

Why do children with special needs thrive in Montessori schools?

In the second in a series of articles focussing on specific pieces of Montessori didactic material, **Wendy Fidler** considers some of the reasons for developmental delay and offers Montessori solutions to meeting the needs of children with learning differences.

Many children start at Montessori school around the age of two and a half or three years. At this age some are already showing signs of developmental delay:

Possible Indicators of Developmental Delay in Children Age 3 Years

Developmental milestones give a general idea of the changes you can expect as children gets older. Each child develops at his or her own pace and takes a slightly different course. The following indicators are signs of possible developmental delay in children at three years of age:

- Frequent falling and difficulty with stairs
- Persistent drooling or very unclear speech
- Inability to build a tower of more than four blocks

Part two

- Difficulty manipulating small objects
- Inability to copy a circle
- Inability to communicate in short phrases
- No involvement in 'pretend' play
- Failure to understand simple instructions
- Little interest in other children
- Extreme difficulty separating from mother

How do the Montessori sensorial exercises help with children's learning?

"Thought is his human birthright, all education aims at helping the individual to think clearly about them (thoughts) instead of half-knowing things all in a muddle." (Phoebe Child)

In their early years children's knowledge is 'a sea of impressions' in their unconscious minds. Montessori sensorial materials help children categorize their subconscious knowledge of their surroundings. Young minds become aware of individual concepts such as size, colour, weight, smell, sound, quantity etc. This is the beginning of sensorial education. When the differences are clear, vocabulary is introduced to describe these concepts. Montessori education builds concept upon concept. Nothing is left to chance learning. There is an order and sequence to the materials presented.

What about children with learning differences?

No two children have exactly the same learning styles; some learn by watching (passive), others by listening or taking part. Each piece of sensorial apparatus provides a particular purpose and focus. It includes using the child's hands, senses,

The Long Rods help develop a child's visual discrimination of differences in one dimension. They also help develop a child's muscular coordination. Even grown-ups enjoy this activity!



PHOTOS COURTESY OF HORSHAM MONTESSORI SCHOOL

and spontaneous activity. Every activity is observed, repeated and consolidated by each child – there is no possibility of ‘gaps’ in children’s learning.

Children are very good at developing coping strategies when they are very young – they have to – they are used to coping with a vast amount of unsorted sensory input in their minds. When children reach three, four or five years of age, they may appear to have difficulty in learning new things – this may be because they have not integrated or consolidated what they have experienced earlier on. With Montessori every sense is stimulated and strengthened individually before the child moves on to further work which requires combination and integration of sensory perceptions.

The Long Rods

‘They cannot see properly without their hands.’ (Phoebe Child)

Montessori understood that young children’s intellectual activity is manual and active. This is contrary to traditional methods of teaching and learning. The Long Rods, like all the sensorial materials are three dimensional. Montessori did not use pictures for teaching sensorial concepts, she believed that children wanted to see and feel the real objects.

Visual aids are not used in sensorial education - the marriage of hand and mind is the cornerstone which unlocks the child’s understanding.

Do the Long Rods help all children learn?

The purpose of the Long Rods is primarily to assist children’s visual concept of length. When a Montessori teacher/guide demonstrates this material s/he emphasises the length of the longest rod by drawing the fingers slowly (measuring) along the full length of the rod. In this way children learn to ‘see’ the full length of the rod by watching the movement of the teacher’s hand. Children go through a process of conceptualisation which involves thinking about and visualising length, understanding concepts of shorter and longer and words to describe these concepts.

Teaching Note: It is important to set the rod horizontally in front of you when ‘measuring’ along the Long Rods. If the rods are set vertically, and the fingers drawn up the rod, the concept the child will learn is height, even if the language used is for length. This is how children get muddled and get ‘gaps’ in their learning.

Children who learn differently may need longer to work with these materials, and the demonstrations may need to be a



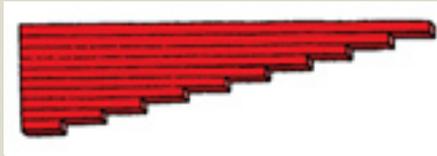
Above: Work with the constructive triangles at age three kick starts a child’s discovery of relationships between shapes.

Left: The Disney Epcot Center Geodesic Dome

PHOTO: COURTESY OF VILLAGE MONTESSORI, BLACKHEATH

touch more ‘dramatic’, i.e. with the teacher exaggeratedly following the hand movements with her face to ‘show’ the child she is using her hands and her eyes. Often every other rod will be used at first until the child gets the idea.

At the same time the child is developing small motor skills, readiness for mathematics, sequence and order. Muscular skill, intellectual and character developments combine as a whole for the child when using Montessori sensorial education.



Concentration is a by product of a child learning with his or her hands

All children concentrate longer when they are working on practical activities. Montessori environments can work wonders with children with Attention Deficit disorders, allowing them a haven of calm and enough time to ‘get their thoughts together’.

The Constructive Triangles

The triangle is the great constructor. The Montessori Constructive Triangles help children to discover for themselves that all figures, no matter how large or small, are formed from triangles. Younger children see for themselves, in a hands-on way, the relationships between different shapes. As children manipulate the various shapes and sizes of triangles, and join the side lines together like puzzles, they work out for themselves how individual triangles can combine to form larger triangles, and a host of other geometric shapes.

Children with dyspraxia and other spatio-awareness difficulties cannot make the mental leap to picturing shapes and sizes in their mind. Using the constructive triangles helps them conceptualise how

visual images can be combined to create different visual images.

Understanding the concept of construction indirectly prepares for children’s later work with geometry and design. Children do not struggle with these subjects if they have learned the concepts on which they are based during their formative years.

Older children discover that many designs can be made stronger by building with triangles. Knowing how complex shapes are made strong can be used in practical ways in the real world. For example, The Disney Epcot Center geodesic dome is made entirely of triangles which keep it very strong.

Teaching Note: A geodesic dome is the only man-made structure that gets proportionally stronger as it increases in size. When completed to form a full sphere, it is known as a geodesic sphere.

Summary: Montessori is suitable for all learning styles

Some children are visual learners, others are primarily auditory learners and others need to be on the move or touching something to be in great learning shape. Working with the Long Rods and Constructive Triangles involves looking, touching, moving and hearing. This makes the activities fully inclusive and all learning styles are addressed. Better still, children become multi-style learners, just in the same way as they can become bi-lingual, because they are repeatedly involved in visual, auditory, tactile and kinaesthetic (movement) activities. ■

Resources:

<http://www.rogersconnection.com/triangles/index.html>

http://en.wikipedia.org/wiki/Geodesic_dome

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