

## Sensorial

Dr. Montessori made a transition from the medical field to education while working in mental hospitals where she observed children. What she saw was the sensory deprivation of these unfortunate children and made the connection between the importance of sensory stimulus and brain development. Studying the works of two Frenchmen, Jean Itard and Edouard Seguin, who also worked with mentally deficient children, help cement her theories. Itard discovered sensory deprivation while working with "The Wild Boy of Aveyron" and realizing how a child who had been isolated from society and not given proper means to develop the senses, had become severely delayed developmentally. Seguin, who was a student of Itard, expounded on these theories and developed physical materials (such as the Tens Board) to encourage the development of the senses. Maria Montessori vigorously studied the works of these two men and in doing so developed sensorial materials which, when used by the institutionalized children, brought them up to the level of 'normal' children.

Seeing the impact the materials had on the deficient children, Montessori delved into her studies of children and began to work with 'normal' children. Her discovery of the 'Absorbent Mind' where: "There is in the child a special kind of sensitivity which leads him to absorb everything about him, and it is this work of observing and absorbing that alone enables him to adapt himself to life. He does it in virtue of an unconscious power that only exists in childhood" (Maria Montessori, The Absorbent Mind, p 62) was a breakthrough. She concluded that children from birth to three years old were absorbing information from their environments in an unconscious way. They were unaware of all

they were taking in. After the age of three, from three to six specifically, this absorption becomes conscious. Children are aware of many things like color, size, shape, and language and are now consciously trying to arrange these impressions in their minds in an orderly fashion. Montessori created the Sensorial materials to assist this process.

The materials in the Sensorial area have many aims, some direct and some indirect. These aims help the child to develop what Montessori described as the 'Mathematical Mind' which is "The part of the mind that is built up through exactitude" (Lorie Federman Lecture, June 2014). The inner drive to organize, classify and clarify the mind's impressions are introduced through the Sensorial materials by using the child's previous experiences and generalizations and reorganizing and reclassifying them for clarifications sake. So the direct aims of these materials are order, refining the senses, stimulating cognitive development, comparing, contrasting, and judging. The preparation for subsequent work in the classroom, such as math, language (reading and writing), art, music, and the development of order, concentration, coordination, and independence are the indirect aims of these materials.

In the Montessori classroom, the Sensorial materials are introduced to the children after lessons in Practical Life. The reason for this is because Practical Life activities are the foundation of Montessori education because they begin the process of developing order, concentration, coordination, and independence, which prepare the child for the more refined elements in Sensorial. These materials contain five specific design features. The first is two-fold isolation, which isolates one sense with one changing quality within that sense. In the case of the Pink Tower, the sense being isolated is the sense of sight; all cubes are pink, and the changing quality is dimension, or the size of each individual cube.

The next features are attractiveness, which draws the child in by its appearance, such as the Color Tablets; exactness, which the guide demonstrates in her lesson of say, the Cylinder Blocks; the individual use of the materials to encourage a child to get the full experience of each step in the process; and movement, which is a cornerstone of the Montessori method. Montessori believed it was essential that a child move; “Through movement we come in contact with external reality, and it is through these contacts that we eventually acquire even abstract ideas” (Maria Montessori, The Secret of Childhood, p 97).

The presentation of the Sensorial materials to the child are on two levels. The first level is perfectly suited for preoperational children because it goes from unconscious to conscious and concrete to abstract. This level includes isolation of an object, exactitude of work, arousal of attention, prevention of misuse, respect of useful activity, and the facilitation of a good finish. The second level is presented to the child after level one is firmly established because it is the introduction of language. The second level is generally an extension of the first and is used to bring a concrete concept into the abstract and to rekindle interest in the material. The introduction of language in level two is done through The Three-Period Lesson. The first period is labeling, where the teacher simply names the object such as ‘square’, ‘circle’, ‘triangle.’ The second period is the longest and most difficult and is recognition or short-term memory. In this period, the teacher uses the name or label from the first period and the child must recall it. The teacher may have the child then point to the ‘square’, ‘circle’, and ‘triangle’ by using its name to make sure the child understands. If the child is incorrect in this period, the teacher does not correct the child because s/he should never be made to feel unsuccessful. The third and

final period in the lesson is retrieval and it is generally question- based. The teacher may ask the child, “What is this?” while pointing to the ‘square’ and the child will have to retrieve the name from short-term memory and say it aloud. The use of the Three-Period Lesson really assists the child in absorbing new information.

The presentation of the Sensorial materials comes before lessons in Math and Language because they indirectly prepare the child for these subjects. Take the Geometric Cabinet. This material strengthens visual discrimination of form using progressively more complicated shapes. When a child masters the differences in form within each drawer of the cabinet, they are being prepared for the more refined skill of discrimination needed to differentiate number like 6 and 9, as well as letters such as b, d; q, g; e, and c. Within each presentation are a plethora of extensions and variations, which further develop a concept. Many of these are child-driven; they are the result of the child’s own exploration and experimentation of the specific material, and are encouraged by the teacher after the initial concept behind the given material is mastered. Using the Geometric Cabinet, an example of an extension is the introduction of language, i.e. the specific names of the shapes, or doing the work blindfolded. A variation would be to find examples of the various shapes in the drawer within the confines of the classroom.

The teacher is, of course, an important part of the Montessori classroom. She is the connecting link between the child and the Sensorial materials because she guides the child in the material’s use with precision and grace. She understands that “The prepared environment is, as far as it is possible, to render the growing child independent of the adult. That is, it is a place where he can do things for himself- live his own life- without the immediate help of adults. Therefore, the environment is a place where the children are

to be increasingly active, the teacher increasingly passive. It is a place where the child more and more directs his own life; and, in doing so, becomes conscious of his own powers” (E.M. Standing, Maria Montessori Her Life and Work, p 267). Knowing this, the teacher has a deep understanding of each material, its aims, language, and extensions. She sets limits for purposeful activity. She is highly observant, observing more than teaching, and keeping excellent record on the progress and development of each child. She knows the importance of movement and exploration and is careful not to interrupt a child at work. The Montessori teacher is a model of behavior; she is present, patient, joyful, and self-aware. Most of all, she honors each child by allowing the natural unfolding of its own unique potential.

## *A Developmental Point of View*

1. Every child is an individual with his or her own rate and style of learning and growing, his or her own unique patterns of approach to situations and his or her own innate capacities.
2. The genetic constitution and the environment together determine the course of development of an individual.
3. Intelligence develops as it is nurtured.
4. All aspects of development are interrelated: physical, social, emotional and intellectual.
5. Growth means change.
6. Growth takes place in orderly sequences or stages, with each successive stage depending on the outcome of previous stages.
7. Play is an important avenue for learning and for enjoyment.
8. Attitudes and feelings are important in learning and in healthy personality growth.
9. Behavior is motivated by extrinsic and intrinsic factors.
10. Understanding, responsible guidance is necessary if the child is to develop his or her potential.
11. The development of a young child suffers if there are deficiencies in nutrition and health care; in attention and loving care; in opportunities to play and have relationships which nourish social, emotional and intellectual growth.
12. A healthy environment is the right of every child and the first responsibility of the community, the state, and the nation.

Source: Read, K. and Patterson, J. *The Nursery School and Kindergarten*, 7th edition.