

What is Montessori?

I. Dr. Maria Montessori (1870-1952) first made history by being the first woman physician in Italy - then she later became the world famous Educator and Psychologist with her research and experimentation in early childhood development.

Her first interest as a physician was to care for deficient and retarded children, where, basing her work on the principles evolved by two French doctors and educators - Seguin and Itard - she found she was able to bring certain of these children to a higher level of development which enabled them to enter public schools and successfully compete with normal children.

This led her to look more closely into the natural ways of development of normal children and her observations made her realize that the natural aptitude of the child and his potential for development were being overlooked and not harnessed in a way that would bring the greatest benefit to his growth.

She had great intuition and a marvelous insight to recognize that the growing baby has keen sensitivities and a highly absorbent mind to take in impressions and learn patterns of behaviour, knowledge and skills through a series of personal experiences offered in the environment around him, and that these are the first steps of learning in his life.

II. The Natural Learning Potential which every infant is endowed with by nature brings the baby in the first three years to a natural acquisition of actions, thought, speech and attitudes according to those prevalent in the family and society in which each infant is nurtured. Dr. Montessori marvelled at the stupendous task each child has already engaged himself from birth to construct from these first impressions without any teaching an Individual Self who can begin to walk and talk, think and understand, act and behave.

How are these achievements made in this period of infancy when all that is apparent is the physical dependency of the infant and his simplicity, with the smiles and joyous activity of babyhood?

Dr. Montessori observed that Nature has taken great care to give certain special sensitivities and a very receptive mind to aid the unconscious learning processes within the child which gradually build up a strata of knowledge in the Subconscious, all of which play a vital part in the laying of the basic foundation of characteristics that would form the individual personality. This is shown specifically in the remarkable acquisitions the baby of two makes:

1. of the language - or languages - spoken by and embracing the thinking and concepts of the people around him
2. orientation to the prevalent social attitudes and mores
3. adaptation to those behaviour patterns peculiar to that society.

And to Dr. Montessori it was made more and more evident that the first educators around the child are the parents and members of the family as also everything else that the HOME holds - each of which gives the infant the ingre. dients with which he can fashion and mold himself in the first three years of life in "becoming" an unique individual person.

III. The Pre-School Child: Further experimentation with the preschool child brought Dr. Montessori to understand that this natural learning potential could be conserved, aided and harnessed in the ensuing years of childhood - especially 3 to 6 years - in an environment which offers a wide scope of prepared activities that bring the world of knowledge, concepts and skills -both of Nature and of Man - within the grasp of the child's actions and his sensory perception. As the child becomes more consciously active, she realized he needed an extensive and intensive scope of "purposive" work and play so that he could control and refine his physical actions, acquire basic human skill, develop sensory discriminatory powers and intelligent understanding of concepts, and even master the academic skills of reading, writing and arithmetic.

In her first experiments she discovered that at this early age Spontaneous Learning was joyfully manifested by these children who were so naturally eager to reach out to the world around them with a boundless energy, an acutely sensitive mind, and a simple, sincere love in their hearts. And when these were nourished and directed into channels which brought the children into a happy relationship with that world, each of them responded with an enthusiasm which developed them into disciplined and responsible individuals.

IV. The Prepared Environment: This discovery of the vast potential for learning and the means for preserving the goodness and beauty of human nature brought Dr. Montessori to forego her career in Medicine and take on the task of exploring into and analyzing all the elements which go to make up the world of learning and of furnishing an environment that would benefit all children of humanity. She sought to provide all children the means by which to develop the right attributes and ways of functioning, so as to build up a wealth of resources within enabling each to cope with the conditions which his own part of the earth offers to each individual.

She realized more and more that not only is the way of learning in every child the same throughout the world, but that also the basis of what has to be learned and acquired is universal although there are certain cultural differences of items in their application. And so was born what was to be eventually known as the "Montessori Method" in which the good doctor devised a variety of units of activity and experience for the child. These are generally contained in four broadly defined avenues of activities which offer "Keys" to open up for exploration and experimentation the vast expanse of knowledge of the world of Nature and the skills and intellectual attainments of Man. These are offered in an Environment of work and play in a purposive way so as to promote a joyous interest and feeling of happy accomplishment under the gentle guidance of understanding adults. Each item of learning is scientifically devised and simplified into sequential "tools" of learning and discovery. And each pupil "LEARNS" rather than being "TAUGHT".

V. The Method. In the amazing revelations which the first children with whom she worked manifested to her, Dr. Montessori found that she had unknowingly channeled their willingness to learn, their spontaneity of interest and the driving inner energy which seemed to increase and multiply with every fresh challenge, and in these she saw the true character of the human person. Through the years of her work she was more and more convinced of the importance of discovering the means to tap this resource of human energy for the welfare of all beings of the world, and how essential it is to direct each individual to become a person of strong character with wholesome ideas, high intellectual ability and practical efficiency. To her these special endowments of man are there because of the mission given to him above all other species to help perfect and preserve the beauty, balance and harmony of the universe.

If all mankind is to work together without damaging or intruding upon the rights and needs of all others whose existence is just as important as contributing factors to that cosmic harmony, then each individual person must become:

1. a being with a sense of worth of himself and his capabilities
2. an adult who knows and understands his place in the world and his responsibility for serving the needs of all that exist both animate and inanimate.

Thus to her to educate is to give a "Help to Life" in the sense of assisting every child to an unfolding of all his potential with an awareness of his place in and his obligation towards contributing to the work of maintaining and advancing the welfare and real peace among mankind while also conserving the existence, work and harmony of all organisms in the vast spheres of the universe.

She spent the rest of her life in exposing these ideas and in trying to bring a greater understanding of the adult society to the requirements necessary for ensuring a healthy development of its future citizens. The

ensuing paragraphs will give a glimpse into what she felt were the ways in which education could be applied according to her realization of the child as a universal being.

VI. Education of Movement: Every organism has its own pattern of behaviour and the co-ordinations required are given to the animal species according to the manner prescribed for each. But in the case of man, there is no one set pattern of behaviour; he can act as he wills. Thus the child needs to be prepared for this mastery over himself by learning first to control his muscles. Dr. Montessori observed that the infant who with great effort learns to raise his head, sit up, stand and walk and also to reach out and grasp is left more or less to a haphazard acquisition of other movements necessary to function as a man. She noted that children take great delight in carrying out the activities that are a part of living, but found that civilized society often hindered or restricted the child's movements which are so essential and have to be repeated and practiced if he is to acquire the grace of body movements and the refined use of his hands in order to act and behave in the many diverse patterns by which man can function.

The inner urge to be active which drives the child with such strong desire to walk and run, climb and jump, push and pull had a meaning to Dr. Montessori. This is Nature's way of saying to the child "go on and be active with the things around you" for this is the only way the child could learn. Thus all the experiences offered in the "Prepared Environment" involve the activity of the child and the first of these are the Exercises of Practical Life which include the ordinary daily movements performed in the course of living, e.g. carrying, handling, pouring, washing, dressing, cutting, etc. All these are classified under:

1. Care of self
2. Care of the environment
3. Acquiring co-ordination of movement and - refinement of motor skills and grace of body and hands
4. Social graces and etiquette in behavior

In this way each child is offered a scope of activities which not only prepares for all kinds of ways of functioning, but the repeated practice given to each of them develop further the physical control and focus of attention building up habits of personal involvement and perseverance as needed in the performance of any task, thus bringing the integration of body and mind to function together. The children love these activities and the more they require accurate performance, the more often are they repeated. They are also always encouraged to

1. Complete the whole task to the best of one's ability
2. See that all the materials needed are arranged in order and used correctly and then put back or replaced with fresh items
3. Make sure that the whole unit is in order and ready for the next child.

Each child is thus helped to attain and maintain a higher standard of work as also to be thoughtful of the needs and rights of his companions. Some of these exercises can be done as corporate group activities involving the sharing of responsibilities and generous co-operation together. Along with these the social etiquette exercises which are dramatized for practice further develop and refine correct behavior patterns. Mention must also be made of the many exercises that can be performed outdoors in physical activities and games, rambles in Nature, gardening and care of animals, etc.

This whole area of activity contributes invaluablely to the organization of the whole person with inner discipline and self direction that come in carrying out chosen tasks with care for detail and order as also with increasing manipulative and bodily skill, and by the accomplishing of each task in as perfect a way as possible they help develop concentration of the mind and a growing awareness of self.

VII. Education of the Senses: The child makes his first orientation to the world around him through his senses which bring him impressions that help and guide him to make his own unique relationship with the world. And it is these sensory impressions that develop his intelligence and understanding of things, persons and events around him. In the first two years the infant is guided by some inner sensitivity to make certain acquisitions, and then as the conscious mind takes over it becomes increasingly necessary to guide these efforts of the child into a conscious understanding of the world and its vast panorama of stimuli. Dr. Montessori realized the need to develop each of the senses to keener powers of observation and perception and thus not only to discriminate and recognize things but to have a greater discernment of the many variations and varied facets of the properties each contains: And so for each of the special features that the different senses can make contact within the outside world there is made some material which gives each of the senses to come to a deeper perception of that special facet that has been isolated in that material. For instance the color tablets are small flat slabs each showing one of the eleven colors and the game is to match the two that are alike thus bringing the eyes to discern the differences between them. When the child can distinguish one from the other the names are given so that he can now categorize all the colors around him. Then the child is brought to distinguish the different gradations there can be in each color so that he can now discern the finest variation of intensity of each color.

So it is with each of the sensory materials which help to develop each of the senses to classify size, dimensions, colors, form and shapes, textures, weight, etc. with a keen sense of discernment and judgment and accurate understanding of the many and varied qualities of the numerous items the environment brings to the child's attention. Each of these factors is presented as a distinct entity in each of the materials which are so formed that the child can work with them at various levels of knowledge, as for instance in the series of ten pink cubes which illustrate size. The largest is a cube of ten centimeters, the next is nine, then eight, and so on to the smallest which is only 1 cubic centimeter. At first it is only for perception of sizes - then the child is led to compare and contrast seeing relationships, proportions with appropriate vocabulary as needed. Later the attention is brought to its mathematical qualities and these used as a base for building abstract concepts necessary for working in that subject.

All the sensory materials help to develop clear classified and intelligent understanding which in turn gives a solid base of facts to build a more accurate use of language and a keener mind for mathematics and the sciences. These materials cover a wide field of illustrations in areas of geography, geology, biology, history, etc. thus bringing the child to an interest in exploring all avenues of cultural knowledge.

The work with all these materials develops a fine sensitivity to, and interest

in, the stimuli offered in the various items of the environment and a feeling of ease as the child makes his way within them maturing in knowledge and intelligent cognizance which allows him to classify and catalogue every impression with a clarity of reason, deep interest and love for learning.

VIII Development of Language. The child spontaneously acquires basic patterns of speech from his immediate surroundings in the first two years, and if there are any deficiencies of language with the normal child, the cause would be that the environment had not furnished rich and accurate patterns of thought and verbal stimuli. It is in this area of spontaneous achievements of the child that care should be taken to enrich the source of human living on which he draws constantly as the natural sensitivity to language drives him to store and produce his own ways of expression. The patterns imprinted in this early age are very difficult to be improved upon or changed.

Realizing this, Dr. Montessori has many preparatory exercises which can be practiced by the children with the guidance of the Directress, first on a verbal or pre-reading level together with a number of exercises that are a preparation both physical and mental - for writing and reading. These can be classified as:

1. Enrichment of vocabulary - casual and social, specific and scientific.
2. Correction of pronunciation, articulation, enunciation and diction.
3. Analysis of sounds in words and word building.

4. Preparation of hand-mechanism for writing.

With frequent practice of these exercises the children can begin to develop spontaneously into writing and reading at two levels. The first "explosion" comes as - in what Montessori called it - an expression of the prepared mechanism resulting in the child writing letters of the alphabet wherever and whenever he finds an instrument of writing and second, on to reading out the letters wherever he sees them written. Gradually the child is led through more and more word building into reading words and visualizing their spelling until suddenly there comes the ability to read fluently as also to write with more ease and control through the frequent practice of writing the words built, thus reinforcing the spelling of the words read. Comprehension is given help with many verbal games, conversations, narrations of stories, poems, songs, dramatizations, etc., and later with many "reading" exercises.

With the ability to read all the materials and work units in the environment will become the source of interpreted reading with the reading and matching of labels, definitions, picture cards, and various reading games. Reading of books is encouraged by preparing a library of books and picture cards to label at different levels of comprehension. Special vocabulary cards for the different cultural subjects already introduced at the sensory level can be brought in now for reading and extension of knowledge in these different areas. Later there will be reading games for understanding of the functions of words (parts of speech) and sentence structure. And then the child is led to involve himself in more exercises of comprehension and expression and an exploration into a wide field of literature, history and other cultural areas.

IX. Development of the Mathematical Mind: As all of the experiences of the child makes begin to unfold the powers of conscious reasoning and thinking both of which have a direct bearing on the quality of judgment the Mind has constantly to make for carrying out daily actions, it became quite apparent to Dr Montessori that this mind in essence is characteristically mathematical. And it became evident also to her that the exercises in the prepared environment offer continuously to bring precision of action, keener observation and perception, finer discernment and more intelligent reasoning, so it became necessary to bring to the child all of the Mathematical knowledge that mankind has gleaned from the experiences of life and made into an abstract science.

Following the principle that the child's learning comes by physical doing and mental exercise she set about devising materials that would bring the ideas, concepts and abstract functionings of Mathematics into items of "purposive play." At first, there is an indirect preparation of the mind to come to accurate understanding of the elements that go into making up the basic qualities e.g. dimensions of length, width, and height, size, distance, and direction, going on to geometric shapes and form - all of which are experienced by the child and their properties learned by him in the exercises of Sensory and Practical Life, followed up by learning of the accurate language.

With all these forming a sound basis of geometric knowledge the child is led to explore and discover the learning of number. Numbers 1 to 10 are given first in quantitative value with the numerals that represent the symbols 0 to 10. This is followed by a whole vision of the hierarchical systems of the base often in the form of the Decimal System material which consists of loose unit beads for the "ones", bars of ten beads each for the "tens", squares of ten tens bars for the "hundreds" and cubes composed of 10 one hundred squares for the "thousands". And to associate with these are the cards of appropriate lengths to show the number of zeros in each - showing 1, 10, 100, and 1,000. This brings the child to visualize the powers of the Decimal System and to understand that there can be only 9 units in each category. With this material the children begin to work at the four operations of Addition, Subtraction, Multiplication and Division; thus mastering the basic essentials of the functioning of numbers for abstract working later on. From here more advanced principles and abstract computations of number, geometry and algebra are brought within the purview of the child's mind with exercises in other graduated and scientifically based materials.

All these act as stepping stones for the exploration into the vast field of other sciences and areas of knowledge which are accessible and full of interest to the inquiring mind of the six or seven-year-old.

X. Academic Learning in Elementary School: It can be seen how the provision of all the above experiences would make a broad base of development for the whole of the human personality giving the

possibility for each individual child to enter the threshold of academic learning with certain established requisites. Each is helped to acquire an integrated physical body and mind closely knit with a stabilized emotional contentment of the inner spirit and an educated will that can give direction in making the right kind of decisions influenced by a high regard of both one's self and of others, together with an intelligence that is on the "qui vive" to go forth and seek fresh ventures and feats of learning in new and complex items of exploration. Thus by the seventh year the child can be led into experiencing the diverse and fascinating avenues of cultural activities embodied in Dr. Montessori's plan of "Cosmic Education".

In this second phase of development from 6 to 12 years, she unfolds to the child first the panorama of the development of the Earth before Man arrived. There is portrayed the functioning of the "Laws of Nature" in fashioning the elements of the sky, earth and sea and of the entrance of the different forms of life as a cosmic preparation for the coming of Man. Then she moves on to make the child cognizant of the different phases of civilization man has gone through to bring himself to the way of life as we have it in the present day.

All this is made into fascinating items of exploration for the intelligent and imaginative mind of this age which has an insatiable curiosity to probe into the WHY, HOW, and WHEREFORE of all that is around in the functioning world. Then between 12 and 18 years there must come a preparation of the adolescent in the learning of the skills and operations necessary to enable him to enter the life of Humanity as an apprentice and participator in the community life of the adult world.

The manifestation of this marvelous energy of the human spirit and how it could act in these subsequent years made Dr. Montessori go on to formulate her methods right on into the period of development of 6-12 years and 12-18 years, for aiding the growing adolescent and youth to enter into the fullness of adulthood.