



## Color and Light Matrix

### Here's What You Get!

- 1 Wooden Matrix Board with Stand
- 40 Translucent Cylinders in Bin

### Introduction:

Fine motor skills are controlled by the nervous system and involve the coordination of small muscle movements (usually in the hands and fingers) with the eyes. These skills emerge in infancy and develop throughout life, aiding in the growth of intelligence and capacity to learn. Preschoolers use fine motor skills to sort and manipulate objects, make patterns, and build math and language skills.

The Excellerations® Color and Light Matrix provides fine motor practice with 50 chunky translucent Cylinders in 5 brilliant colors that may be used separately, or with the Light Matrix Board. The Board may be used flat on a tabletop or inserted vertically or horizontally into the special stand. Children can sort, pattern, and count while exploring these engaging materials. Best of all, the Cylinders and Board can be used with a light table, light cube, or light panel – the inserted Cylinders will glow brilliantly and add a new dimension to classroom explorations!

### Use the Excellerations® Color and Light Matrix to address these Head Start Learning Outcomes:

Goal P-ATL 6 Child maintains focus and sustains attention with minimal adult support.

Goal P-PMP 3 Child demonstrates increasing control, strength, and coordination of small muscle.

Goal P-PMP 6 Child coordinates hand and eye movement to perform actions.

Goal P-MATH 3 Child understands the relationship between numbers and quantities.

Goal P-MATH 6 Child understands addition as adding to and understands subtraction as taking away from.

Goal P-MATH 7 Child understands simple patterns.

## Color and Light Matrix (continued)

### Suggested Activities:

- **Easy Inserting!**

Place the Matrix Board flat on a table. Invite the children to investigate the set of Cylinders by placing the colored Cylinders into the holes. When the child can confidently insert the Cylinders, encourage her to select Cylinders to make rows or blocks of specific colors. For example, a row of 5 red Cylinders, or a 2 x 2 "block" of 4 purple Cylinders. Even very young children will experience success as they select and add Cylinders to the Board.

- **Just the Cylinders**

The chunky size and brilliant colors make the cylinders fun and easy to stack, sort, and explore early math concepts. Encourage the children to stack towers of all red Cylinders or all blue Cylinders. Can they create a tower with alternating colors?

Assemble a group of 5 blue Cylinders and 2 green Cylinders. Which group has more? Create different groupings with different quantities and colors, prompting the children to identify which group has more, less, the most, the least.

Use the Cylinders for counting and one-to-one correspondence. You can also introduce simple operations by creating two small unequal groups of Cylinders. Challenge the children to add or remove Cylinders to make the two groups equal.

- **Introduction to Patterning**

Place the Board flat on the table as above. Insert Cylinders into one row or column to create a pattern such as red-blue-red-blue. Encourage the child to re-create your pattern in the next row by selecting and inserting the appropriate colored Cylinders. Very young children may benefit from gentle prompting – offer a choice of two colors to add to the pattern.

Make this activity more challenging by creating more complex patterns (red-blue-green). You can also leave open holes at different sequences in your pattern (red-blue-GAP- blue-red-blue) and challenge the child to fill in the gaps.

Any of these activities may be enhanced by placing the Board on a light table or panel.

- **Working Upright**

Insert the Board into the two semi-circle Stands. The Board may be oriented horizontally or vertically. As above, invite the child to insert Cylinders into the holes, make rows or blocks of specific colors, or complete patterns. While the activities and cognitive outcomes are similar, the perceptual and motor skills are very different and will lend a new dimension to using the Cylinders and Board.

To enhance the upright use of the Color and Light Matrix, place the Board in front of a light cube or panel. If using a light panel, make sure the panel is firmly secured in an upright position.