

# Table of Contents

The Elementary Program: An Overview	2
The Lower Elementary Program	3
Mathematics	4
Geometry	5
Language Arts	5
History and Geography	7
Science	7
French and Spanish	8
Music	9
Art	9
Physical Education	9
Library	10
Homework	10
Transition to Upper Elementary	11

## The Elementary Program: An Overview

The Metropolitan Montessori Elementary School serves the academic, social, emotional, and behavioral needs of children in their activity of self-construction from the ages of six to 12 years. The term "self-construction" is carefully chosen. Dr. Maria Montessori based her developmental philosophy and methodology on the belief that the child possesses, and must exercise, the desire and the potential to build himself or herself into a complete human being. Dr. Montessori designed her holistic educational approach to support the child in carrying out this responsibility and attaining this goal. The Elementary program at Metropolitan takes her work as its foundation, and adapts the curriculum and themes to reflect the realities of New York City and the 21st century. What do we seek to offer the children? How do we provide these offerings? How does the Elementary program differ from the Primary program? What happens after MMS?

The Elementary School continues the educational and developmental processes of the Primary School. All Montessori lessons contain dual purposes: the direct purpose of conveying the concept presented and the indirect purpose of providing either a foundation for a later, more complex activity, or a more detailed investigation and practice. Therefore, the Elementary program finishes the Primary educational introduction and creates maximum benefit for the child. The discipline, sequencing, organization, and attention to detail acquired by the Primary child when "washing the table," an exercise involving some 32 steps, now enables the Elementary child to master the intricacies of the algorithm for long division as well as the challenge to communicate logically in a factual essay.

The Elementary program, however, does not simply extend the Primary program because the child has evolved. Originally, the child acted as an absorbent toddler in need of facts and was concerned with building his or her individual self in order to thrive in a small local environment. Now, however, three sensitive points motivate the child:

- A need to break out of the small circle and into a larger social and physical world
- The possibility for significant intellectual development
- The awakening of a deep and complex moral sense

The seemingly uncomplicated toddler has evolved into a questioning, reasoning, and challenging young investigator and experimenter interested in seeing how and why all things work in the universe and in expanding his or her circle.

To meet the exigencies of this new child, the Elementary school provides an interdisciplinary program centered on initially revealing the mysteries of the child's physical universe. We then branch out into other disciplines either as they illuminate this world, or as they relate the story of people's struggles and accomplishments in living on this planet. In this way, the child receives the curriculum in an interrelated fashion.

Throughout these discoveries, the student undertakes a personal quest for his or her contribution to this fragile yet magnificent universe. The child comes to realize his or her place as a member of a social unit, experimenting with relationships and their demands within the security of a purposefully created and observed environment in the Montessori classroom. To meet the needs of this child for experiences with a larger universe, the classroom is extended to include relevant and stimulating field trips.

The child is assisted on his or her developmental odyssey in a variety of ways that build responsibility, gratitude, compassion, independence, and cooperative living skills. The child is given freedom and space to develop, search, fail, and succeed. The staff of Montessori-trained educators fosters a learning experience that involves imagination, risk-taking, independent exploration, and accomplishment. Children develop strength and self-confidence by reflecting on and overcoming obstacles on their own. The MMS quest is for the development of a contributing human being and not only a scholar. Mr. Mario Montessori, past head of Association Montessori Internationale, stated:

“It is not a question of education, not a question of instructing the mind in old or new mathematics, or old and new physics. It is life, pulsating, demanding life, that we give to the child.”

MMS graduates have moved on to successful experiences at Brearley, Collegiate, Horace Mann, Hunter, Nightingale-Bamford, Spence, Riverdale, Trinity, the Delta Program, and later, Stuyvesant High School, among others. The following pages provide details of the Lower Elementary Montessori program at Metropolitan Montessori School.

## **The Lower Elementary Program**

The Lower Elementary program contains the equivalents of grades one through three inclusive in the same classroom.

Older children model and teach younger students in collaborative learning experiences that encourage social development and academic skills. The three-year age grouping guarantees that each student has the opportunity to proceed at his or her own pace without the artificial pressures of grade level, and within a specially designed curriculum and environment, replete with time for individual attention. By working on projects in mixed-age groups, children learn to appreciate the value of different kinds of contributions toward a common goal and develop their ability to function effectively in a team.

Lesson size varies from one to six students in virtually all critical subject areas. These small, similarly skilled groups of children take part in individual follow-up assignments as well as a series of long-term, collaborative group projects. Throughout the day, as a child shows the need to ever observing teachers, one-on-one assistance takes place with remedial lessons given on the spot. In this purposefully designed environment, however, the first priority is to give the child the time and space to overcome his or her own obstacles and build intellectual and emotional strength and self-confidence.

From early on, the children experience the human continuum of reaching, stumbling, reflecting, and overcoming as the path to self-development. Teachers encourage students to question, take risk, challenge, seek to know why and how something is and not just what it is, and build problem solving and reasoning skills. The children "make friends with mistakes" and so turn mistakes into natural and common learning experiences.

Throughout the classroom experience, we focus on the children acquiring both the process of learning as well as specific academic content. Focused concentration, interest-driven exploration, active listening, and ordering of thoughts are nourished

constantly. A program of repetition with variation allows for the acquisition of curriculum and the development of the necessary studying and learning skills as lifelong habits.

Each child works with two professionally trained, full-time teachers who address all core subjects with an interdisciplinary approach for the entire three-year period. Parents observe and confer with head teachers twice a year in scheduled meetings and as needed throughout the year to nurture the dynamic partnership between child, parent, and teacher. Parents also receive a detailed year-end report on the academic, social, behavioral, and emotional growth of their child during the year. The two-person teaching team functions in concert with other faculty who specialize in French, Spanish, music, art, library science, and physical education.

## **MATHEMATICS**

As the student moves into this next level of his or her education and development, the Reasoning Mind takes over from the Absorbent Mind. The critical component of learning is now not just the acquisition of facts but understanding why something is the way it is. The students form their vocabulary and a base in numerations first: a deep knowledge of whole numbers to the millions, decimal fractions to the hundredths and beyond, and common fractions. Then the students create facility with this language. They study all four operations and seek to master facts, static and dynamic questions, and word problems. Throughout all of this activity, three strands are constantly growing:

1. The building of strength and confidence in mental math and mathematical reasoning
2. The development of flexibility in mathematical thinking, and
3. The genesis of the skill and courage to test oneself as to the accuracy of one's work by learning how to ask what is reasonable.

Lessons take place in small groups and proceed through a process of presentation and review with each new concept building on the previous achievement. In this way, review is ongoing. Lower Elementary students work in new lessons and on follow-up activities in mathematics on a daily basis. The topics covered in the three-year program are:

- History of Numbers and Number Systems
- Measurement of Length, Weight, Capacity
- Temperature, Time, and Money
- Place Value of Whole Numbers, Common Fractions, Decimal Fractions
- Ordering
- Rounding, Estimating
- Addition and Subtraction
- Multiplication
- Division
- Concepts of Common Fractions
- Concepts and place value of decimal fractions
- Addition and Subtraction with Common Fractions, Decimal Fractions
- Commutative and Associative Properties of Numbers
- Graphing (bar, picto-, pie, and line) and Coordinates
- Factors and Multiples
- Word Problem Solving
- Mental Math Strategies

For this work, we follow the Montessori curriculum. The children work with the Montessori materials until they reach a level of abstract understanding and move to paper. This movement to paper happens at different times for different children. The Key To Geometry and Key to Fractions, and Singapore Math are used to supplement this work.

## **GEOMETRY**

The children approach geometry as an integral part of the civilization built by human beings. We use an historical perspective to explain this branch of mathematics and enable the children to work creatively and constructively. Our first approach is concrete as the students absorb everything through their senses. The child manipulates and builds using the Montessori Geometric Box of Sticks, absorbs images and impressions, and creates the basis for abstraction through the actual construction of plane figures. There are two main themes in geometry that recur: the concepts of congruence, similarity, and equivalence, which later are applied to area and volume, and classification of shapes. We expose the children to theorems so that they build touchstones for later, more detailed work.

The children name, label and draw plane figures and solids. Geometric drawings progress from using a straightedge ruler to working with a compass and protractor. Perimeter, area, and coordinates are also introduced. During the three-year program, the students cover these specific topics:

- History
- Congruence
- Similarity
- Equivalence
- Polygons including Triangles and Quadrilaterals
- Kinds, Parts, and Measurement of Angles and Lines
- Parts of the Circle
- Measurement of Perimeter
- Measurement of Area of Rectangles and Squares
- The Concept of Volume
- Measurement of Volume of Cube
- Constructive Drawing
- Word Problem Solving

## **LANGUAGE ARTS**

Language enables the child to develop independence, self-knowledge, and self-confidence and, as a result, to begin to thrive as an individual. Language is more than reading and writing, more than conveying thoughts. It enables children to clearly formulate thoughts for themselves, by themselves. Therefore, the twin goals of the language program are clarity of vision (the ability to define ideas), as well as clarity of communication (the ability to share ideas with others in conversation and in writing). We present language arts to the children so they experience language as the vehicle that human beings use to communicate and create culture.

## **Reading**

As part of a balanced literacy program, the Lower Elementary employs a reading workshop approach. Each day in reading workshop, teachers provide direct and explicit instruction through a brief mini-lesson, along with a stretch of time for children to read books at appropriate levels. As children read, teachers provide assessment-based conferences and coaching.

The instruction teachers provide in mini-lessons is designed to teach skills children can draw on not just on one day but always, such as monitoring for sense and using the whole of the text to make meaning. Directly following the mini-lesson is the heart of the reading workshop, in which children have time to read just-right books and to practice the set of skills they have been taught. As children read, teachers work with individuals and carefully chosen groups to target specific areas of need and to provide support to meet the needs of each child.

In addition to comprehension skills, the reading curriculum also includes instruction in writing about reading and discussion. Dick Allington posits in *What Really Matters for Struggling Readers* (2000) that even just five minutes of conversation about a book can skyrocket comprehension. During independent reading time, children have the opportunity to talk with partners about their books, working alongside another reader to find deeper meaning. Children also practice using writing as a tool to grow their thinking about texts.

The reading curriculum will be fueled by different units of study across the year, which contain a balance of fiction and nonfiction reading. Teachers channel children's reading so that, for designated chunks of time, they are reading a similar kind of text. This enables children to practice the specific skills and strategies they are learning about in the whole-class instruction. The goal is that the skills and strategies students practice will impact the quality of their work in other curricular areas, such as cultural studies (history, geography and science) and mathematics.

## **Writing**

Children in the Lower Elementary write for a variety of audiences and purposes and in a variety of contexts. Teachers provide time for children to write in an extended context using a writing workshop format several times a week. As in the reading workshop, teachers convene children for direct instruction on specific writing skills. Immediately following this instruction, children have time to practice these skills in their own writing as they move through the writing process with increasing independence. The goals of writing workshop are to help children to develop a sense of qualities of good writing, to write with stamina and volume, and to develop foundational writing skills that will serve them well in Upper Elementary and beyond. The writing curriculum is designed to complement the reading curriculum, with a balance of narrative and expository writing. Additionally, children have the opportunity to use writing to grow ideas and extend their thinking in cultural subjects, science, and mathematics.

## **Word Study and Grammar**

In addition to the comprehension skills taught in reading workshop and the composition skills taught in writing workshop, the curriculum includes explicit teaching in phonics, spelling, and grammar. Children progress through a systematic word study (synonyms, antonyms, compound words, etc.) and grammar (analysis of parts of speech and of parts of a sentence) curriculum in keeping with Montessori principles. Instruction is designed

to support children's transfer of word knowledge into their reading. During writing workshop, children are supported in transferring all they have learned during word study to their independent writing.

## **HISTORY AND GEOGRAPHY**

What is life like today? What was life like before? These are the kinds of questions that form the essence of the Montessori approach to history. The purpose of teaching history is not to pass off a collection of facts but to arouse awareness of, gratitude for, and, when necessary, regret for the work of other human beings. History is the center of the Elementary Montessori curriculum since it is the story of humankind and, therefore, threads together all knowledge. History is the center of the curriculum since it calls the children to develop responsibility, empathy, compassion, and cooperation by observing what it takes to function in society with others. Finally, history stands as the linchpin of the program since it provides the children with the opportunity to comprehend, reflect, and question in a way that builds their creative and individual reasoning and decision making powers to affect their future actions.

Three guidelines drive the study of history: analysis of fundamental needs (nourishment, clothing, shelter, defense, and transportation), the creation of culture, and the impact of physical geography on humanity's decisions. To access history, we appeal to the imagination of the children through the use of stories, impressionistic charts, maps, and elaborate, detailed, illustrated time lines. We also expose the child to exact names, dates, events, and places and clearly establish the linkage between a person's actions and the imperatives of his or her geographic location.

Over the three-year program, the students address the make-up of the physical world (continents, countries, and oceans; land and water forms, climate) as well as these topics:

- The Coming of Life and People
- Fundamental Needs
- Timelines of Life and People
- The Measurement of Time including BCE, CE/BC, AD
- Movements and Migrations of Peoples
- World Cultures

The children accomplish this work following the Montessori curriculum, listening to the Montessori "Great Lessons," and using certain Montessori materials as listed above. We supplement this work with videos, presentations from outside experts, field trips to important museums and historical locations, and materials from the American Museum of Natural History, the Metropolitan Museum of Art, and others, all of which provide authentic artifacts and activities. The children's work includes making maps, time-lines, and models as well as cooking, research and report writing, working individually and in collaborative groups.

## **SCIENCE**

The children pursue science in the Lower Elementary program along two distinct tracks: all the studies connected to the earth (earth and physical science) and all the studies connected to life on the earth (botany, zoology, and ecology). The students seek to

understand the features of the earth, why the earth is the way it is, and how the earth consequently impacts humans. The children explore the natural order and laws of the universe, perceive the delicate balance of these natural laws, and begin to see the need for their contribution to maintain this vulnerable vitality of their environment. From this initial focus on the creation and structure of the universe, the students move on to the life of the universe, from the quantum to the cosmic, as represented by plants, animals, and ecosystems. The goal here is for the children to experience that all forms of life assist the earth in staying in balance and that without this life, the earth loses a significant component of its vitality. We address these topics in the three-year science program:

- The Creation of the Universe
- The Clock of Eons and the Timeline of Life
- The Composition of the Earth
- The Four States of Matter (liquids, solids, and gases)
- The Work of the Sun and Earth, of Air and of Water
- The Needs of Plants, Their Parts and Classification
- The Needs of Animals, Their Classification and Their Body Functions
- Interdependencies and Ecosystems
- Light, Sound, Magnetism and Simple Machines

We examine science through the annual Montessori Great Lesson of the Creation, associated stories of both organic and inorganic participants in the universe, the use of impressionistic charts to stir the imagination and experiments, and demonstrations to enhance understanding and raise further questions. We develop vocabulary and facility with the presented concepts by having the children work routinely and repetitively with the Montessori nomenclature cards, a series of illustrated research briefs, identification puzzles, as well as guided review of a select assortment of non-fiction on each topic. We supplement this work with videos and presentations from outside experts, field research in Central Park and Black Rock Forest, and trips to museums such as the American Museum of Natural History and the Hayden Planetarium as well as other sights of significance. The children's work includes making maps, charts, time-lines, models, and experiments as well as creative story writing, research and report writing, and classification of life species, all done individually and in collaborative groups. The students also care for plants and animals.

## **FRENCH AND SPANISH**

The language curriculum for the Lower and Upper Elementary schools seeks to provide the students with a solid understanding of the fundamental structures in French and Spanish. In addition, the children become acquainted with these cultures not only to enlighten themselves about their ways and customs, but at the same time, to have them acknowledge the differences and uncover the similarities between two cultures in general. Ultimately, one major goal is to enable children to realize that what is foreign does not have to be intimidating or out of touch. Reaching out to a foreign culture, understanding it, accepting it and most of all, respecting the differences are all part of an ongoing teaching approach throughout the curriculum.

Proficiency in a language is attained when the student is taught and trained at a very early age. Considering this factor, at Metropolitan the teaching of French and Spanish begins at the Primary level. In the first grade, families choose the language they wish the child to concentrate on until sixth grade. Small class sizes enable the student to benefit

fully from this learning process by allowing the children to express themselves more extensively.

The language program seeks to build a foundation in the basic structures. This teaching is accomplished with the support of varied materials ranging from textbooks and workbooks to audio- and videotapes. Diverse learning activities take place in class in order to stimulate and captivate a student's mind, which, at such a young age, is acutely fit for language learning.

From first grade to third grade the level of expectation gradually increases along with the child's developmental abilities. Students are constantly encouraged to express themselves in French or Spanish by making full use of their past and present knowledge. The children engage in listening, speaking, and introductory writing activities. They are required to use on a regular basis materials such as matching cards that seek to assess, reinforce, and stimulate.

## **MUSIC**

In the elementary program, we not only encourage the development of musical skills and knowledge, but also an appreciation for all kinds of music. The children are introduced to singing, pitch, notation, music history, rhythm, great composers, and movement at both the Primary and Elementary levels. Children participate in choir and string ensembles. By first grade, students can elect to receive instruction in violin. They perform in the holiday program.

## **ART**

Art class for the Lower Elementary level focuses on observation and use of materials. The child is coming from a rich sensorial experience, offered in the Primary level, which is continued to form an understanding of the subtleties and differences in form, surface, and color. We practice looking at our world, translating our ideas into two and three dimensions, and responding to the connection of art and language. We utilize collected imagery and illustration to track our ideas and observations. The children are introduced to various artists and styles in our lessons, experiment with techniques and materials, and use pastels, charcoal, watercolor, collage, textile, weaving, and clay. Most importantly, they work on an affiliation and elaboration of image and language. Discussing and critiquing the work we see and do leads us to create a dialogue between image and idea and internalize a lifelong touchstone in the mind.

## **PHYSICAL EDUCATION**

The motor and physiological growth of children between the ages of six and 12 is very different. Therefore, a child's ability to master particular activities varies according to developmental stages. A Montessori physical education program provides the space for a child to mature at an individual pace and thereby encompasses multiple levels of ability.

Youngsters six to 12 years of age are highly energetic. During these years, physical activity remains essential to children's growth and fitness. This is an optimal time for them to learn new skills and become adept at such activities as gymnastics, aerobics, and group games. Students begin to understand the cooperative spirit and necessities

of team play. All play steers MMS youngsters towards refinement of motor skills. Play builds strength, endurance, ability, speed, and flexibility. Activities practice running, jumping, skipping, throwing, catching and sliding. Later, we practice combinations of these skills as the first step toward developing individual, specific sport skills.

The physical education program at MMS is success oriented. A child who feels successful in learning new skills takes risks and wants to learn more. We seek to nurture all levels of performance and effort. As the year progresses, classes gradually become more demanding.

The curriculum of the six to 12 year old encourages skill improvement through the following challenges:

- How far/how high can I jump?
- How far and accurately can I throw? How high can I kick the ball?
- Can I run a little further today?

In both competitive and non-competitive settings as appropriate, the child builds team and individual skills, which lead to participation in more intensive skill instruction and practice of:

- specific sports, aquatic and/or gymnastic skills
- combinations of skills as they may occur in a game (dribble, pass, run, catch, shoot)

We seek to have children enjoy all the benefits of healthful physical activity, share adventures and enthusiasm and develop pride in their own athletic prowess. Most importantly, we want children to play as children, to develop skills that lead to self-confidence, and to see physical activity as a necessity throughout their lives.

## **LIBRARY**

The library at MMS reflects the importance given to critical thinking, including analyzing, and supporting conclusions with carefully researched data. In addition, the development of a love of reading as a lifelong joy is encouraged and nurtured. Because each child has his or her own learning style, the library collection consists of different media. Some children respond well to traditional print sources. Others absorb information more easily from pictures, while another group may find aural stimulation the easiest to process. The library contains fiction and nonfiction titles, DVD's, and a growing number of computer-based information sources. The library's catalog and circulation systems have been computerized.

The library also serves as a resource for the teachers at MMS in their preparation of materials for their classes and for the parents in their search for information about parenting and early childhood development. While the bulk of materials is geared to preschool through eighth grade levels of comprehension and interest, certain materials are acquired that address topics at an adult level.

## **HOMEWORK**

As guides to the development of our 6- to 9-year-old children, we, parents and teachers, constantly seek the fine balance of family time, extracurricular life, and free play with developing intellectual skills, responsibility, organization, and a strong work ethic. Extracurricular activities enrich the lives of our children as well as broaden their talents,

contribute to the development of their identity, and provide them with joy. Free play builds their social skills, self-reliance, creativity, and problem-solving abilities. These activities provide our children an opportunity to relax and release after an active day at school. A challenge of creating a routine for our children is not to over-schedule but yet to provide opportunity for growth, variety, and a change of pace.

As a school, we seriously consider the role of homework in the lives of our children. There is enough conflicting research available to support or refute almost any stance on homework. Here is a summary of the school's philosophy on the role of homework in the lives of children at the Lower Elementary level. We encourage you to ask questions as they arise.

Homework serves a variety of purposes. Our goals in assigning homework include:

#### Practical Life Skills

- To establish a nightly reading routine and to assist in the growth of a personal love of independent reading
- To deepen intellectual development
- To provide the child with an opportunity to work with familiar concepts in different ways, thereby extending the practice they do in the classroom

Homework practices in the Lower Elementary:

- Homework will be gradually introduced in the first year and will be expanded upon during each year of Lower Elementary.
- Expectations for homework are adjusted as needed to suit individual needs and abilities.
- Teachers will send home directions and materials for completing homework with children at the time the assignment is given. The child is encouraged to ask questions about any part of these instructions that she or he does not understand.
- If a child takes substantially more than the suggested time to complete a homework assignment, the child and his or her parents are encouraged to stop the work and let the teacher know that this was the case. If the child needs significantly less time to complete the work, the parent and child should share that information with the teacher as well.

By working together cooperatively, parents, students, and teachers can make homework a productive, practical part of the educational process in the Lower Elementary program.

#### **TRANSITION TO UPPER ELEMENTARY**

Maria Montessori has written that above all, education for the child must be "an aid to life." Our children live in the New York City area and after attending MMS will be entering, in all likelihood, a local independent school. There they will encounter competition, scheduling, extensive homework requirements, and a very abstract and teacher-centered approach to work. Therefore, in the Lower Elementary program and in particular, during the third grade, we not only extend the themes of the Primary program but also undertake several steps to assist the children in making their transition into a very different Upper Elementary environment. The degree of difference of the Upper Elementary program has been shaped by the practical requirements necessary to

prepare the children for the more traditional educational environments they will encounter after their graduation from MMS.

Some of the methods employed to aid this transition are:

- *Journals*: The students maintain journals that contain their work in lesson notes and assignments, with all corrections.
- *Work plans*: The children receive multiple assignments and instructions with varying due dates, some overnight and some of a more long-term nature. They develop a sense of responsibility for completing this package of work on a weekly basis.
- *Homework*: The most important aspect of homework at this level is reading books from the book bag (these are at the child's "just-right" level) each evening. Project work may be assigned at the second and third grade level. Other homework flows from and supplements class work as necessary and will be reviewed with the child and coordinated with the parents.
- The support of the parent is necessary to ensure that homework is considered important and is accomplished with the proper care, attention, and quality.
- *Assessments*: A variety of assessments flow from and review the understanding of all lessons and activities. The structure and evaluation of each effort facilitates each child developing self-awareness, an understanding and acceptance of their style of learning, and what logical next steps exist for them in a particular endeavor.

At MMS we constantly seek to develop self-discipline, cooperation, responsibility, honesty, compassion, self-esteem, respect for peers, adults and the environment; independence, tolerance, equality, joy, love, and imagination. We strive to create a sense of contribution and service, gratitude, and empathy. We reach for consistency in our behavior and performance. We encourage the children to take risks. We address these values in all our work and our interpersonal relations.

The MMS Lower Elementary program builds upon the foundation of the Primary years and provides the experiences, approaches, and opportunities needed by this "new" Elementary student. In so doing, we sow the seeds for successful exploration and culmination in the last three-year cycle of MMS, the Upper Elementary program.

Revised: August 2013