

2. NESTING BARRELS

VISUAL SENSE: DISCRIMINATION OF SIZE, GRADING

Material:

- Seven barrels differing in size from large to small. The barrels nest within each other.

Presentation 1:

When the directress initiates the selection of the material:

1. Invite the toddler to work with the nesting barrels. Say, "I will show you the nesting barrels."
2. Show the toddler where the nesting barrels are located on the shelf. When the toddler makes the selection of the material, begin with the third step after naming the material for the toddler.
3. Indicate the procedure for carrying the material: grasp the nesting barrels with two hands.
4. Place the barrels on a rug or table at the left of the work space.
5. Say, "I will open each barrel and find the smaller barrel."
6. Place the subdominant hand on the lower portion of the barrel that is on the table top.
7. Place the dominant hand on the top of the barrel.
8. Twist the top of the barrel until the top of the barrel is loose.
9. Remove the top of the barrel by lifting upward.
10. Place the top to the right.
11. Grasp the barrel that is inside the bottom with the dominant hand.
12. Place the top below the large bottom.
13. Continue as in step #6 to place the subdominant hand on the lower portion of the barrel that is on the table top. Place the dominant hand on the top of the barrel.

14. Twist the top of the barrel until the top of the barrel is loose.
15. Remove the top of the barrel by lifting upward. Place the top to the right.
16. Continue until all the barrels are open.
17. Reverse the procedure. Place the subdominant hand of the lower portion of the smallest barrel.
18. Place the dominant hand on the top of the barrel.
19. Place the top of the barrel on the bottom.
20. Twist the barrel closed.
21. Place the smallest barrel inside the bottom of the next barrel. Continue in this manner until all barrels have been correctly nested.

Presentation 2: Horizontal

1. Proceed as in Presentation 1 through step #16.
2. Beginning at the top, place each lid on the bottom and twist the barrels closed.
3. Select the largest barrel with two hands. Place it to the left at the bottom of the table.
4. Select the largest remaining barrel. Place it to the right of the prior barrel.
5. Continue in this manner to place the remaining largest barrel to the right of the horizontal line of barrels.
6. When the barrels have been graded from largest to smallest from left to right, begin with Presentation #1, step #9.

Presentation 3: Vertical

1. Proceed as in Presentation 1 through step #16.
2. Beginning at the top, place each lid on the bottom and twist the barrels closed.
3. When all the barrels are closed, stack the barrels vertically moving left to right.

Variation 1: Memory

1. Proceed as in Presentation 1 through step #16.
2. Place the lid at a table or a rug a distance from the bottom of the barrel.

3. When all the lids have been placed at the other location, select a lid and place it at the bottom of the table.
4. Select the bottom which will match the lid.
5. Continue to select a lid and place it to the bottom and to the right of the preceding barrel.

Variation 2: Base cards

1. Make seven cards with solid circles corresponding to the bases of the barrels.
2. Proceed as in Presentation 2.
3. Place the seven cards on a rug in a line from left to right.
4. Beginning at the left, select a barrel and match it to the base.
5. Continue until all the barrels have been matched to the bases.
6. Select the largest barrel and move it with its card to the upper left area of the rug.
7. Select the next largest barrel and move it with its card to the right of the largest barrel.
8. Proceed in this manner until all the barrels with cards are graded.
9. Place each barrel above the cards.
10. Remove the cards by stacking the cards from left to right.
11. Nest the barrels as in Presentation 2.

Variation 3: Cooperative learning

1. Place the barrels before two toddlers.
2. Alternately, each toddler opens a barrel and places it as in Presentation 1.

Language:

1. Large, larger, largest; small, smaller, smallest; barrel, base.

Points of Interest:

1. The equal progression of each barrel.

Direct Aim:

1. Development of visual discrimination of difference of size, which leads to observing one's environment with an intelligent eye.
2. Development of order, concentration, coordination, and independence.
3. Supports the sensitive period for order in the toddler.
4. Encourages simple problem solving techniques.

Indirect Aim:

1. Development of large motor muscles for voluntary movement.
2. Preparation for the mathematical mind.

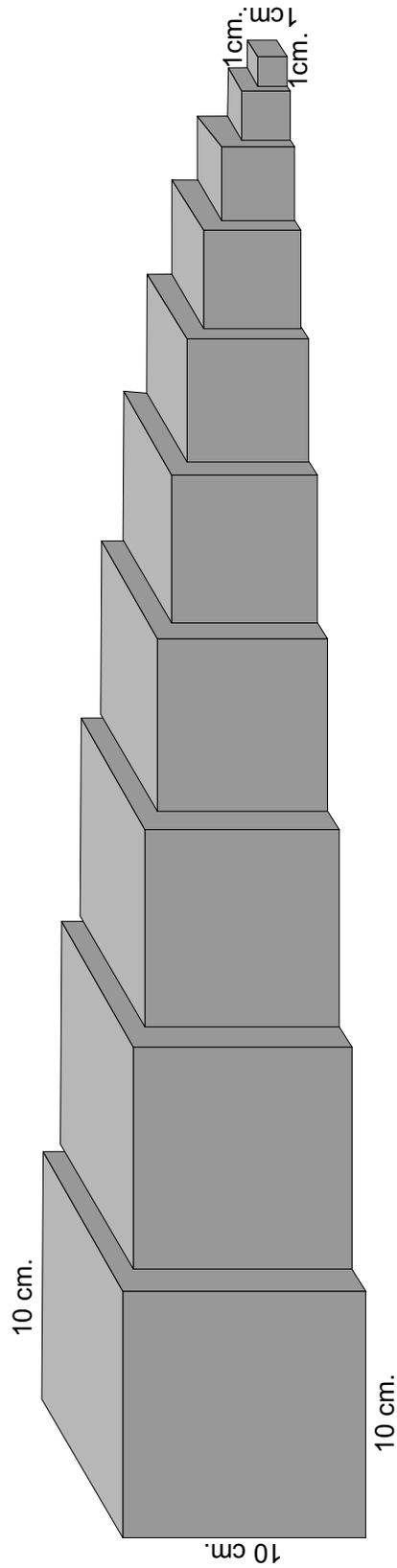
Control of Error:

1. Visual disharmony.

Age:

2 to 3 years

3. PINK CUBES



3. PINK CUBES

VISUAL SENSE: DISCRIMINATION OF SIZE, GRADING

Material:

- Ten pink cubes differing in three dimensions and graded in size from ten centimeters (one decimeter) cubed to one centimeter cubed.

Presentation 1: Horizontal

When the directress initiates the selection of the material:

1. Invite the toddler to work with the pink cubes. Say, "I will show you the pink cubes."
2. Show the toddler where the pink cubes are located on the shelf. When the toddler makes the selection of the material, begin with the third step after naming the material for the toddler.
3. Say, "The pink cubes are so large, we will need a rug."
4. The adult or toddler may select the rug and unroll the rug.
5. Indicate the procedure for carrying the pink cubes. Grasp the largest cube with two hands.
6. Walk to the rug and place the largest cube at the top of the rug.
7. Continue to place the cubes on the rug in mixed order in a straight line at the top of the rug.
8. Say, "I will grade the pink cubes from largest to smallest."
9. Select the largest cube and move it with two hands to the bottom left of the rug.
10. Continue with the next largest cube. Place the cube to the right of the prior cube.
11. Grade the cubes horizontally from left to right, largest to smallest.

12. When the gradation of the pink cubes is complete, slide the open hand slowly from left to right along the top of the pink cubes, noting the decrease in size.
13. Delicately grasp the smallest cube and move it up each cube, noting the even level the smallest cube creates with the next cube. Then move the smallest cube down the cubes in the same manner to its original position.
14. Return the pink cubes to the shelf by grasping each cube with two hands. Begin with the largest cube.

Presentation 2: Vertical - Edged

1. Proceed as in Presentation 1 through step #6.
2. Beginning with the largest cube, grade the cubes vertically and in a fashion such that one corner and two sides of each cube are even with those of the previous cube.
3. After all the cubes are placed into position, run the fingers up the even sides of the cubes.
4. Show that the smallest cube measures the unit of increase or decrease along one dimension from the next cube by descending and ascending the vertical gradation.

Variation 1: Memory

1. Proceed as in Presentation 1 through step #12.
2. Place a second rug a distance away.
3. Select the largest cube and carry it with two hands to the second rug.
4. Place the largest cube to the left side of the rug.
5. Return to the first rug and select the largest remaining cube.
6. Continue until all the cubes have been graded from largest to smallest, left to right on the second rug.
7. The pink cubes may be placed in mixed array and graded on the first rug if the toddler is still interested.

Variation 2: Base Cards

1. Make ten square cards with solid squares corresponding to the bases of the cubes.
2. Proceed as in Presentation 1.
3. Place the ten cards with the solid square bases on a rug in a line from left to right.
4. Beginning at the left, select a cube and match it to the square base.
5. Continue until all the cubes have been matched to the bases.
6. Select the largest cube, and move the cube with its card to the upper left area of the rug.
7. Select the next largest cube, and move the cube with its card to the right of the largest cube.
8. Proceed in this manner until all the cubes with cards are graded.
9. Place each cube above the cards.
10. Remove the cards by stacking the cards from left to right.

Variation 3: Cooperative Learning

1. Place the pink cubes in mixed order at the top of the rug.
2. Alternately, each toddler selects the largest cube and places it in graded sequence from left to right at the bottom of the rug.

Language:

1. Large, larger, largest; small, smaller, smallest; cube, side or face, edge, corner, base.

Points of Interest:

1. The equal progression of each cube as the measure of the smallest cube.

Direct Aim:

1. Development of visual discrimination of difference of size, which leads to observing one's environment with an intelligent eye.

2. Development of order, concentration, coordination, and independence.
3. Supports the sensitive period for order in the toddler.
4. Encourages simple problem solving techniques.

Indirect Aim:

1. Development of large motor muscles for voluntary movement.
2. Preparation for the mathematical mind.
3. Ten cubes as a preparation for the decimal system.

Control of Error:

1. Visual disharmony.

Age:

2 to 3 years