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ABSTRACT

Sets of illustrative instructional activities for teaching basic concepts to migrant children are contained in this handbook. Activities focus primarily on the Boehm Test of Basic Concepts. Other concepts are introduced where they would facilitate instruction. The activities in this handbook are arranged in sequence, progressing from the use of 3-dimensional objects to the use of 2-dimensional materials to more abstract applications. Supplementing the activities are a list of selected materials, a chart for relating specific concepts to those materials, and a short list of suggested readings. (Author/NQ)

MIGRANT EDUCATION PROGRAM:

A Handbook for the Teaching of Selected Concepts

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March 1972

This handbook was prepared using Migrant Education program funds received from the Pennsylvania Department of Education in Summer, 1971. When coupled to an "interim report" describing and evaluating 1971's program and administrative activities, it represents CSIU's "final report" on last summer's Migrant Program.

Table of Contents

I. Introduction

In August 1971, CSIU 16 administered the Boehm Test of Basic Concepts* (BTBC) to all children in its summer migrant education program. The BTBC is based on an analysis of the "directions given" to children in curriculum materials used for the early grades. The BTBC tests a child's knowledge of 50 concepts such as below, middle, and different, considered essential to the understanding of these materials. Although the BTBC is specifically designed for grades K, 1 and 2, it was felt that test results would not be invalid for older children.

The results of the CSIU testing program indicated severe deficits in concept knowledge at all age levels. Such results were not unexpected. Much of the literature on the disadvantaged focuses on language deprivation and it is known that substantial differences exist between the private language of the child's social environment in the home and the instructional language of the classroom. The BTBC results provided a focus on one aspect of language deprivation that CSIU 16 felt could serve as a rational basis for program planning within the constraints of the migrant education program.

On the assumption that a better knowledge of these basic concepts will have a beneficial impact on a child's ability to perform in a "regular" classroom, CSIU 16 will introduce an instructional program in the summer of 1972 to teach these concepts to migrant children. This handbook is one of the products of the planning for that instructional program. A description of the handbook's diagnostic and instructional applications follows.

II. The Handbook

This handbook contains sets of illustrative instructional activities for teaching basic concepts. Although the activities focus primarily on those concepts in the BTBC, other concepts have been introduced where they would serve to facilitate instruction. For example the concept "same" which is not in Boehm is introduced simultaneously with "different," which is in Boehm. Instructionally, the knowledge of either of these concepts is dependent upon a knowledge of the other.

In some instances the activities in the handbook can be used with little modification. It is much more likely that they will be used by the creative teacher as a basis for planning, adapting both content and technique to the needs of individual children. Supplementing the activities are a selected list of materials purchased specifically for use in CSIU 16's program, a chart for relating specific concepts to those materials, and a short list of suggested readings.

III. How to use the Handbook

A. Testing

The BTBC is to be administered to all children as they enter the

*The Psychological Corp., New York, New York

program. The test is to be used as a diagnostic tool, i.e. the sole purpose of test administration is to identify those concepts that each child does not understand. Although in general the directions accompanying the test are to be followed, the suggestions below may prove helpful in obtaining an accurate measure of the child's concept knowledge.

1. The test should be administered individually or at most in groups of two or three. If administered to a group, an aide should be present to assist when necessary.

2. It is important that the child understand what he is to do. Some of the younger children, for example, may not know how to make an X or may lose their places easily. There may also be confusion with "left and right," "up and down," etc. The test administrator or aide should assist the children to overcome these difficulties.

3. There may be some dialect difficulties, e.g. item 19 on the test, Rabbit = Bunny. Although no problems of this nature were apparent during the CSIU 16 testing, the test administrator should be alerted to the possibility. Confusion with up and down may be due to a dialect difference, down meaning directional right and up meaning directional left.

4. Don't hesitate to let the child re-orient himself between questions or to change his response if he really wants to. A test question can be repeated a third time if necessary.

5. It is permissible to offer general words of encouragement such as "you're doing fine." However, the testor cannot change the language of the instructions to help clarify a word or phrase.

B. Teaching the Concepts

1. The test results can be used

   - to identify the specific concepts an individual child does not know.

   - to identify concept deficits that several children have in common.

   The Boehm manual offers some very helpful advice on teaching the concepts and should be consulted by anyone using this handbook. (The manual does not come automatically with copies of the test. It must be specifically ordered.)

2. Instruction should be individualized; if the children are grouped, the groups should be limited to two or three. Trained student aides are an economical and valuable resource in achieving a low pupil/teacher ratio.

3. Instruction should follow the sequence below.

   a. Present the concept to be taught using toys or real objects. Change the activity frequently so the child can transfer the concept to several situations.

   b. Move from the use of real objects to two dimensional objects such as books, paper and pencil games, workbooks or card games (see appendix). The transition from three dimensional objects to two dimensional materials may be difficult for some children, especially the younger ones. Sometimes a parallel situation is necessary for the child to transfer to a two dimensional form of material. For example: when showing children spatial relationship cards illustrating the various placements of a cup and spoon, a real cup and spoon may be needed to illustrate along with the picture cards. Ultimately at this level two or three concepts could be incorporated into directions such as those found in typical workbocks, e.g. draw a line under the first object in the row.

   c. The activities in this handbook are arranged generally in the sequence indicated above, progressing from the use of three dimensional objects to the use of two dimensional materials to much more complex and abstract applications of concept knowledge.

   d. Two units, the sun and the senses, illustrate how it is possible to integrate several levels of concept knowledge suitable for a variety of age levels into one subject area.

   e. It is important that teachers "load their everyday language" with concepts, interacting constantly with the children according to each child's specific deficits.

   f. Above all make it possible for the child to be successful and make him constantly aware of these successes.

INSTRUCTIONAL ACTIVITIES

Activity #1

Suggested age level: 5-7

Suggested concepts: some, not many, as many, match, row, every, least, few, not first or last, most, pairs

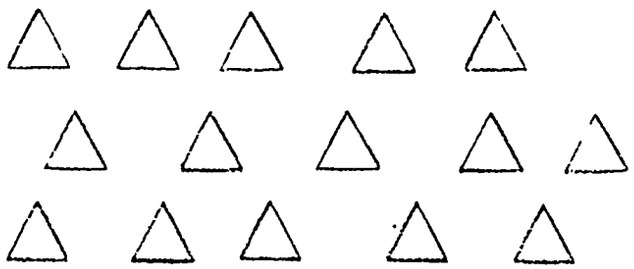
Materials: Cubical Counting Blocks, flannel board figures

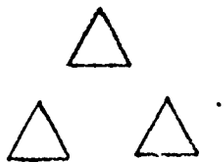
Purpose: To teach above quantitative concepts by playing games with colored cubes, other small objects, or furniture in the room.

Procedure:

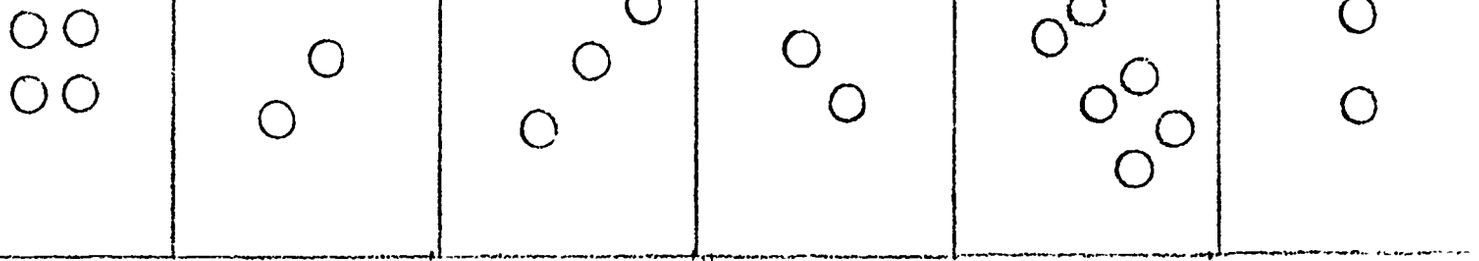
1. Teacher discuss and dramatize the above concepts using flannel board figures, toy cars, etc.
2. Prepare chart with children's names on left side of chart and concepts on top of chart. When child gives correct response place a star in proper column. The child with most stars accumulated wins the game.
3. Game: Have children count cubes and tell how many after each.
   a. Put some, not many cubes in a row in front of you.
   b. Put a few red cubes in a row in front of you.
   c. Put most of your cubes in a row in front of you.
   d. Put as many cubes, as I am holding, in a row in front of you.
   e. Put every cube you have in a row in front of you.
   f. Take the cubes away which are not first or last.
   g. Place your cubes in pairs - make the colors match.
   h. Teacher divides some cubes into sets. Have children pick out set with least number of cubes. Vary numbers in sets to continue activity.

1. Mark a red X in the box that has some, not many triangles.

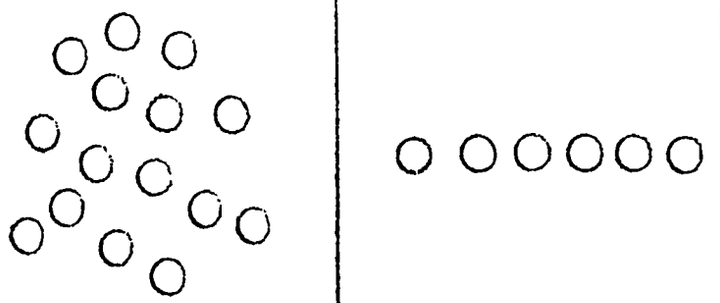




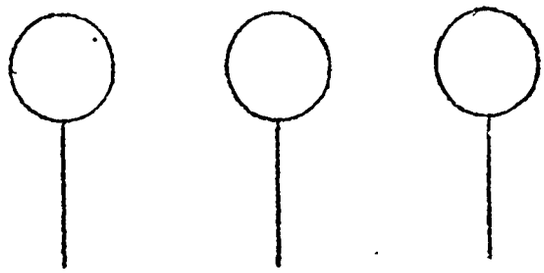
2. Mark a blue X on the boxes that have the same number of balls.



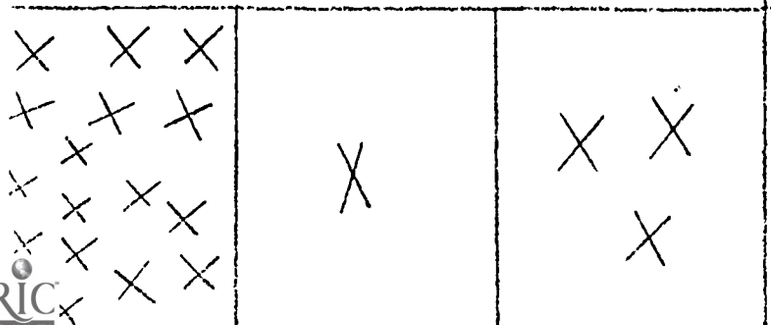
3. Mark a green X in the box where the circles are in a row.



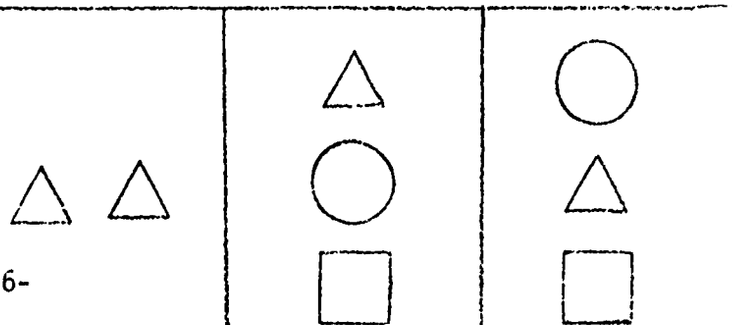
4. Mark with a yellow X the lollipop that is not first or last.



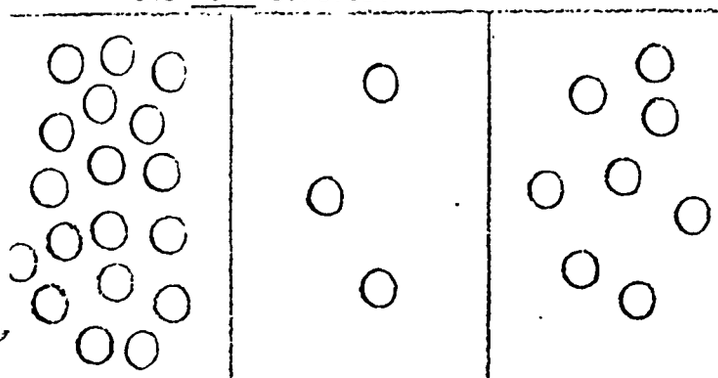
5. Draw a brown line in the box that has a few X's in it.



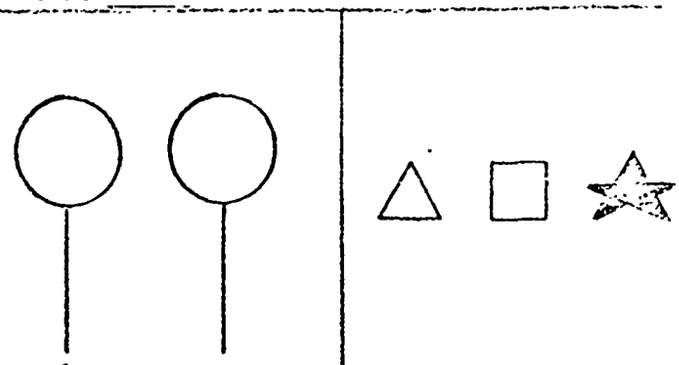
6. Mark with a black X the box that shows a pair.



7. Mark with a purple X the bo.. containing the most circles.



8. Mark with red circles the box with items that match.



Activity #2

Suggested age level: 5-7

Suggested concepts: top, next to, above, away from, over, under.

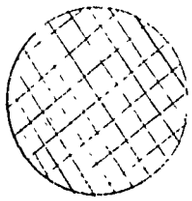
Materials: jump rope.

Purpose: To teach above concepts during a recreation break.

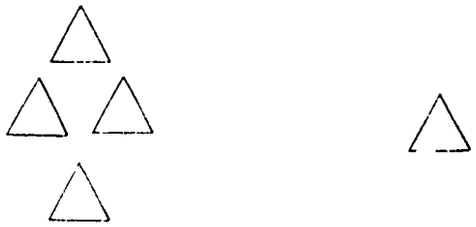
Procedure:

1. Children jump rope using various singing games.
2. Dramatize concept over by holding rope over each child's head. Have children recite: The rope is over my head. The rope is over "Terry's" head.
3. Have children jump over the rope and recite the name of the child who is jumping over the rope.
4. Have children stand on the rope and recite the names of children standing on top of the rope.
5. Have children stand next to the rope and recite the names of the children standing next to the rope.
6. Have children walk away from the rope, stating: "I am walking away from the rope."
7. Other games such as "highwater, low water" can be substituted for jumping rope.

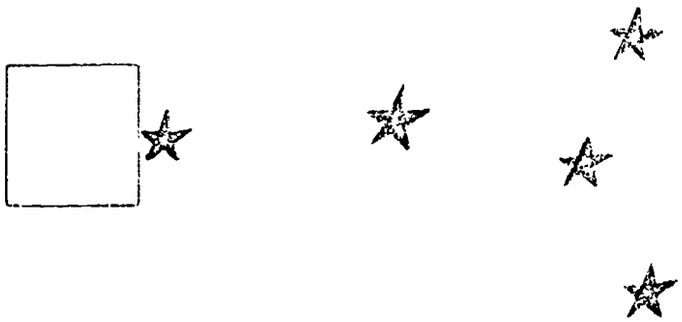
1. Draw a red line <u>above</u> the ball.



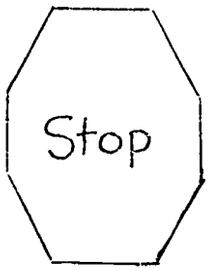
2. Draw a blue circle <u>around</u> the triangle that is <u>away from</u> the other triangles.



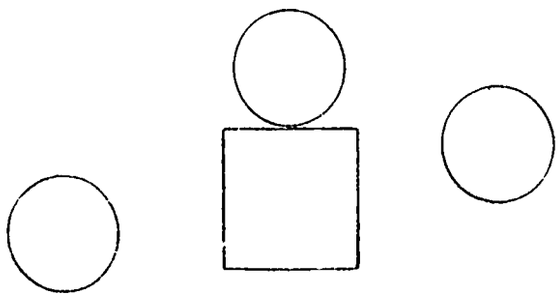
3. Mark with a purple X the star that is <u>next to</u> the box.



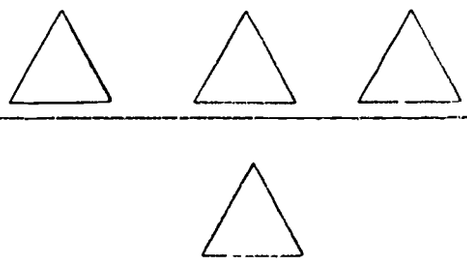
4. Draw a yellow circle <u>under</u> the stop sign.



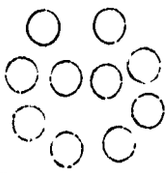
5. Color the ball on <u>top</u> of the box orange.



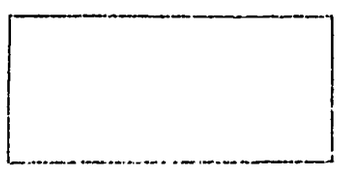
6. Color the triangle <u>under</u> the line black.

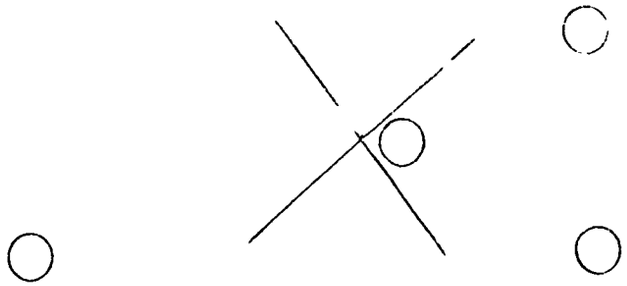
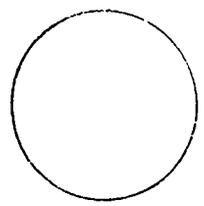


7. Draw one blue circle <u>away from</u> the other circles.



8. Draw a brown line <u>above</u> the rectangle.



9. Color the circle red that is <u>next to</u> the X.	10. Draw an orange line <u>above</u> the circle.
	

Activity #3

Suggested age level: 5-7

Suggested concepts: around, nearest, between, inside, different, right, left, side, whole, top, half, forward, backward.

Materials: song "Hokey Pokey".

Purpose: To develop awareness of self through large muscle, recreational activity incorporating language concepts.

Procedures:

1. Introduce game with language concepts:
   a. Form circle.
   b. Walk around.
   c. Who is standing nearest you?
   d. What children are you between?
   e. Put the parts of your body inside circle as the song tells you.
   f. See how many different movements the song tells us.
2. Sing song using left and right hand.
3. Variations on verses might include:
   a. right/left foot.
   b. right/left side.
   c. whole self in
   d. bend your top half forward/backward.

Activity 4

Cooking Breakfast

Suggested age level: 5-11

Suggested concepts: always, first, second, third, left, right, never, beside, between, whole, half, above, after, nearest, pairs, center, several, every, almost, separate, next to, as many as, over, some, not much, together.

Materials: disposable plates, cups, utensils, napkins, towels, 2 electric fry pans, pitcher, spatula, large spoon and fork, egg beater, bowl, salt and pepper.

Purpose: To teach specific language concepts by relating them to an everyday situation.

Menu

Scrambled eggs

Bacon

Tang

Milk

Bread - butter/jelly

Procedure:

1. Set the table.
   a. The fork is always placed on the left side.
   b. The knife is placed on the right side.
   c. The spoon is placed beside the knife.
   d. After the utensils are on the table the plate is placed between the fork and the knife.
   e. The cup is placed above the plate nearest the knife.
   f. The pairs of salt and pepper shakers, the butter plate and the jelly go in the center of the table.

2. Prepare the food.

   a. First the Tang.

      1. Several ice cubes.

      2. Measure Tang and water according to directions stressing words such as half/whole.

      3. Pour every cup almost full.

   b. Second the bacon.

      1. Never use the highest temperature.

      2. Separate the strips of bacon.

      3. Place as many strips next to each other as the pan will hold.

      4. Turn pieces over several times until every piece is done.

   c. Third the eggs

      1. Crack as many eggs as there are children.

      2. Measure milk using half/whole cup.

      3. Beat eggs and milk together.

      4. Add some/not much salt and pepper.

      5. Pour into frying pan - always keep stirring.

A shopping trip for foods could precede this activity. It could also serve as a culminating or motivational activity for a food unit.

3. After breakfast, review the sequence of tasks.

Activity #5

Suggested age level: 5-11

Suggested concepts: top, bottom, above, small, little, big, far away.

Materials: paper, cameras, crayons, pencils, clay.

Purpose: To teach the above concepts through a mountain* climbing field trip experience.

Procedure:

1. These activities relate to climbing a mountain overlooking a town. It can be coordinated with a science or nature experience, an art experience, etc.
2. Preparation for trip in the classroom.
   a. A discussion leading to questions which will give direction to the child's observation.
   b. A pertinent story to provide background material.
   c. Related visual aids - pictures, posters, etc.
   d. A map discussion of the area to be covered on the trip.
3. While on the trip develop concepts by asking questions.
   a. We are at the bottom? of the mountain.
   b. We are at the top? of the mountain.
   c. How does the town appear? Far away from us, small, little.
   d. How do the buildings appear? Little, small.
   e. We are above? the town.
4. Plan to take photographs or draw pictures while on the mountain.
5. Be sure to point out all areas of interest, radio towers, historical landmarks, etc.
6. Follow up of trip.
   a. Discussion of sensory experiences such as sounds, sights, smells that children recall.

* (In Central Pennsylvania our hills are called "mountains".)

b. Write reports on the origin of mountains, etc.

c. Write experience stories or poems about field trip.

d. Art experience: form mountain using clay, draw pictures, etc.

e. Reports, pictures, photographs, experience stories and poems may be placed in child's notebook.

Field Trip Experiences:

1. Language instructions should be a part of any field trip.
2. In the area where the authors teach a mountain climbing experience is appropriate; the same language experience could be developed visiting a skyscraper, tall building, etc.

Activity #6

Suggested age level: 8-11

Suggested concepts: center, side, top, through, right, bottom, middle, left.

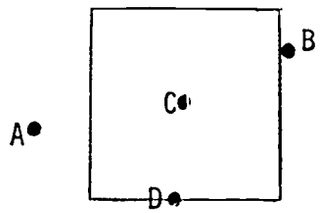
Materials: paper, crayons (pencil), rulers.

Purpose: To teach the above concepts using a mathematical approach.

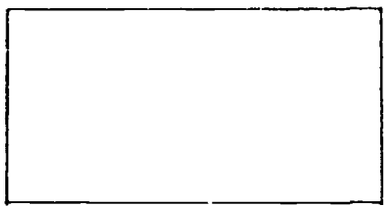
Procedure:

1. Give child piece of paper with middle or center marked.
2. Discuss verbally the spatial relationship of top, bottom, and middle by turning paper with the middle marked.
3. After discussion of these terms, drawing upon their previously acquired knowledge, have them label the paper (middle, top, bottom, right side, left side).
4. Give the following instructions:
   a. Draw a red line through middle of paper - begin at the top and end at the bottom.
   b. Draw a blue line from the center of your paper - begin at the left side of your paper and end at the right side.
5. Discuss where lines intersect and allow children to discuss until they realize that this is the middle or center of the paper.
6. This activity should lead to discussions and activities involving the concepts of whole and half.

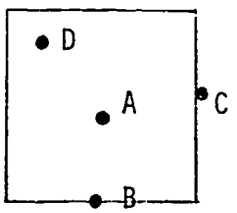
1. Which dot is in the middle of the square? _____



2. Trace the right side of the rectangle with your blue crayon.



3. Which dot is on the bottom of the square? _____



4. Circle the star that is in the center.

5. Which triangle is on the left? Mark the left triangle with an X.

6. Which triangle is in the middle? Mark the middle triangle with an X.

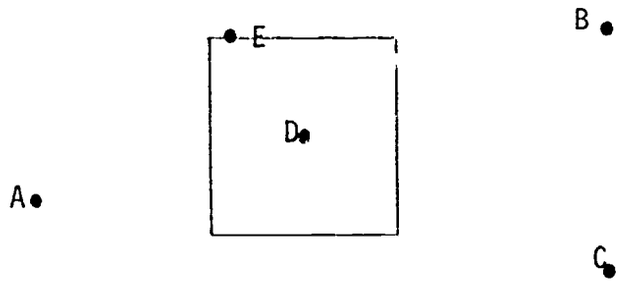
7. Which line is at the top? Mark the top line with an X.

_____
_____
_____
_____
_____

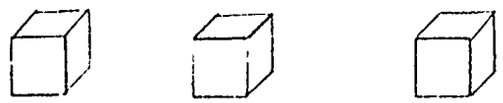
8. Which line is at the bottom? Mark the bottom line with an X.

_____
_____
_____

9. Which dot is in the center of the square? Mark the dot in the center with an X.



10. Which box is on the right? Mark the right box with an X.



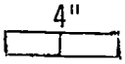
Suggested age level: children who do not know numerals.

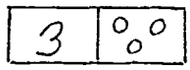
Suggested concepts: same, matches, alike, (not the same), half group.

Materials: tagboard, gummed stickers (things to wear, animals, things to eat), felt pens.

Purpose: To teach numeral recognition and relationship to number using language concepts above.

Procedure:

1. Cut sets of tagboard (10 each) 4" x 2"; mark each card in half 2"  to make flashcards.

2. Have children categorize sets of stickers into groups of same things. Example: things to wear, animals, thing to eat.
3. After teaching a numeral by various games, seatwork and chalkboard activities, have children make the same numerals on flash cards.
4. Children put the same number of stickers on their flashcards as the numeral indicates using only one category at a time. 

5. Repeat this entire procedure; this time cut each card in half. Children will have two sets of cards - one to check their own work, and the cut sets for playing games.
6. Teacher holds up large numeral cards - children hold up flashcards with same number of objects or teacher holds up card with a given number of objects and children hold up numeral that matches.

Activity #8

Suggested age level: 8-11

Suggested concepts: Concept Category - quantity, most, half, least, almost, more, less, first, second.

Materials: play money, trinkets for buying and selling.

Purpose: To teach the above concepts in a mathematics context.

Procedure:

1. Buy some small trinkets or useful objects at the dime store to use in game.
2. Mark the prices clearly on each item.
3. Teacher acts as storekeeper. Assign each child a specified amount of play money to spend.
4. Let child select that exact amount from box containing play money.
5. Discuss which objects cost the most and which cost the least amount of money.
6. Have children purchase the objects from storekeeper.
7. Children must select the correct amount of money to purchase the objects. Child who has purchased most items with his assigned amount wins the game.
8. Discuss how much designated items would cost if you purchased first item at full price and the second item at half price.
9. Allow children to purchase these items with correct amount of money from storekeeper. (Variation - Also, purchase single items at half price.) Child who has purchased most items wins this game.
10. Designate items which cost almost as much as other items.

11. Have children purchase these items with correct amount of money from storekeeper. Child who has purchased most items wins this game.
12. Let children take turns as storekeeper.
13. Take children on a real shopping trip to buy school supplies, snacks, food for a cookout, a breakfast, etc. Discuss what must be bought, the amount of money on hand and the price of individual items. Decide how money is to be spent effectively.

1. Addition

a.	b.	c.	d.	e.
3¢	5¢	4¢	6¢	4¢
2¢	2¢	2¢	2¢	1¢
4¢	2¢	4¢	3¢	5¢

Which sum has the most pennies? _____

2. Subtraction

a.	b.	c.	d.	e.
10¢	15¢	10¢	10¢	12¢
- 3¢	- 5¢	- 6¢	- 7¢	- 7¢

Which answer has the least pennies? _____

3. a. 5 cents = _____ nickel

b. 2 nickels = _____ dime

c. 5 nickels = _____ quarter

d. 2 quarters = _____ half-dollar

e. _____ dimes and _____ nickel = 1 quarter

f. 50 cents = _____ half-dollar

g. _____ dimes = 1 half-dollar

h. _____ nickels = 1 half-dollar

i. _____ half-dollars = 1 dollar

j. 10 dimes = _____ dollar

k. 100 cents = _____dollar

4. If Tom has 50¢ and spends 25¢ for a toy car how much money will he have left? _____
Did he sperd one-half of his money? _____

5. If Julie spends 13¢ for candy and Jack spends 11¢ for candy, how much money have they both spent? _____. Who spent the most money? _____

6. Billy had 10¢ and his father gave him a quarter; how much money does he have now? _____

   Does he have more or less then he had? _____

7. Mark and Patricia went to the store for mother to buy bread and milk. The milk cost 36¢ and the bread cost 27¢; how much money did they spend? _____

   Which item cost the least? _____

8. Christie had 25¢ and spent 15¢ for an ice cream cone; how much money did she have left? _____

   Did she spend one-half of her money? _____

9. Sallie had 49¢. While walking to school she lost one dime. How much money did she have when she got to school? _____

   Did she have more or less money when she got to school? _____

10. Carol got one dollar for her birthday. She bought a jump rope that cost 57¢. How much money did she have left? _____

    Did she have more or less than when she started? _____

Activity #9

Suggested age level: 5-11

Suggested concepts: in order, beginning, after, first, second, third, every, other, medium-sized, different, away from, inside, big, little

Materials: story of "Three Bears," set of flannel board pictures to correspond, flannel board*

Purpose: To develop ability to describe events in proper time sequence utilizing language concepts.

Procedure:

1. Read the story.
2. Ask children to arrange pictures in order to illustrate the story just read.
3. Examples of concepts teacher might use:
   a. "What happened at the beginning, first, second, third or after?"
   b. "How did Goldilocks get inside the house?"
   c. "Did Goldilocks try every bowl of porridge, chair, bed?"
   d. "What other things happened?"
   e. "Which bear was medium-sized?"
   f. "How many different size beds were there?"
   g. "When did Goldilocks run away from the bears' house?"
4. Have children retell the story in proper sequence, stressing time relationships.

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* Goldilocks and the Three Bears, Book and Record by Peter Pan Records, 145 Komorn Street, Newark, N. J.
To use with children 8-11 use story such as abridged "Black Beauty," Book and Record based on book by Anna Sewell printed in U.S.A. by Western Lithographing Co.

Activity #10

Unit: The Sun

Suggested age level: 5-11

Suggested concepts: always, away from, farthest, next, near, far away, side, other, same, different, beginning, middle, after, last, above, over, behind, in-front-of, half, around, every, first, second, third.

Materials: globe, flashlight, ball to represent the sun, and poems

Purpose: To teach the above concepts in a science context.

Procedure:

1. Give children introduction to the home planet, the moon, and the sun.
2. Ask these questions:*
   a. What happens to the sun at night?
   b. What happens to the sun when it sets?
   c. Why is it dark at night?
   d. Why does the sun come up in one direction and go down in another?
   e. Why does night follow day?
3. Illustrate earth's rotation and relationship to the sun with globe and flashlight.
4. Ask children questions about the sun.
   a. What do you do when the sun shines?
   b. What do you think the sun is made of?
   c. Is the sun near to the earth or far away from the earth?
   d. Of what use is the sun to us?

* A teacher should always reflect a child's response by using the appropriate concept, e.g., Child: "The sun shines all the time"; Teacher: "Yes, the sun always shines".

e. What happens to the sun when it rains? (Does the sun go out, or is it behind a cloud?)

5. Ask children questions about nighttime. Examples:

a. Where is the sun when it is dark?

b. Do things appear to be the same in the dark?

c. Is the temperature the same or different when it gets dark?

6. Have children discuss, list and dramatize activities of the day:

a. A.M. - What do you do at the beginning of the day?

1. Get up in the morning.

2. Wash face and hands.

3. Brush teeth.

4. Eat your breakfast.

5. Go to school.

b. What do you do in the middle of the day?

1. Eat lunch.

2. Play.

c. What do you do after school? What other things?

1. Go home.

2. Play.

3. Eat supper.

4. Do homework, play games, and watch television.

d. What are the last things you do at the end of the day?

1. Brush teeth.

2. Take a shower.

3. Go to bed.

7. Have children play games and try to guess the time of day by the location and length of their shadows. Examples of questions (reflect each response using the concept):
   a. Is the sun above (or over) your head?
   b. Can you see your shadow? (Discuss shadows) Is it behind or in front of you?
   c. Is the sun behind you?
   d. Is the sun in front of you?
8. Intersperse question activities with poems or songs about the sun, the earth, shadows, etc.
9. Teacher may be more specific with the 8-11 year old group. Example: terminology.
   a. rotation.
   b. revolution.
10. Have children draw pictures for notebook. Example:
   a. a sunny day.
   b. a sunset.
   c. the earth.
   d. the earth in relationship to the sun and moon.

Activity #11

Unit on Senses

Suggested age level: 5-11

Suggested concepts: same, different, near, top, left, right, center, bottom, first, next, below, around, in order, corner, away from, farthest, never, always, least, most, pairs

Materials: sight - magnifying glass, mirror, prism, various colors of paints, crayons, collections of pictures related to senses, magazines for children to cut pictures from; touch - sandpaper, flannel, vinyl, leather, sponge, styrofoam, stones, feather; taste - dry cereal, lemon juice, alum, salted pretzels; smell - stick cinnamon, garlic buds, toothpaste, perfume, tuna fish; hearing - tuning forks, pop bottles with various levels of water, pitcher of liquid for pouring sound, stretched rubber bands, magazines. Construction paper for each.

Purpose: To teach children the five senses, the importance of each, and to relate the senses to the appropriate part of the body. Throughout this unit the above concepts should be stressed.

Procedure:

1. Present an overview of senses:
   a. Name five senses for vocabulary.
   b. How do our senses help us?
   c. Which part of our body do we use for each of the senses?
   d. Which one of our senses is most important to you/least important? (Ask this question again at end of unit to see if answers change.)
   e. For motivation have children make a collage cutting different sensory organs from magazine pictures.

2. Children make hand puppets adding the organs each time a new sense is studied, e.g. put eyes on puppet when sight is introduced. Puppets can be made from heavy wrapping paper and machine stitched around the edge. Children can cut pairs of eyes, ears, hands, a nose and a mouth.
3. Collect various materials from the Association for the Blind,* such as Braille Cards for each child, eye safety information. Copies of the manual alphabet can be obtained from the Bloomsburg State College Speech and Hearing Clinic,** or the National Association of the Deaf.***
4. Develop a booklet with children on the study of the senses to incorporate some experience stories, tactile materials, classifications of objects, and art work.

The first sense we will study is sight:

1. Present a scenic picture representative of the area where the children are being taught e.g. a picture with mountains might be appropriate in specific areas.

   Examples of questions:

   a. How many different things do you see in this picture?

   b. How many things in the picture are the same object, same color, same shape?

2. Put a pair of eyes on the puppet.

   a. Where are the eyes placed?

      Reflect the response: Yes, near the top of the puppet's head.

   b. Place one eye on the left side and one eye on the right side.

* Pennsylvania Association for the Blind, 2843 North Front Street, Harrisburg, Pennsylvania 17116

** Speech and Hearing Clinic, Bloomsburg State College, Bloomsburg, Pennsylvania

*** National Association of the Deaf, 905 Bonifant Street, Silver Springs, Maryland 20910

3. Discuss eye colors: Examples:

   a. Do we all have same color of eyes?

   b. Do blue eyes see the same colors as brown eyes?

   c. Do we all see the same thing in the picture?

   d. Discuss sameness or difference in colors of hair, eyes or skin.

4. Eye safety:

   a. Show filmstrip "The Better to See You".*

   b. How can we protect our eyes?

   c. Why is it important to see?

   d. Write rules for eye safety in booklets, "What should we never do, always do?"

   e. Play Blindman's Buff.

   f. Experiment: place three objects (balls, blocks, pencils) all the same size and shape - only different colors. Ask children to pick up and describe each object. Then blindfold children and repeat this procedure. Without being able to see a child cannot tell the difference in the objects.

   g. Discuss eye anatomy very briefly for 5-7 year olds - e.g. pupil, iris, cornea, tears, corner of the eye. Use "Sense of Sight Kit".** For 8-11 year old children more emphasis could be placed on the anatomy, e.g. have children make a simple diagram in their booklets.

5. Classifying Objects

   a. Children collect various objects from walks - stones, leaves, bottle caps, etc. Then children can put all the things that are the same shape, same color, same size, same function together.

* Filmstrip: "The Better to See You" EBE. Encyclopedia Britannica Educational Corporation.

** The 5 Senses Kits, Educational Products, Oak Lawn, Illinois 60453

b. Play a game trying to see something different each day in the classroom.

c. Classify some objects that could be pasted into booklet - such as shapes or colors cut from paper.

The other senses can be developed in a similar way. Examples of dialogue utilizing language concepts in teaching the senses of hearing, smell, touch, taste:

1. The puppet's nose is placed in the center of its face.
2. The puppet's mouth is below the nose.
3. Name a few things which taste sweet.
4. Which sound came from farthest away from our room?
5. Describe in order from top to bottom the three objects on your desk by feeling with your fingers.

Throughout this unit use*:

"Sense of Hearing Kit"

"Sense of Touch Kit"

"Sense of Smell Kit"

"Sense of Taste Kit"

Children ages 8-11 can assemble kits; they could also use some resource materials and write oral reports. Some additional materials could be incorporated such as the biography of Helen Keller.** For the older children a prism and mirror could be used experimentally to introduce "refraction" and "reflection."

* The Five Senses Kits, Educational Products, Oak Lawn, Illinois 60453

** Helen Keller by J.W. and Anne Tibble. G.P. Putnam's Sons: 1958 New York.

APPENDIX

The charts on the following pages key one specific concept of the Boehm Test of Basic Concepts to specific teaching materials, toys and games. It is hoped that these charts will be helpful in ordering materials if the concept teaching described in this handbook is adapted. Some items listed can be used to teach virtually any concept, such as hand puppets and toy cars. Others, the Matrix Game for example, can be used for far more complex language activities.

Concept	Name of Material and Suggested Age Range					
	Colored Cubes (5-11)	Educational Toy Money (5-11)	Plain Inch Cubes & Design Cards (8-11)	Dolch Word Cards (5-11)	5 Senses Kits (5-11)	Association Picture Cards (5-11)
Top					X	
Through				X		
Away from					X	
Next to					X	X
Inside						
Some, not many	X		X			X
Middle						X
Few	X		X			X
Farthest					X	
Around					X	
Over						
Widest						
Most	X	X	X		X	X
Between						X
Whole		X		X		X
Nearest	X					
Second	X					X
Corner	X				X	
Several	X					X
Behind						
Row	X		X			X
Different				X	X	X
After						
Almost	X	X				
Half	X	X				
Center					X	
As many	X	X	X			X
Side						
Beginning	X					X
Other						X
Alike	X	X		X		X
Not first or last	X		X		X	X
Never					X	
Below					X	
Matches	X	X	X	X		X
Always					X	
Medium-sized						
Right				X	X	X
Forward						
Zero						
Above						
Every	X		X			X
Separated	X					
Left					X	X
Pair	X		X	X		
Skip						
Equal	X					
In order		X			X	
Third	X					
Least	X	X	X		X	X

Concept	Counting Picture Cards (5-7)	Same/ Different Size Cards (5-7)	Same/ Different Color Cards (5-7)	Mix 'n Match Blocks (5-7)	Add-a-Picture Boards (5-7)	Hand Puppets (5-11)	Children of America (5-11)
	Name of Material and Suggested Age Range						
Top				X	X	X	
Through					X	X	
Away from						X	
Next to				X	X	X	
Inside						X	
Some, not many						X	
Middle						X	
Few	X					X	
Farthest					X	X	
Around						X	
Over				X	X	X	
Widest						X	
Most	X					X	
Between					X	X	
Whole	X			X	X	X	
Nearest						X	
Second					X	X	
Corner				X	X	X	
Several	X					X	
Behind						X	
Row					X	X	
Different	X	X	X	X	X	X	X
After					X	X	
Almost				X	X	X	
Half	X			X	X	X	
Center						X	
As many	X				X	X	
Side				X	X	X	
Beginning				X	X	X	
Other				X	X	X	
Alike	X	X	X	X	X	X	X
Not first or last					X	X	
Never				X	X	X	
Below				X	X	X	
Matches	X	X	X	X	X	X	X
Always				X		X	
Medium-sized						X	
Right		X	X	X	X	X	
Forward						X	
Zero				X	X	X	
Above				X	X	X	
Every	X			X	X	X	
Separated				X	X	X	
Left		X	X	X	X	X	
Pair		X	X	X		X	
Skip					X	X	
Equal		X	X	X	X	X	
In order	X			X	X	X	
Third						X	
Least	X					X	

Concept	Name of Material and Suggested Age Range: Parquetry Blocks & Design Cards (5-11)	Sequential Picture Cards (5-11)	Color Association Cards (5-7)	Motor Expressive Cards (5-7)	Spatial Relation Cards (5-11)	Doll Dishes (5-7)
Top	X			X	X	X
Through				X		
Away from	X			X	X	X
Next to	X	X		X	X	X
Inside	X			X	X	X
Some, not many	X					
Middle	X	X				X
Few	X					
Farthest	X					
Around	X			X		
Over	X			X		
Widest	X					
Most	X					
Between	X	X		X		X
Whole	X					
Nearest	X					X
Second	X	X				X
Corner	X			X		X
Several	X					
Behind	X			X	X	X
Row	X	X		X		X
Different	X		X			X
After	X	X		X		X
Almost	X					X
Half	X					X
Center	X	X		X		
As many	X					X
Side	X			X	X	X
Beginning	X	X		X		
Other	X			X		
Alike	X		X	X		X
Not first or last	X	X				
Never	X					
Below	X				X	X
Matches	X		X	X		X
Always	X					X
Medium-sized						
Right	X	X		X	X	X
Forward				X		
Zero						
Above	X			X		
Every	X	X				X
Separated	X					
Left	X	X		X	X	X
Pair	X					
Skip	X					
Equal	X					
In order	X	X		X		X
Third	X	X				X
Least	X					

Concept	Pegs & Pegboards (5-7)	Matchbox Cars (5-7)	Play Family & Furniture (5-7)	People & Animal Puzzles (5-7)	Animal Stencils (5-7)	Know 'N' Show Alphabet (5-11)	The Black Family (5-11)
	Name of Material and Suggested Age Range						
Top	X		X	X	X	X	
Through					X		
Away from		X	X				
Next to	X	X	X	X	X	X	
Inside		X	X		X		
Some, not many	X	X	X				
Middle	X	X	X	X			
Few	X	X	X				
Farthest		X	X				
Around		X	X		X		
Over	X	X		X			
Widest	X						
Most	X		X				
Between	X	X	X	X			
Whole	X	X		X			
Nearest	X	X	X		X		
Second	X	X	X	X			
Corner	X	X	X	X	X		
Several	X	X	X				X
Behind		X	X				X
Row	X	X	X				
Different	X	X	X	X	X		X
After	X	X		X			
Almost		X	X	X	X		
Half	X						
Center	X	X		X			
As many	X	X	X		X		
Side	X	X	X	X			
Beginning	X	X	X	X	X		
Other	X	X		X	X		
Alike	X	X	X	X	X	X	
Nor first or last	X	X	X		X		
Never	X	X		X	X		
Below	X	X	X	X	X		
Matches	X	X	X	X	X	X	
Always				X	X		
Medium-sized	X						X
Right	X	X	X	X	X		X
Forward		X					
Zero	X						
Above	X	X	X	X	X		
Every	X	X	X	X	X		
Separated	X		X	X			
Left	X	X	X	X	X		X
Pair	X	X	X	X	X		
Skip	X	X	X		X		
Equal	X	X	X	X			
In order	X	X	X			X	
Third	X	X	X	X	X		
Least	X		X				

Concept	Name of Material and Suggested Age Range Large Desk Outline Map of U.S. (8-11)	Place Value Chart (5-11)	Primary Cut-Outs (5-7)	Let's Learn Sequence (5-7)	Classification Games (5-11)	Numerals and Fractions (5-11)
Top	X		X	X	X	
Through						
Away from			X			
Next to		X	X		X	
Inside					X	
Some, not many			X			
Middle		X	X			
Few			X			X
Farthest			X			
Around						
Over	X		X		X	
Widest	X		X			X
Most			X			X
Between			X			
Whole	X	X				X
Nearest			X			
Second		X	X	X		X
Corner					X	
Several			X			
Behind			X			
Row		X	X	X		
Different			X			
After		X	X	X		X
Almost						
Half			X			X
Center						
As many						
Side		X	X		X	
Beginning				X		
Other						
Alike		X	X			
Not first or last			X	X		X
Never						
Below			X			
Matches			X			
Always						
Medium-sized						X
Right		X	X	X		
Forward				X		
Zero		X	X			X
Above	X				X	
Every						
Separated						
Left		X	X	X		
Pair			X			X
Skip		X				X
Equal			X			X
In order				X		X
Third		X		X		X
Least		X				X

Concept	Name of Material and Suggested Age Range: Flannel Board Fractional Parts (5-11)	Standard Number Assortment (5-11)	Pictures for Peg Board Classification (5-7)	Individualized Mathematics Kit AA (5-11)	Kindergarten Fun (5-7)
Top					
Through					
Away from					X
Next to			X		
Inside			X		X
Some, not many					
Middle					X
Few	X	X			
Farthest					X
Around					
Over					
Widest	X	X	X		X
Most	X	X			
Between			X		
Whole	X	X			
Nearest					X
Second	X	X		X	
Corner					X
Several					
Behind					
Row				X	
Different					
After	X	X		X	
Almost				X	X
Half	X	X		X	
Center					
As many				X	
Side			X		
Beginning					
Other					
Alike			X		X
Not first or last	X	X			
Never					
Below					X
Matches					
Always					
Medium-sized	X	X			
Right			X		X
Forward					
Zero	X	X		X	
Above					X
Every				X	
Separated					
Left			X		X
Pair	X	X	X	X	
Skip	X	X			
Equal	X	X		X	
In order	X	X			X
Third	X	X		X	
Least	X	X		X	

Concept	Name of Material and Suggested Age Range					
	Numbers for You and Me (5-7)	Dominoes Set (5-11)	Flannel Board Measurement (5-11)	Color Bingo (5-11)	Alphabet Bingo (5-11)	Number Bingo (5-7)
Top						
Through						
Away from						
Next to	X	X				
Inside	X					
Some, not many		X				
Middle	X	X			X	
Few	X	X				
Farthest		X				
Around	X					
Over						
Widest	X					
Most	X	X		X		
Between	X					
Whole		X	X			
Nearest						
Second						X
Corner		X		X	X	
Several		X				
Behind						
Row	X	X			X	
Different		X				
After		X	X			
Almost						
Half		X	X			
Center				X	X	
As many		X				
Side						
Beginning	X					
Other		X				
Alike		X				
Not first or last						
Never						
Below						
Matches	X	X			X	
Always						
Medium-sized						
Right	X					
Forward						
Zero		X	X			X
Above						
Every			X			
Separated						
Left	X					
Pair		X	X			
Skip						
Equal		X	X			
In order		X		X		
Third						X
Least	X		X	X		

SUGGESTED MATERIALS*

Colored Cubes - Ideal School Supply Company, Oak Lawn, Illinois 60453

Educational Toy Money - Milton Bradley Company, Springfield, Massachusetts 01100

Plain Inch Cubes and Design Cards - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Dolch Word Cards - The Garrard Press, Champaign, Illinois 61820

The 5 Senses Kits - Educational Products, Oak Lawn, Illinois 60453

Association Picture Cards I, II, III - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Counting Picture Cards - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Same/Different Size Cards - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Same/Different Color Cards - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Mix 'n Match Blocks - Bank Street College of Education Publications, 69 Bank Street, New York, New York 10014

Add-a-Picture Boards - Bank Street College of Education Publications, 69 Bank Street, New York, New York 10014

Hand Puppets - any type of hand puppet

Children of America - The Instructo Corporation, Paoli, Pennsylvania 19301

Parquetry Blocks and Design Cards - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Sequential Picture Cards I, II, III - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Color Association Cards - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Motor Expressive Cards I, II - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Spatial Relation Cards - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Doll Dishes - any type of children's dishes

Pegs and Pegboards - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

SUGGESTED MATERIALS (CONTINUED)

Matchbox Cars - Lesney Products Company, Ltd., London, England

Play Family and Furniture - any type doll family and furniture

People and Animal Puzzles - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Animal Stencils - Developmental Learning Materials, 3505 North Ashland Avenue, Chicago, Illinois 60657

Know 'N' Show Alphabet - The Instructo Corporation, Paoli, Pennsylvania 19301

The Black Family - The Instructo Corporation, Paoli, Pennsylvania 19301

Large Desk Outline Map of U.S. - A. J. Nyrstrom and Company, 3333 Elston Avenue, Chicago, Illinois 60618

Place Value Chart - Ideal School Supply Company, Oak Lawn, Illinois 60453

Primary Cut-Outs - The Instructo Corporation, Paoli, Pennsylvania 19301

Let's Learn Sequence - The Instructo Corporation, Paoli, Pennsylvania 19301

Classification Games - The Instructo Corporation, Paoli, Pennsylvania 19301

Numerals and Fractions - The Instructo Corporation, Paoli, Pennsylvania 19301

Flannel Board Fractional Parts - Milton Bradley Company, Springfield, Massachusetts 01100

Standard Number Assortment (Addo Arithmetic Game) - Kenworthy Educational Service, Inc., Buffalo, New York 14200

Pictures for Peg Board Classification - Ideal School Supply Company, Oak Lawn, Illinois 60453

Individualized Mathematics Kit AA - Random House/Singer, Westminister, Maryland 21157

Kindergarten Fun - Prentice Hall, Inc., Englewood Cliffs, New Jersey 07632

Numbers for You and Me - Prentice Hall, Inc., Englewood Cliffs, New Jersey 07632

Dominoes - The Instructo Corporation, Paoli, Pennsylvania 19301

Flannel Board Measurement - The Instructo Corporation, Paoli, Pennsylvania 19301

Color Bingo - Trend Enterprises, White Bear Lake, Minnesota 55110

Alphabet Bingo - Trend Enterprises, White Bear Lake, Minnesota 55110

Number Bingo - Trend Enterprises, White Bear Lake, Minnesota 55110

*Most materials can be ordered through Kurtz Brothers' catalog.

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Blank, Marion & Solomon, Frances "A Tutorial Language Program to Develop Abstract Thinking in Socially Disadvantaged Preschool Children". Child Development, Vol. 39, No. 2, June, 1968. Society for Research in Child Development, Inc.

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