

The Montessori Sensorial Materials: Part II

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Forest Bluff School Blog

What Do Children Do with Montessori's Sensorial Materials?

Imagine you are watching a four-year-old boy carry a wooden box with a red lid to a table. Then, he goes back to the shelf of Sensorial Materials and brings over a matching box—this one with a blue lid. (These are called the Sound Cylinders. Each is filled with about one ounce of grains of sand ranging from very fine to coarse, in subtle gradations so that each cylinder makes slightly different sounds when shaken).

The boy removes each lid and slides them underneath each corresponding box. He carefully lifts eight wooden cylinders out of the boxes and lines them up in front of each box: the ones with blue tops in front of the blue-lidded box and the ones with reds tops in front of the red-lidded box. He mixes these identical red and blue topped cylinders around, and then lines them up again by color in two columns. He is now organized and ready to begin the game.

He lifts a red-topped cylinder with his left hand and shakes it by his left ear. He then lifts the first blue-topped cylinder with his right hand and shakes it by his right ear; back and forth, he compares the sounds. He decides that they do not match, so he places the blue-topped cylinder in the back of the row of “blue cylinders” and moves on to the second blue-topped cylinder. He does this until he finds one that sounds the same and places this pair in a new column.

He does this with all the cylinders until he has a double column of matching pairs. He checks them one more time, comparing carefully, his eyes soft as he focuses all his attention on the very faint sounds. When he determines he is correct, he mixes them up, deciding he wants to do it again. After the second time through, he puts the materials back on the shelf and moves on to another activity.

This game introduces this young boy to a systematic way to compare qualities and keep the choices already tested in logical order. It gives him an option when he wants to compare other things in life and familiarizes him with an organized way to do math problems or eliminate options when looking for an answer to a “problem” of any kind. Equally important, it helps children to refine their sense of hearing and their capacity for concentration through an entire process. As a bonus, little children think such games are very fun! They love the challenge and the sensorial exploration.

What Characteristics Identify Montessori's Materials?

There are certain qualities that Dr. Montessori's Sensorial Materials share. They each isolate a sense or quality to bring the child's attention to it. There is only one of each material to eliminate confusion. And by “...removing as far as possible all distracting factors...[this] enables the child to engage in an inner and external analysis that can help him to acquire an orderly mind” (Maria Montessori, *The Discovery of The Child*).

Each sensorial material is:

- A materialized abstraction
- Progresses from general to specific
- From familiar to the unfamiliar
- Involves physical movement
- Isolates a difficulty
- Is limited in certain ways so that it draws in the child's focus
- Serves as indirect preparation for something else (learning to read, write, or do arithmetic)
- Contains an inbuilt control of error
- Provides a key to the world
- Has a specified place in a sequence of presentations

Arguably the most exciting thing about the Sensorial Materials are the games that the teacher teaches the children to play with them. There are matching games (where we connect two items with identical qualities), grading games (where we put objects or qualities in an order based on gradation of that quality), and language games (where we name, and sometimes label, qualities as we discover them).

The games are very important because they help children exercise and further develop their memory-building capacities. When we build memorizing techniques in a game-like fashion, we get better at memorizing information and are better able to hold foundational facts in our minds. Here's a surprise for you: Montessori children are not more intelligent; they've just received many more opportunities to develop their minds than children typically get in other educational settings. The games we play with the Sensorial Materials every day is one of the key ways this happens.

What A Wonderful World!

The knowledge the children gain through this specialized set of Montessori materials relates directly to their experience of the world around them. Children have a repertoire of categorized information at their fingertips and the language to identify and name their experiences in the world:

"This is hot. This is cool. This is cold. This is tepid."

"This feels rough. This feels smooth."

"This is heavy. This one is heavier. This is long, that is longer, this other one is the longest."

"This is sour. This is sweet. This is bitter."

"That is loud. This is louder."

And even more specifically:

"This is Poland. This is Mexico. This is Bhutan."

"This is the flag of Iraq."

"This is an obovate leaf. That one is hastate."

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“This is a pentagon. That is a hexagon.”

“That is lavender. This is fuchsia.”

“This musical note is a C. This note is an F.”

This vocabulary frees the child from ignorance and opens the world to them. Young children explore the world with their senses by nature, and they have absorbent minds which capture immense amounts of vocabulary and information in an almost photographic fashion. Montessori’s approach provides a perfectly matched pathway to developing a sophisticated and exacting way to identify and categorize the qualities in one’s three-dimensional experience of living. Montessori’s materials take abstract qualities and put them into concrete form for children to explore, become familiar with them, and then to identify and call them by name.

One might say that because of their experiences in the classroom with the Sensorial Materials, the child sees the world for the first time with all of its detail. Because of the Botany Cabinet of leaf shapes, the child really notices the various shapes of the leaves on the trees she walks past. Because of the Geometry Cabinet, he notices that a doorframe is a rectangular shape. A child sees that their hardboiled egg is an ovoid, that there are soft and rhythmic sounds of different notes in a song played on the stereo, that the world has so much detail, and every piece of it has a place, a name, and a relation to all else. Suddenly, the world looks different; it has come alive and there is so much more to explore, to learn! As they learn the names for each of these qualities and perceptions, the connections are solidified.

How satisfying this must be for them! Imagine the revelation, the feeling of belonging. This is a practice for developing one’s intelligence, quite literally.

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The experiences that 3- and 4-year-old children have with these materials give them minds that can think and bodies they can control—the ultimate preparation for math, language, art, science, and all other knowledge that will follow. Each child is prepared to learn. They each have their own unique system for categorizing new information as it comes in, for memorizing new information, and for learning to identify and organize information. They have the body control and the spatial awareness for laying out math problems and counting, computing, and recording their answers. Learning to read, write, and do math problems is made simple because of the sensorial experiences the children have had as a prerequisite. So, when your child recognizes, “The sky is blue!” or you see them staring at a leaf and hear them whisper, “hastate,” you have the Sensorial Materials to thank.