

Montessorians Helping Students
With Learning Differences
In the Sensorial Curriculum

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Children in a Montessori pre-school program who indicate delays in coordination, language, attention and/or perception are at risk for learning disabilities. Students in the elementary program or beyond who have difficulties with reading, decoding, spelling and written expression are showing the characteristics of dyslexia. Those who demonstrate challenges in comprehension, math, attention, social skills, and oral and written languages are indicating the characteristics of a related disorder.

Regardless of the area(s) of academic weakness, these learning differences are caused by processing disorders. For these students, though intelligence is normal or high, perception of language and/or math patterns symbols is slower and less accurate than that of the average student.

The sensorial curriculum teaches the child to categorize their world by their five senses. The five senses are the avenues through which information is received by a child and becomes available for processing by the child's brain. Montessori said, "we learn through the senses not with them."

A sensory input like the feel of a soft blanket is received by the child's brain, the brain processes this tactile information and a perception of the sensory information is accomplished. Perception is the brain's processing of sensory information. The child develops perceptions through each sense; visual, auditory, tactile, olfactory and gustatory. Perceptions of color, size, shape, sounds, which are loud to soft, tones that are high to low, feels which are rough to smooth, various smells and tastes are perceived.

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Over the first year of life the baby's brain is bombarded by sensory input and the resultant perceptions. The human child from birth to 2 1/2 – 3 has no neurological inhibition control and therefore all sensory information is received by the brain. The brain networks itself as a result of this input.

Montessori calls this period for the child "the absorbent mind." Since the child cannot inhibit input the mind absorbs it all. By three most children have developed inhibition control and can focus in on the more important sensory information and inhibit or "shut out" less important sights, sounds, smells, tastes, and textures. This is the beginning of sustained attention and concentration.

By one year of age most children begin to label their perceptions. Language develops by attaching words to perceptions. The sensorial language offers the child the words for

perceptions of big, little, thick, thin, short, long, the names of shapes, loud, soft, high, low, sweet, sour, salty, bitter, etc. It provides an opportunity to further develop the language of comparisons and superlatives.

Since pre-school children who are at risk for learning differences often process sensorial information incorrectly and have difficulty attaching language to their perceptions, the Montessori sensorial curriculum offers the teacher a way to observe the development of the perceptual skills and the language of those perceptions. The sensorial curriculum is diagnostic of processing or perceptual delays, and the sensorial presentation can be made in a remedial way to the child whose development is not proceeding normally.

The Montessori teacher has within her knowledge and her presentation the materials and method to help the at risk child to move his development from delayed to more age appropriate. To do this Montessorians need to be aware of the following ways to help.

- 1) Break presentations into even smaller steps (for example, use three pink cubes, the largest, middle and smallest, to get the concept of size gradation if necessary, then move to five, seven and ten at a rate at which the child has success.
- 2) Encourage the child to feel the material as well as look at it (learning through more than one sense is more important for the at risk child, have him feel each cube carefully to get a sense of the size as he decides which cube goes next).
- 3) Reduce the difficulty of the task (use three color tablets for shading; darkest, middle, lightest until the child grasps the concept, then add more shades).
- 4) Make Control Charts to assist with difficulty with space perception (example, make a control chart to build the red rods on until the child perceives the gradation task, then as the student becomes successful, challenge them to remove the chart.
- 5) Analyze through your observations:
 - a. Why is the student having difficulty?
 - b. What can I do to structure this activity for success?
 - c. The key to teaching at risk children is to structure every presentation for success so he or she will keep trying.
- 6) Attach language to every presentation after the child has mastered the perceptual task (example, using the three-period lesson introduce and practice all the language of the sensorial curriculum). The child's vocabulary will be greatly enhanced.
- 7) Continue sensorial work in the upper elementary and beyond. The at risk and learning different child needs exposure to these percepts and concepts much longer. Suggested activities:
 - a. Knobless Cylinders
 - b. Geometric solids
 - c. Geometric Cabinet
 - d. Color Box III
 - e. Montessori Bells
 - f. Fabric Box

- g. Weight Tablets
- h. Memory Bag
- i. Advanced olfactory and gustatory activities (often in correlation with cooking activities)
- j. Presenting any sensorial activities to younger children

Students with learning disabilities do not proceed smoothly through the sensitive periods, as the average student does. They have areas of strength and areas of weakness. Some perceptual areas are “arrested” at a younger level of development. The continuation of the sensorial activities over a longer period of time provides the opportunity to master eye-hand coordination, fine motor skills, order and sequence in a learning task and improve sustained attention. All of these skills are critical for success in academic work.