

Montessori Materials and Curriculum

The Montessori method involves a curriculum of learning which comes from the child's own natural inner guidance and expresses itself in outward behavior as the child's various individual interests are at work. Supporting this inner plan of nature, the method provides a range of materials to stimulate the child's interest through self-directed activity. In the first plane of development (0-6), these materials are generally organized into four basic categories; practical life, sensorial, math, and language.

Practical Life

Practical life materials and exercises respond to the young child's natural interests to develop physical coordination, care of self and care of the environment. Specific materials, for example, provide opportunities for self-help dressing activities, using various devices to practice buttoning, bow tying, and lacing. Other practical life materials include pouring, scooping and sorting activities, as well as washing a table and food preparation to develop hand-eye coordination. These activities also provide a useful opportunity for children to concentrate bringing about their normalization. Other practical life activities include lessons in polite manners, such as folding hands, sitting in a chair, walking on a line.

Sensorial

The sensorial materials provide a range of activities and exercises for children to experience the natural order of the physical environment, including such attributes as size, color, shape and dimension. Many of these materials were originally suggested and developed by Seguin in his prior research with scientific education. Examples of these materials are: Pink tower (series of ten sequential cubes, varying in volume); knobbed cylinders (wooden blocks with 10 depressions to fit variable sized cylinders); broad stairs (ten wooden blocks, sequentially varying in two dimensions); color tablets (colored objects for matching pairs or grading shapes of color).

Mathematics

In this area, materials are provided to show such basic concepts as numeration, place value, addition, subtraction, division and multiplication. For numeration, there is a set of ten rods, with segments colored red and blue and "spindle boxes", which consist of placing sets of objects in groups, 1-10, into separate compartments. For learning the numeral symbols, there is a set of sandpaper numerals, 1-9. For learning addition, subtraction, and place value, materials provide decimal representation of 1, 10, 100, etc., in various shapes made of beads, plastic, or wood. Beyond the basic math materials, there are materials to show the concept of fraction, geometrical relationships and algebra, such as the binomial and trinomial theorems.

Language

In the first plane of development (0-6), the Montessori language materials provide experiences to develop use of a writing instrument and the basic skills of reading a written language. For writing skill development, the metal insets provide essential exercises to guide the child's hand in following different outline shapes while using a pencil or pen. For reading, a set of individual letters, commonly known as sandpaper letters, provide the basic means for associating the individual letter symbols with their corresponding phonetic sounds. Displaying several letters, a lesson, known as the Seguin three-period lesson (see below), guides children to learn the letter sounds, which finally blend together to make certain simple phonetic words like “up” and “cat”. The aim of these nomenclature lessons is to show the child that letters make sounds, which can be blended together to make words. For children over six, Montessori language materials have been developed to help children learn grammar, including parts of speech, such as nouns, verbs, adjectives, articles, prepositions, adverbs, conjunctions, pronouns, and interjections.

Cultural subjects

The Montessori classroom may also include other materials and resources to learn cultural subjects, such as geography (map puzzles, globes), and science, such as biology in naming and organizing plants and animals. Music and art are also commonly involved with children in various ways. After the age of approximately six, learning resources include reading books and more abstract materials for learning a broad range of advanced subject matter.

Elementary (6-12) Curriculum

During the second plane (6-12) of development, the curriculum takes on a more conventional appearance of books and writing activities, since children now function more through abstract reasoning, and are no longer as sensitive to the physical environment. The contextual format for this more advanced curriculum is described as cosmic education, a concept that was first explained in England in 1935. Cosmic education is the total interrelated functioning of the whole universe, which allows elementary children to store and organize a great amount of knowledge from among a wide range of different subject matter areas and disciplines.