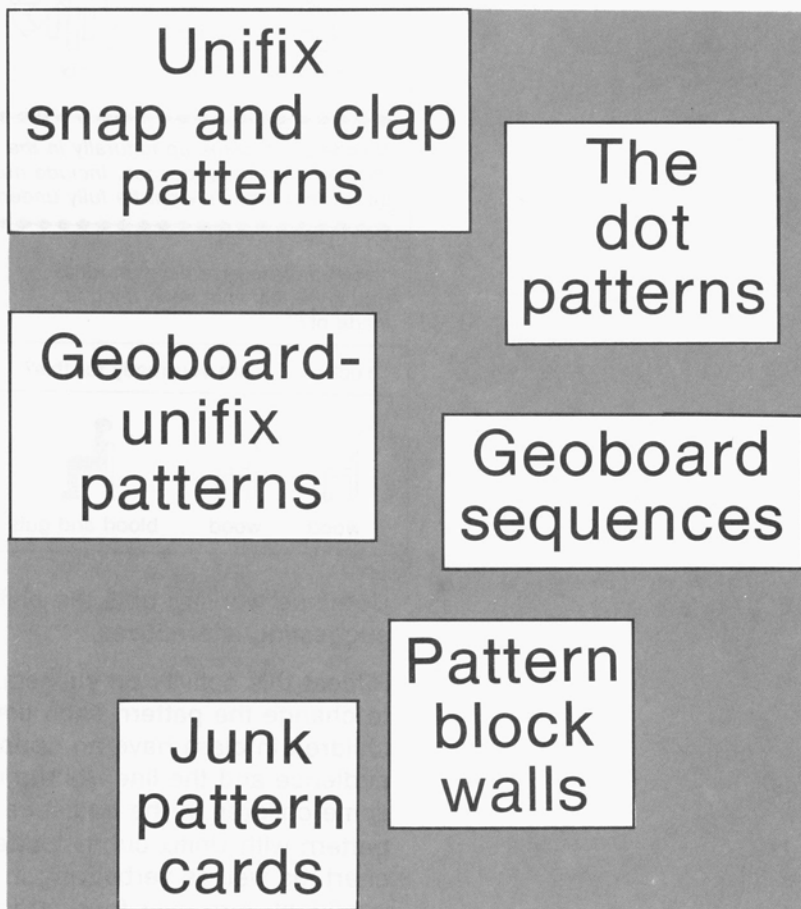
# APPLICATION AND EXTENSION OF PATTERN



When the children are successful with rhythmic clapping, dot chart patterns, Unifix cube patterns, and people row patterns, and in your judgment are ready for an additional challenge, introduce the following pattern stations.

These activities should be explored by the children independently. The teacher can observe and assist the children as they work but should not do the children's thinking for them. Allow the children to puzzle over the solution to the activities together. If the children have grasped the idea of pattern, they will experience the joy of success. If not, assess their pattern skill and go back to the concept level activities.

The children work at the following stations during the next few weeks.



# Unifix Snap and Clap Patterns

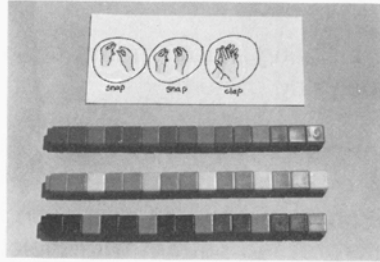
- SKILLS** \_\_\_\_\_ Translating a pattern into a different medium  
Analyzing patterns
- MATERIALS** \_\_\_\_\_ Snap and clap cards,\* Unifix cubes\* (See Worksheet 7)
- ACTIVITY** \_\_\_\_\_ A group of children turn over a snap and clap card and interpret the pattern with their Unifix cubes. Each child selects whatever colors sheorhe wishes to use.





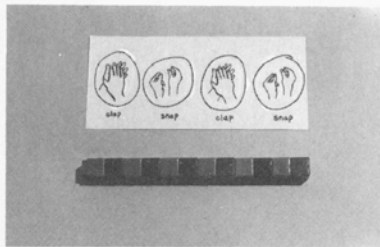


The children add to their pattern for a designated period of time. At the end of this time, each child takes a turn pointing to the cubes in his or her train one at a time, as the group chants the colors.



Red, red, green, red, red,  
green  
Blue, blue, orange, blue, blue,  
orange  
Black, black, green, black,  
black, green

In a few days, when the children demonstrate skill and seem ready for a more advanced level of this activity, have each child work independently turning over his or her own card and creating a pattern. Now all the children in the group have a different pattern which the group can compare. By labeling the pattern auditorily with ABC the children can practice analyzing their patterns.



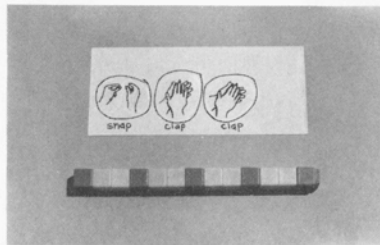
red, black, red, black,  
A B A B

red, black  
A B



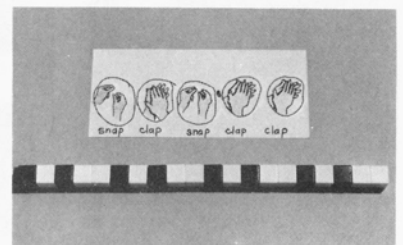
blue, blue, blue, yellow, blue,  
A A A B A

blue, blue, yellow  
A A B



green, orange, orange,  
A B B

green, orange, orange  
A B B



black, white, black, white,  
A B A B

white, black, white, black,  
B A B A

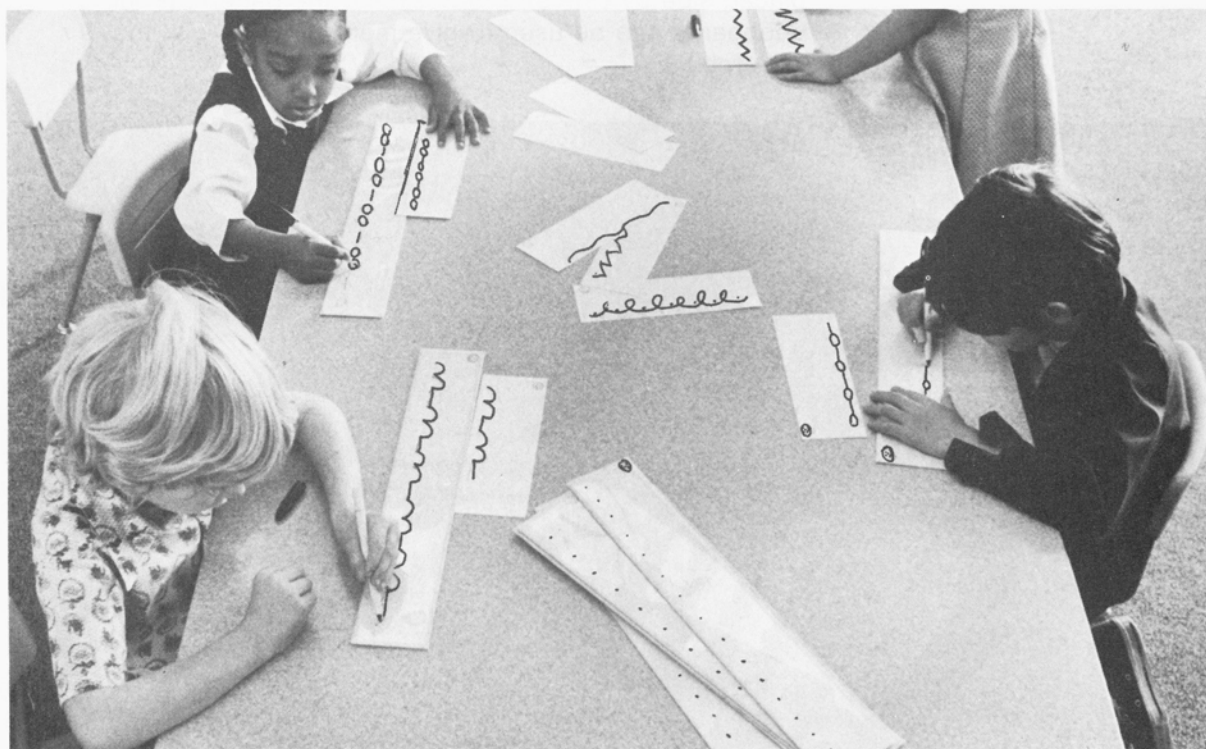
white, white  
B B

# The Dot Patterns

**SKILLS** \_\_\_\_\_ Reproducing and extending patterns  
Matching  
Strengthening left to right progression  
Observing similarities and differences

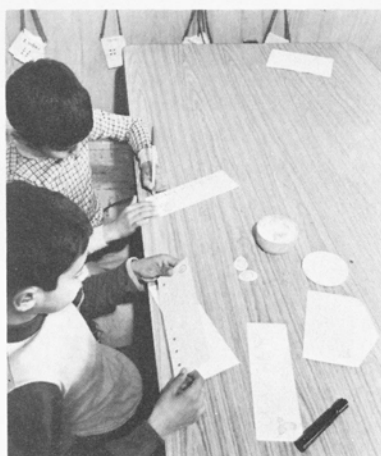
**MATERIALS** \_\_\_\_\_ Dot pattern cards,\* acetated strips of tagboard with dots

**ACTIVITY** \_\_\_\_\_ The children copy the pattern from the dot pattern card onto their acetated strip and extend it to the end of the line without the help of the model.



Some children enjoy making up new patterns for the class to use. These should be covered with contact paper and have the child's photocopied picture\* attached.

As children acquire skill with this activity, they may enjoy copying their patterns onto paper and stapling them into a little book. This should only be a followup to the acetated strips, which during the learning stages eliminate the frustration of mistakes because they are so easily erased. There is no evidence of a mistake with an acetated strip; there is with paper.





## Geoboard-Unifix Patterns

PATTERN  
ONE

**SKILLS** \_\_\_\_\_ Reproducing and extending patterns  
Matching  
Strengthening left to right progression  
Hand-eye coordination

**MATERIALS** \_\_\_\_\_ Geoboards,\* geoboard-Unifix pattern cards,\* Unifix cubes\*

**ACTIVITY** \_\_\_\_\_ The children copy the pattern of cubes onto two geoboards placed side by side and then extend the pattern. (Four geoboards can be used to give more practice with the patterns.)

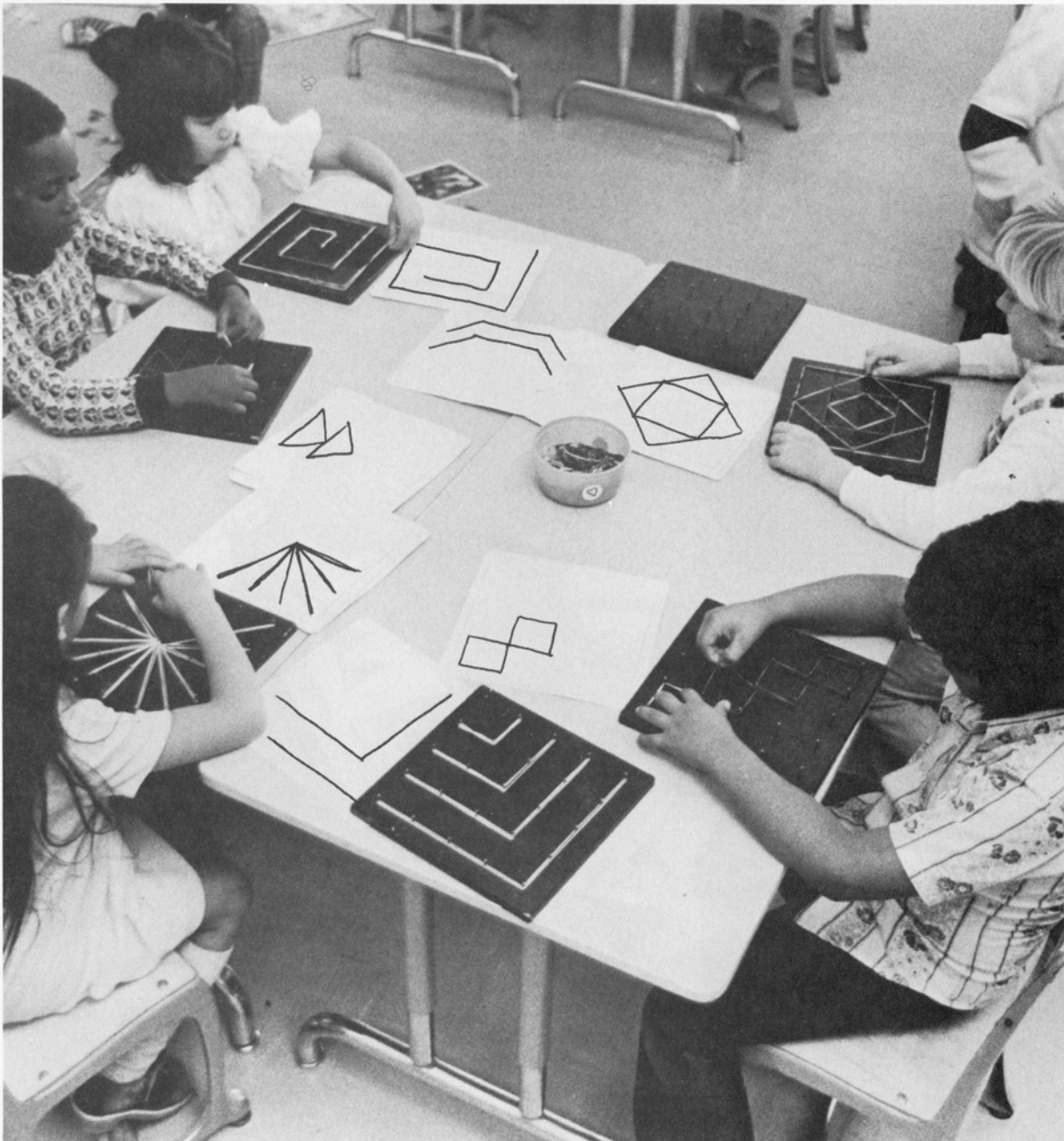


# Geoboard Sequences

**SKILLS** \_\_\_\_\_ Reproducing and extending patterns  
Analyzing patterns  
Reasoning deductively  
Hand-eye coordination

**MATERIALS** \_\_\_\_\_ Geoboards,\* geoboard sequence cards,\* geobands\*

**ACTIVITY** \_\_\_\_\_ The children copy a partial design onto their geoboard and complete it by extending the pattern.



## Pattern Block Walls

**SKILLS** \_\_\_\_\_ Strengthening left to right progression  
 Creating original patterns  
 Hand-eye coordination  
 Reproducing and extending patterns

**MATERIALS** \_\_\_\_\_ Pattern blocks,\* photocopied pictures of the children in class,\*  
 23 cm × 8 cm or 9" × 3" tagboard, pattern block shapes (see  
 Worksheets 2–6)

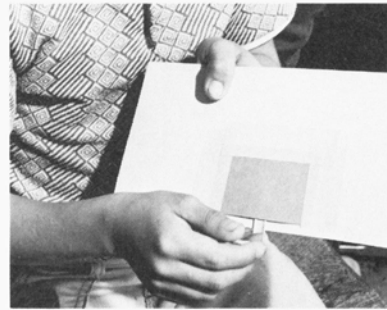
**ACTIVITY** \_\_\_\_\_ Ask children to take five or six pattern blocks and stand  
 them up. When each child has found a pleasing design,  
 sheorhe is ready to copy it onto tagboard by gluing down  
 the appropriate construction paper shapes. Each child also  
 glues hisorher photocopied picture onto the tagboard.



As one of the activities during free exploration, the children can cut the shapes from pieces of construction paper and the pattern block template.\*

When the patterns are dry, cover them with contact paper for durability. This enhances the children's feeling of self worth by recognizing the value of their contribution.

On the back of each piece of tagboard, tape a small piece of heavy colored paper about an eighth of an inch from the bottom edge. Paper clips can be opened and taped. Later they can be slipped into this slot by a child to make the wall stand up.



After several walls are prepared, the children extend the patterns to several feet.



# Junk Pattern Cards

**SKILLS** \_\_\_\_\_

- Creating original patterns
- Reproducing and extending patterns
- Observing similarities and differences
- Comparing and relating
- Analyzing patterns

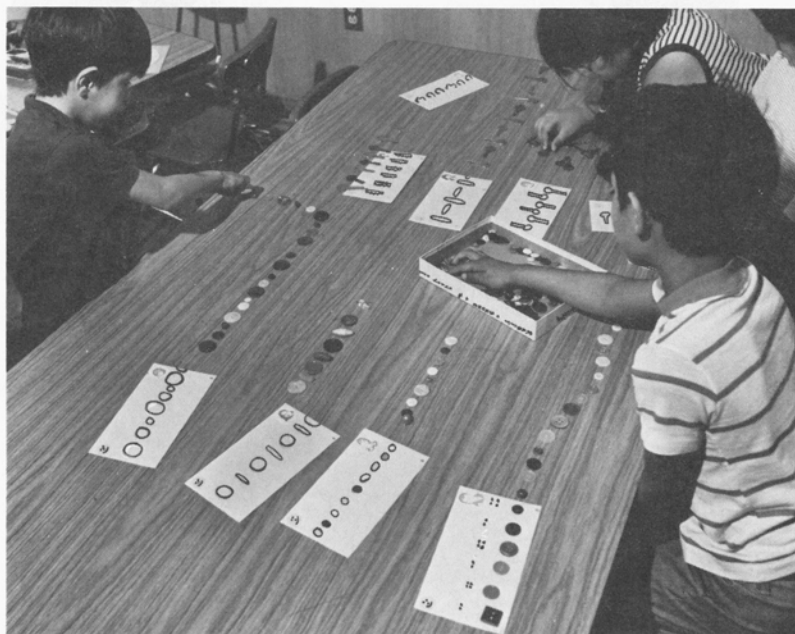
**MATERIALS** \_\_\_\_\_ Junk boxes,\* pieces of tagboard

**ACTIVITY** \_\_\_\_\_ A small group of four or five children each creates a pattern with a few pieces from a junk box. If the children are skilled enough, they copy the pattern onto tagboard. If not, the teacher copies the pattern for them. Each child glues his/her photocopied picture\* to the card and when dry it is covered with contact paper.

If the children have difficulty creating a pattern, the teacher can ask the children questions such as, "Could you make a pattern with three colors," or "Can you use two different shapes and make a pattern?" or "Can you make a pattern with a change in position or one using two sizes?"

When several pattern cards have been prepared for one junk box, the children reproduce the pattern by placing the appropriate items directly on top of the card or just under it, depending upon their level of skill. When the pattern runs off the card, it is extended until all of the necessary objects have been used up.

The children can analyze the patterns as they build them, saying ABBABBABB, ABCABCABC, and so forth.



# Border Patterns

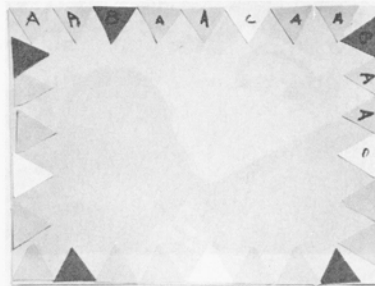
**SKILLS** \_\_\_\_\_ Creating original patterns  
Comparing  
Analyzing patterns

**MATERIALS** \_\_\_\_\_ Shapes cut from different colors of construction paper,  
paste, paper

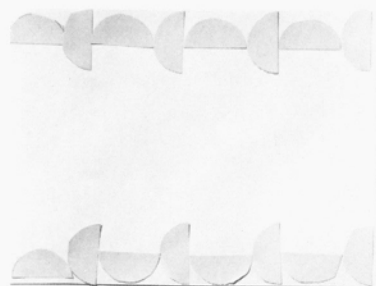
**ACTIVITY** \_\_\_\_\_ The children start a pattern with two colors or two shapes.  
When they complete the design they glue it onto paper.



The whole class can analyze the patterns when they are dry, looking at them one at a time and identifying them with ABC.



AABAACAABAAC



ABABABAB





# Necklace Patterns

**SKILLS** \_\_\_\_\_ Creating original patterns  
Hand-eye coordination  
Comparing  
Analyzing patterns

**MATERIALS** \_\_\_\_\_ Macaroni, glass jar, food coloring, alcohol, newspaper,  
3 cm × 5 cm or 1¼" × 2" pieces of tagboard, glue, string

**ACTIVITY** \_\_\_\_\_ Have the children help you do the following after school one day: Mix one tablespoon of alcohol, a few drops of food coloring and some macaroni in a glass jar. Screw the lid on tightly and shake until all the macaroni is coated. Let the macaroni dry on a piece of newspaper overnight.

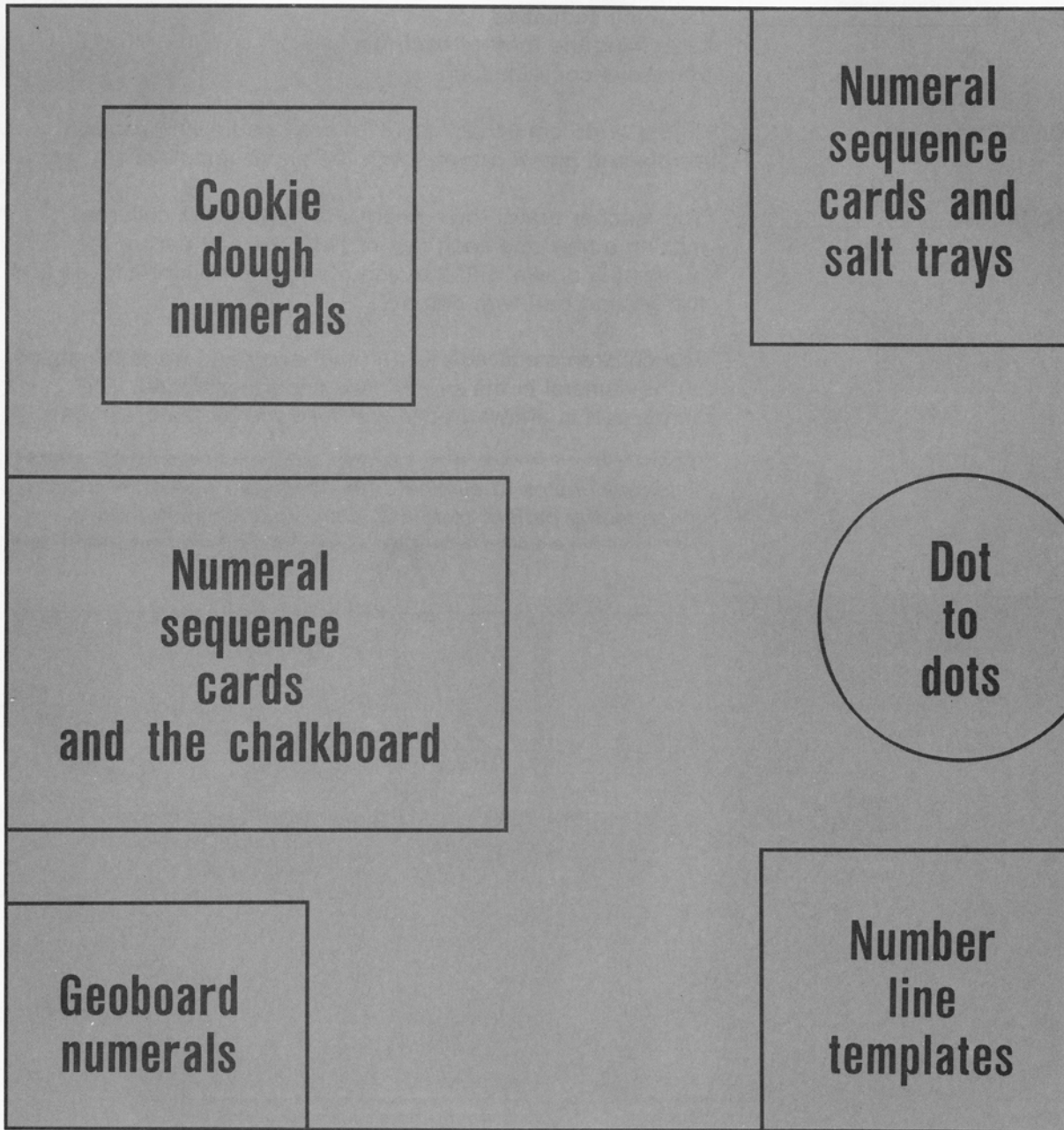
Punch two holes in each piece of tagboard (or have the punch available to the children) and cut string into 91 cm or 36" lengths. Tie a piece of macaroni onto one end of each string to keep the macaroni from falling off the end as it is strung.

On the following day, when the children are ready to string a necklace, have them place a few pieces of macaroni on one of the tagboards that has been punched. These pieces are arranged in a pattern, and then glued down. This forms the child's necklace pattern and she or he can refer to it during the stringing process. The pattern is repeated over and over again until the necklace is completely strung. Each child should be encouraged to verbalize his or her pattern before beginning to string the macaroni and once again while working. This reinforces the pattern and helps the child establish the auditory pattern as well as relate it to the visual pattern.



Children may analyze the patterns of their friends' necklaces when they finish, by saying AABAABAAB, and so forth.

# Learning to Write Numerals



The pattern activities shown above should be done at another time during the day, as writing numbers is an art lesson (in the mechanical drawing sense) rather than a math lesson. You should start this work long before the children need to use the numbers so that when the time comes, these patterns are ingrained. Say each number as you write, but do not focus on teaching the names to the children or require the children to be able to recall the numbers by name. At this stage the children are only learning a form, much as they might learn to draw a circle, square, or triangle.



When the children have traced the numeral six or seven times in the air, have them trace it in the palm of their hands. The children hold their hands up high enough so that if they raise their eyes slightly, they see the large numeral card just over their hands.



# Cookie Dough Numerals

**SKILLS** \_\_\_\_\_ Observing the form of each numeral  
Hand-eye coordination  
Matching

**MATERIALS** \_\_\_\_\_ Very stiff cookie dough (add  $\frac{1}{2}$ – $\frac{3}{4}$  cup additional flour),  
duplicated worksheet of the numerals, waxed paper, toaster  
oven

**ACTIVITY** \_\_\_\_\_ The children roll out a snake and fashion a number on top of  
the worksheet (covered with waxed paper). Cook in a toaster  
oven and . . . munch, slurp, crunch, yum, yum.



The children also enjoy making numbers with clay: their house number or telephone number, their age, other favorite numbers, their parents' or teacher's license plate number, their room number, and so forth. This gives the children lots of practice making numbers that are meaningful to them.

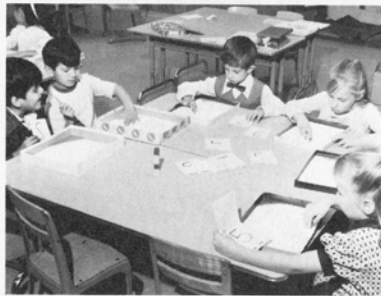
# Numeral Sequence Cards

**SKILLS** \_\_\_\_\_ Observing the form of each numeral  
Learning sequence  
Hand-eye coordination

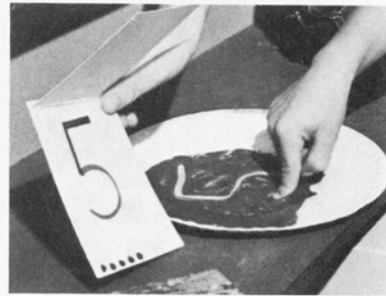
**MATERIALS** \_\_\_\_\_ Numeral sequence cards,\* boxes with salt inside, cookies, frosting, finger paint, empty roll-on deodorant bottles

**ACTIVITY** \_\_\_\_\_ The children work in pairs. One child holds the numeral sequence card and the second child forms the numeral.

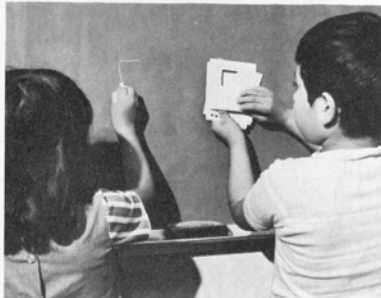
The children make the numerals with a variety of materials.



The salt trays



Finger paints or chocolate pudding



the chalkboard



Frosting



An empty roll-on deodorant bottle (The teacher writes on the child's palm. The child keeps his/her eyes closed.)

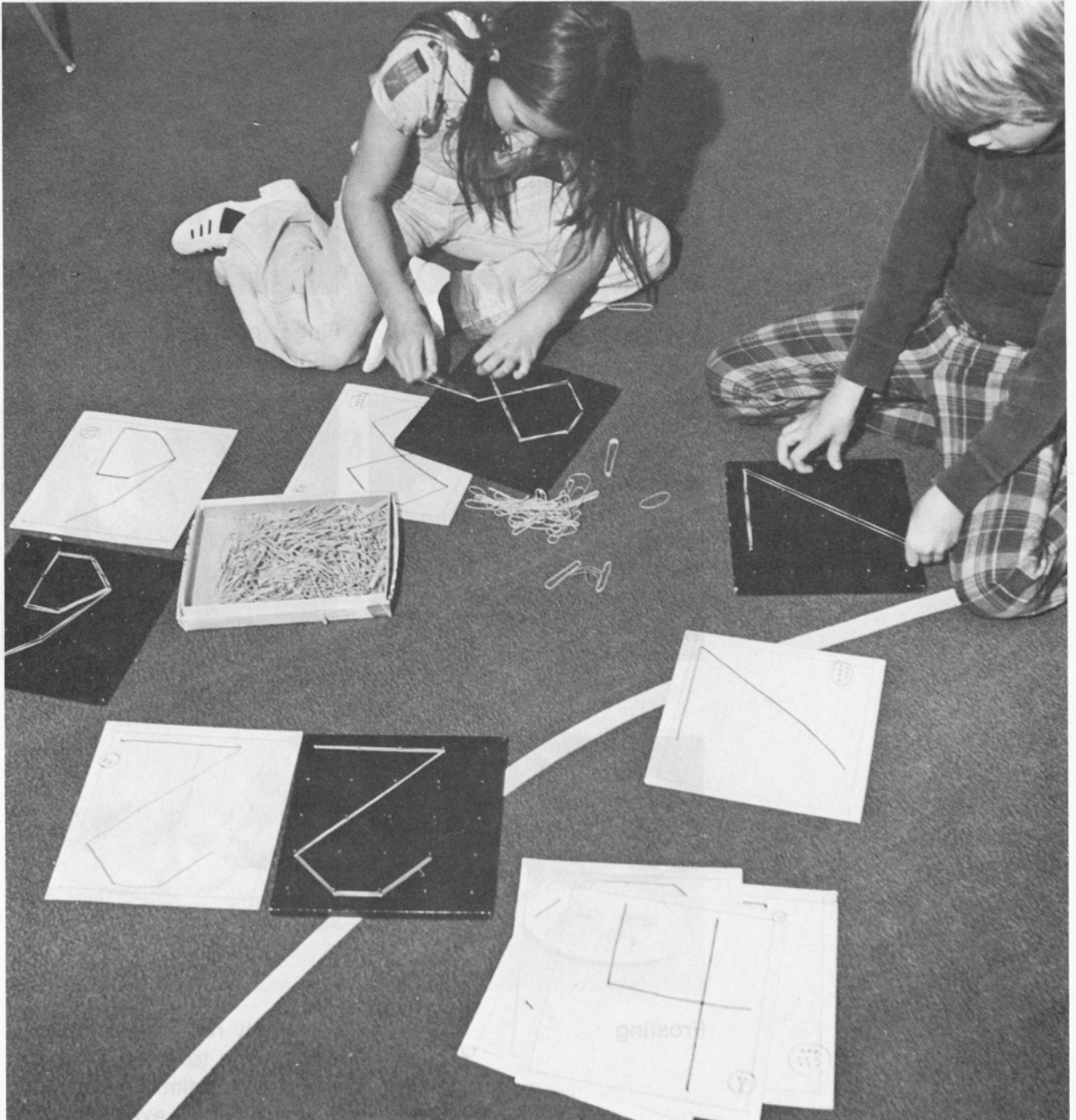


# Geoboard Numerals

**SKILLS** \_\_\_\_\_ Learning sequence  
Observing the form of each numeral  
Hand-eye coordination

**MATERIALS** \_\_\_\_\_ Geoboards and geobands,\* pattern cards with the numerals written in purple and green on geoboard dot paper (see Worksheet 17)

**ACTIVITY** \_\_\_\_\_ The children make numerals on their geoboard, copying the pattern cards.

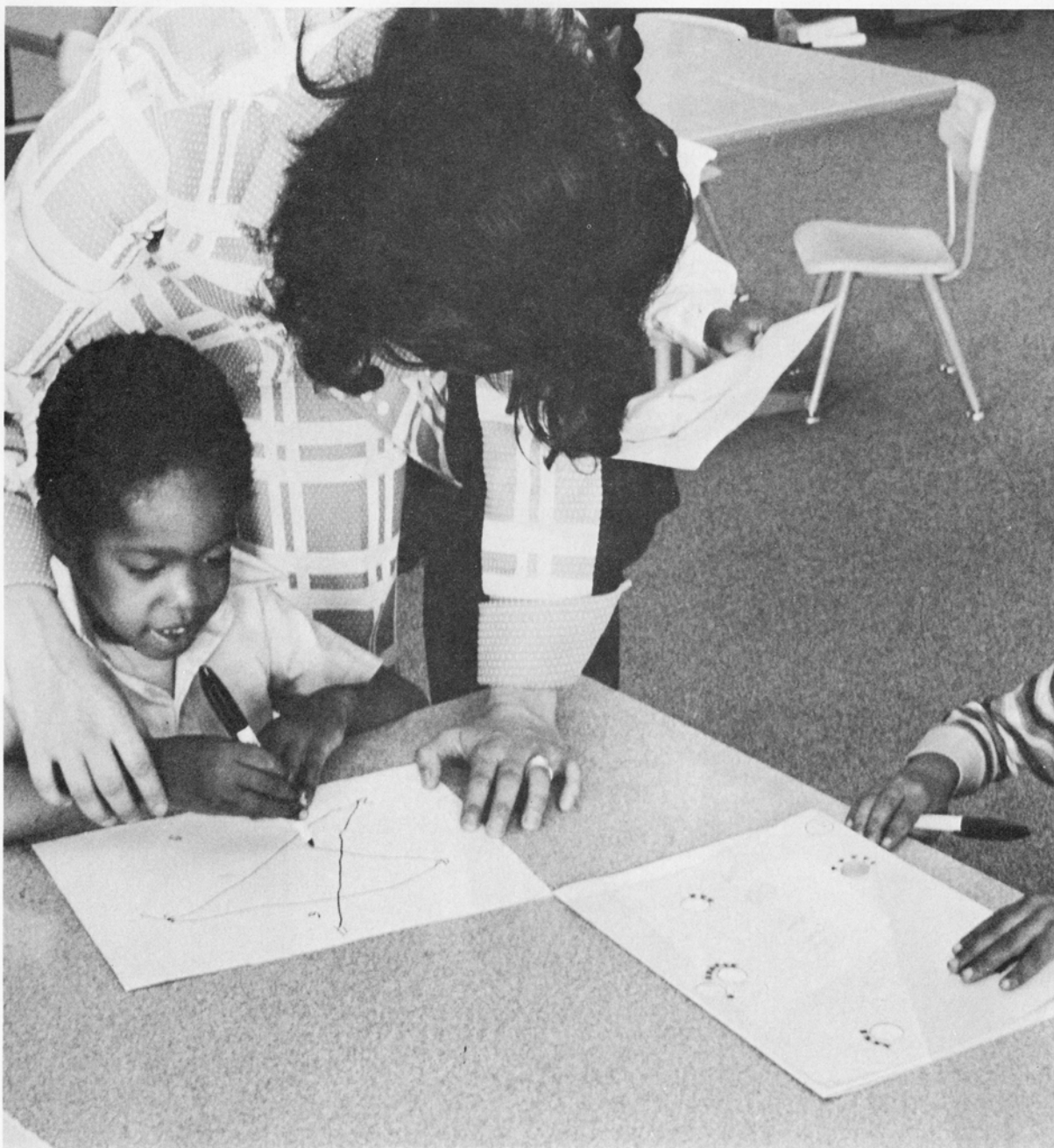


# Dot-to-Dots

**SKILLS** \_\_\_\_\_ Copying numerals  
Ordering  
Hand-eye coordination

**MATERIALS** \_\_\_\_\_ Dot-to-dot templates,\* paper

**ACTIVITY** \_\_\_\_\_ The child puts a template over a piece of paper and copies the appropriate numerals in each hole. (It is not important that the children copy the numbers in order.) When all the holes contain a numeral, the child removes the template and connects the dots.







# The Number Line Templates

- SKILLS** \_\_\_\_\_ Copying numerals  
Hand-eye coordination
- MATERIALS** \_\_\_\_\_ Number line templates,\* paper
- ACTIVITY** \_\_\_\_\_ The children practice making the numerals by writing them in the holes on the template.

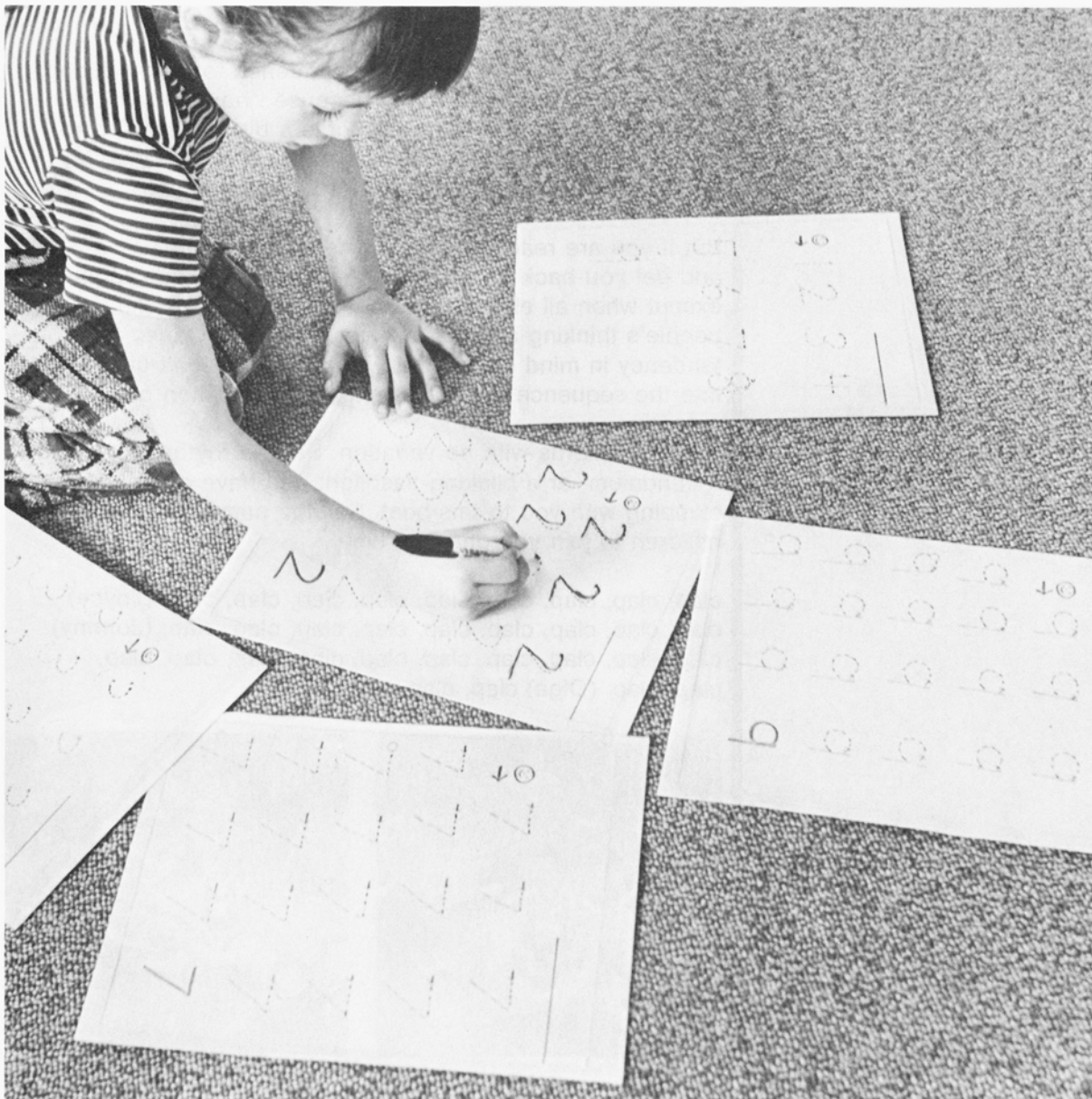


# Writing Papers

**SKILLS** \_\_\_\_\_ Hand-eye coordination  
Copying numerals

**MATERIALS** \_\_\_\_\_ Worksheets 8–16 made with two colors or use numeral writing paper available from the Center for Innovation in Education.

**ACTIVITY** \_\_\_\_\_ This work is the final reinforcement for writing numerals. The activities on pages 43–50 teach the children to form each numeral correctly and are prerequisite to this activity. This activity is the final proof that the children have internalized the forms of the numerals and can copy them without effort.



## QUESTIONS FROM TEACHERS

THE FIRST DAY I TRIED "CLAP, SNAP, CLAP, CLAP, SNAP" WITH MY KINDERGARTEN CLASS AND THEY COULDN'T DO THE PATTERN: THEY ALL GO AT DIFFERENT SPEEDS AND NO ONE UNDERSTANDS THAT WE NEED TO STAY TOGETHER. I'VE TRIED EVERYTHING, AND I'M READY TO GIVE UP. HELP!

Let's look at your original pattern and try to analyze why it was so difficult:

clap	snap	clap	clap	snap
A	B	A	A	B

The first part alternates one clap and one snap. Then the children must double the first motion (clap clap) and remember *not* to double the second (snap). The problem is now compounded because, after these five beats the children must start over again.

I intentionally did not give you a sequence to follow during the preceding pattern chapter because I have found it is important to let the children struggle a bit and even more important to let them experience a variety of patterns. My concern is that a sequence is often very confining.

But if you are ready to give up, here's a plan to revive you and get you back on course. I don't advocate this sequence except when all else fails because a sequence locks in people's thinking and encourages inflexibility. Keep this tendency in mind so you and your children don't get locked into the sequence and never make the transition out of it.

Step 1: Patterns with *no* variation. Set the rhythm with a bell, a pendulum, or a blinking flashlight and have one child begin clapping with you to this beat. Call the names of additional children to join you one at a time.

clap, clap, clap, clap, clap, clap, clap, clap, clap, (Joyce)  
clap, clap, clap, clap, clap, clap, clap, clap, clap, (Johnny)  
clap, clap, clap, clap, clap, clap, clap, clap, clap, clap,  
clap, clap, (Olga) clap, clap. . . .





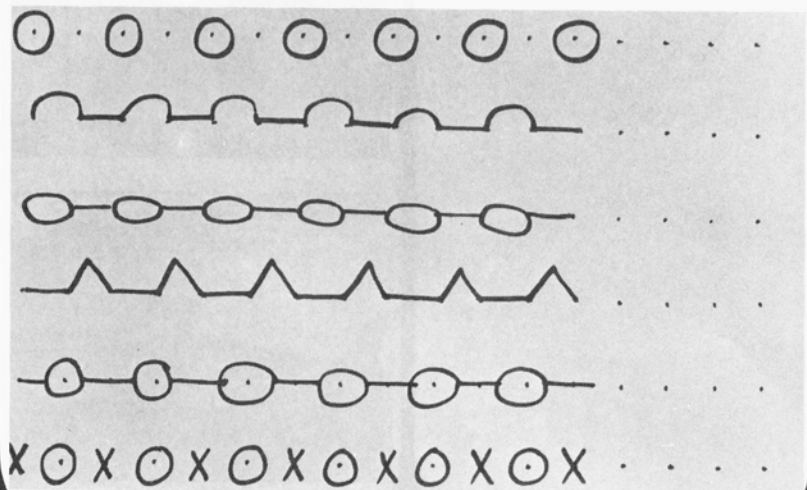
Now all together try stamping, marching, slapping hands with a partner, bumping hips, rocking shoulder to shoulder, or leaning side to side. Tell the children to hold their heads motionless but to look out of the corner of their eyes to see the class doing it together. Have them try to see and feel the shoulders of the next child move at exactly the same time as their own.

When the children are able to keep together, try the following activities, which have one change.

Step 2: Patterns with one change (ABABABAB): Stamp, clap, stamp, clap, stamp, clap, stamp, clap; hop, clap, hop, clap, hop, clap, hop, clap; snap, clap, snap, clap, snap, clap, snap, clap; slap legs, cross hands, slap legs, cross hands, slap, cross, slap, cross; stand, sit, stand, sit, stand, sit, stand, sit.

Ask the children to suggest other movements and do as many different combinations of two movements as are suggested.

Introduce alternating patterns on the dot chart and ask the children to verbalize the patterns. (This will take several days.)



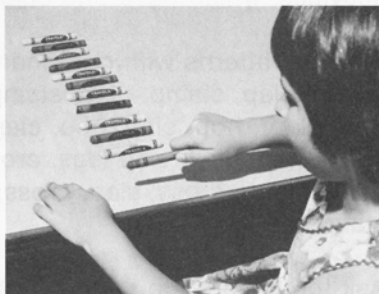
Make alternating patterns with the junk, pattern blocks, Unifix cubes, the chairs, and the children.



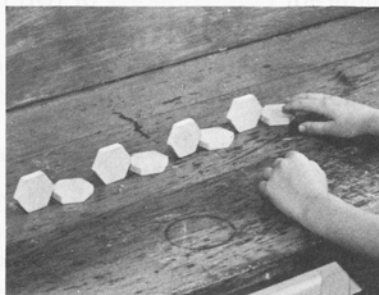
boy girl  
boy girl  
boy girl. . . .



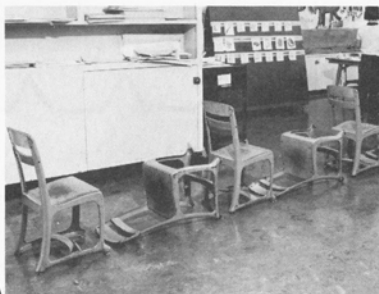
stand sit  
stand sit  
stand sit. . . .



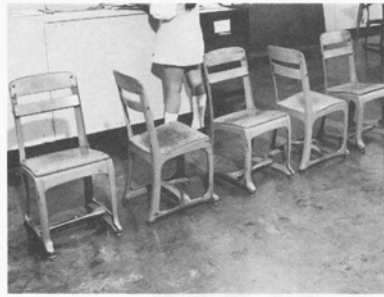
yellow red  
yellow red  
yellow. . . .



side to side up and down  
side to side up and down  
side to side. . . .



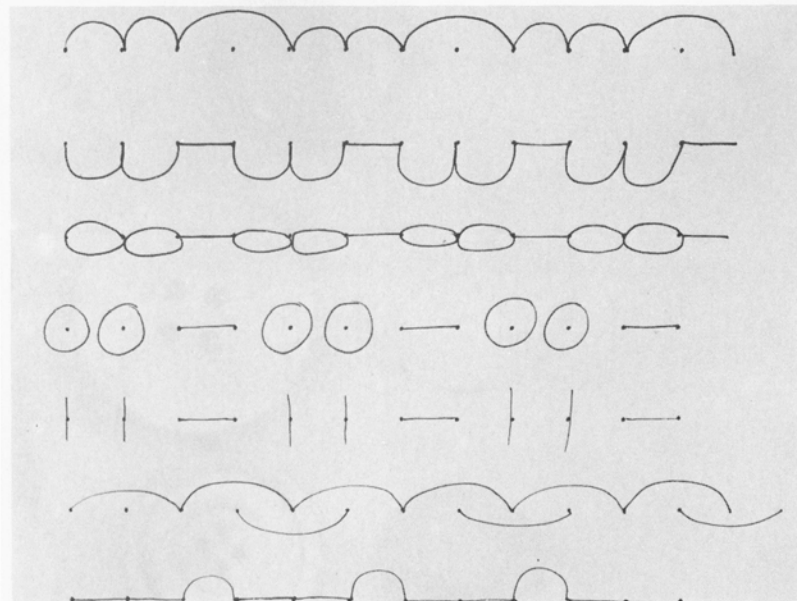
up down  
up down  
up. . . .



straight turned  
straight turned  
straight. . . .

Step 3: Ask the children for motions that fit a "twice, once," or "once, twice" pattern: walk, walk, hop; bend right, bend right, squat; hop, hop, clap; snap, clap, clap; (walking) step, step, turn, step, step, turn."

Introduce the following patterns on the dot chart over several days and have the children extend and verbalize the patterns:



During these same days have the children make AAB or ABB patterns with the Unifix cubes, the junk, pattern blocks, chairs, and each other.

When this is easy for the children, introduce any of the following patterns again, using rhythmic clapping, the dot chart, Unifix cubes, junk, pattern blocks, chairs, and children.

AABBAABB  
AAABAAAB  
ABBBABBB  
ABAABAABA  
AAABBBAAABBB  
ABCABC

ABCBABCB  
AABCCAABCC  
ABCCABCC  
ABCBCBABCBCB  
AABBCCAABCC  
ABCCCCABCCCC etc.