The Upper Elementary Program: An Overview

INTRODUCTION

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 twelve years. The term "self-construction" is purposely chosen. Dr. Montessori based her developmental philosophy and method on the belief that the child both possesses, and must exercise, the desire and the potential to build him or herself into a complete and unique human being. Maria Montessori designed her approach to education to support the child in carrying out this responsibility and in attaining this goal. The Elementary program at Metropolitan takes Dr. Montessori's work as its foundation, as well as adapts the curriculum and themes to reflect the realities of New York City and the 21st century.

The Elementary school continues the educational and developmental processes of the Primary school. For example, 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 school, however, does not simply extend the Primary program because the student has entered a new developmental stage. Now 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; and 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 things work.

The Elementary school provides an interdisciplinary program centered on initially revealing the mysteries of the child's physical universe. We then branch out into all other knowledge either as it illuminates this world, or as it relates the story of people's struggles and accomplishments in living on this planet. In this way, the child receives the entire curriculum in an interrelated fashion.

As Dr. Montessori stated: "A global vision of cosmic events fascinates the child and his intellect would soon remain fixed on one particular part as a starting point for more intensive study. As all parts are interrelated, they will all be scrutinized sooner or later. Thus, the way leads from the whole via the parts back to the whole. Thus, the child is taught within the unity of the universe. This is the very thing to organize his intelligence and to give him a better insight into his own place and task in the world, at the same time presenting a chance for the development of his creative energy."

Throughout these discoveries, the student begins to understand the way he can contribute. The child begins to act like 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. Again, to meet the needs of this child for experience within a larger universe, the classroom is extended to include a program of challenging and enriching field trips.

The child's work is designed to build responsibility, gratitude, compassion, independence, and cooperative living skills. The child is given freedom and space to develop, search, fail, and succeed by a staff of educators who facilitate this growth. Imagination, risk-taking, the sheer joy of exploring and accomplishing, and the enduring strength and self-confidence of reflecting on and overcoming obstacles on one's own, are sought and supported. The MMS quest is for the development of a contributing human being and not only a scholar. Mario Montessori 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."

Graduates of MMS have moved on to highly successful experiences at Brearley, Collegiate, Chapin, Dalton, Hunter, Nightingale-Bamford, Spence, Trinity, Fieldston, Horace Mann, Riverdale, and Stuyvesant High School, among others.

THE UPPER ELEMENTARY PROGRAM

The Upper Elementary program is comprised of grades four through six. It serves as a transition between the classic child-centered approach of the MMS Primary and Lower Elementary programs and the more traditional curriculum emphasized in the middle schools to which our graduates transfer.

Upper Elementary seeks to provide a rigorous yet sensitive and secure environment for behavioral and emotional self-development through a broad and vigorous array of academic, artistic, and physical challenges. It is our objective to assist and support each child in his or her quest for self-awareness, self-confidence, responsibility, determination, resilience, compassion, and integrity. We nurture and guide each student to expand his or her interests, initiative, and self-expression and to create an internal sense of excellence as a natural expectation. We aim for each child to discover that contribution, service, and teamwork enable all to thrive and, finally, for each child to begin to question what role each desires to undertake in his or her future.

It is the intention of the Montessori philosophy to assist in building "learners for life." In concert with this, Upper Elementary emphasizes teaching and learning how to study as much as it provides academic content. Listening, following oral and written directions, tracking multiple assignments and deadlines, organizing and presenting work effectively, taking notes, outlining, question decoding, short answer and essay writing, self-assessment and self-correction, time management and planning: the development of these practical life skills becomes an ongoing focus of the three-year program.

The classroom enables the children to function independently, with opportunity to progress at their own pace and depth, within reasonable yet challenging expectations. The children experience freedom in conjunction with responsibility and learn to live harmoniously in a heterogeneous group. Students are carefully observed by the same, full-time team of professionally trained educators for a period of three years. In addition, students are assisted by specialist teachers in French, Spanish, music, art, library science, and physical education.

In many ways, Upper Elementary works as a personal and academic tutorial for each student. Lesson sizes are small, allowing opportunity for individual follow-up. Teachers develop instruction and pacing according to the needs and learning style of the group.

Reading, writing and math lessons are given daily. Individual student/teacher conferences occur depending on necessity, and guarantee each child the type of support designed to facilitate self-development.

MATHEMATICS

In Upper Elementary, students develop a more sophisticated understanding of math by deepening their number sense, particularly with fractional numbers, and by deepening their understanding of basic operations. Students begin to problem-solve more strategically and to communicate their mathematical thinking more effectively, both verbally and on paper. They continue to learn and build fluency in basic procedures and algorithms. They also build deeper understanding of geometry – both procedural and conceptual understanding.

(1) Algorithms and procedures: Part of gaining proficiency in mathematics is learning the algorithms and procedures for carrying out basic arithmetic In fourth grade, students practice the algorithms for addition, subtraction, multiplication, and division with whole numbers, as well as with fractions and decimal numbers. In the later years they also learn more advanced procedures, such as for solving proportions, for computing the area and volume of regular and irregular figures, and the ability to compose and solve algebraic equations. In their final year, students study the main principles of probability, data analysis and number theory, applying the skills they have mastered to these new fields.

(2) Developing flexibility: The goal of the Upper Elementary math curriculum is to enable the students to apply their mathematical knowledge flexibly and creatively to solve novel problems, not merely to carry out procedures for solving familiar ones. This depends on helping students to develop conceptual understanding and a rich web of connections among topics. Some examples of ways the curriculum helps students develop this flexible expertise are:

(a) Students develop number sense by composing and decomposing numbers as they practice mental arithmetic.

(b) Students develop conceptual understanding of the basic operations and their properties by breaking up and solving arithmetic problems in different ways, looking for an efficient or interesting solution.

(c) Students study prime numbers, composite numbers, and factors in depth to help them gain a deeper understanding of questions involving divisibility.

(d) Students study the properties of rational numbers in depth to help them understand patterns in repeating / terminating decimals.

(3) Problem-Solving: Students gain confidence in approaching novel problems by gaining exposure to problems that require them to use their own judgment to choose an approach. Students also learn how to approach problems in a more strategic way. They develop a repertoire of "rules of thumb" for solving problems such as by starting off with a simpler version of the original problem or drawing a diagram for representing the numerical relationships involved. Students also gain comfort with risk-taking, knowing that false starts are an inevitable part of the process.

(4) Learning to Visualize Numerical and other Mathematical Relationships: Visualization is an important part of mathematical understanding, which students develop in many ways over their years in Upper Elementary. A simple but powerful example is the number line, in which a number's magnitude is directly related to its position on the line. Students also learn to use bar diagrams for representing numerical relationships in word problems, they learn to understand how the slope of a line graph relates to the rate of change, they use Geometer's Sketchpad for understanding the properties of shapes, and they do art projects in which mathematical patterns are displayed graphically.

(5) Communication: Students practice communicating their mathematical thinking. This communication takes place verbally in groups and in class discussions. Just as important, however, is the ability to lay out one's work neatly on paper. This is an important skill because a student's understanding is deepened if the student is able to reflect on and articulate his or her own problem-solving methods. Also, by laying out the work in steps on paper, the student is able to take on more and more complex problems. Additionally, the student learns to self-monitor and learns to find and correct errors.

We use the following materials in addition to the Montessori materials:

- **Singapore Mathematics** Primary Mathematics and Challenging Word Problems workbooks, New Mathematics Counts text
- **Key Curriculum Press - Key To Series –** especially: **Key to Decimals, Fractions, Algebra and Measurement**

We also use materials from the MathCounts and Math League websites:

- http://www.mathcounts.org
- http://www.themathleague.com

Additionally, we encourage students and parents to use websites and apps for facilitating mastery of math facts.

We also supplement our lessons with materials from ***The Art of Problem Solving*** series specifically:

Introduction to Counting and Probability

PreAlgebra

Introduction to Number Theory

GEOMETRY

As with mathematics, geometry is presented as a part of our history. The children create a context for the subject by learning about the stories of people solving problems in a

practical sense: building houses and bridges, or surveying land, for example. To find solutions to these problems, the theories of geometry and mathematics were formulated and tested by people long ago, people who become "real heroes" to the students.

The study of geometry is closely intertwined with the rest of the mathematics curriculum. Students learn to use geometry to understand arithmetic concepts, such as using the area model for multiplication and using graphs to understand rates of change. Additionally, students grow in their understanding of abstract geometry, beginning with points, lines, and angles. Students later learn to classify shapes according to the properties of their lines and angles, such as classifying an isosceles triangle based on the equality of its base angles. In conjunction with these geometric concepts, students learn to calculate different kinds of measurements of shapes, such as their perimeter/ circumference, and area. They also learn to use given information and geometric reasoning to draw conclusions about unknown angle and side-length measurements. The study of solids similarly includes concepts about their building blocks (vertices, edges, and faces), their classification, and their measurement (surface area and volume).

LANGUAGE ARTS

The Upper Elementary Reading and Writing curriculum is designed to foster life-long reading, writing, and thinking skills. Through carefully structured activities and assignments, students gain the skills and understandings they need to be effective readers and writers for the remainder of their educational careers and beyond.

READING

Reading is taught using carefully chosen novels and nonfiction texts. Teachers select books that are leveled appropriately for their individual groups. Teachers aim to choose books that are at an instructional level for students and yet will stretch students further in their comprehension and analytical skills, but that are not so difficult as to be counterproductive. Through book discussions, modeling, and direct instruction on strategies, teachers guide students toward deeper understanding of and deeper engagement with texts. As students progress through the program, the volume of reading they are expected to accomplish per night increases.

As part of the reading curriculum, students are taught to share their thinking about texts through writing. Students learn techniques to make thoughtful comments, ask insightful questions, and write brief summaries as they read. Teachers give feedback on ways students can use writing as a tool to deepen their thinking about texts and on ways to strengthen the quality of their writing.

Another component of the reading program is use of the school library to develop and expand an independent habit of reading as well as to expose students to new genres, authors and topics. Students are expected to bring their independent reading book to all classes in case there are a few extra minutes to read. Students make their own choices but get targeted feedback from the school librarian about whether or not this is a good choice for that particular student. Students who are struggling readers often need the most guidance in finding that “just right” book. The independent book should be a comfort level book. The reach books are more effectively dealt with in literature groups

when there is scaffolding provided by the teacher. The independent book reinforces the "habit" of reading. There is also an annotated summer reading list that provides students with a huge number of choices.

We assist the students to build a good understanding of literary conventions and techniques. They explore a variety of genre: realistic fiction, formula fiction, fantasy, traditional literature, poetry, non-fiction, essay, newspaper and magazine articles.

The students learn and experiment with the elements of a story: character, plot (chronological order/flashback; conflict involving person-against-self, person-person, person-against-society, person-against-nature; and types of action including suspense, cliff-hanger, foreshadowing, climax, denouement, coincidence); theme, setting (how the setting can act as antagonist, or illuminate character, or reinforce mood, or is symbolic); points of view (who is telling the story?); style (imagery, simile, metaphor, hyperbole, understatement), and tone.

Discussions play an integral role in the Language Arts program. They serve not only to bolster active listening and critical thinking skills, but also to help students to connect and categorize pieces of information systematically. Whole-group and small-group discussions are structured specifically to aid students in developing new understandings through discourse with each other. In small-group discussions, students take more of an active role in facilitating the direction of the conversation. As the students' facilitation skills progress, the teacher lessens the amount of modeling and scaffolding in discussions, and takes on more of a role of observer. Students progress toward being able to consistently: demonstrate understanding of reading material, integrate new vocabulary, listen to and analyze comments of other group members and ask relevant follow up questions, espouse and defend a viewpoint and to offer supporting examples/reasoning, acknowledge the validity of different interpretations, ask clarification about confusing passages, make predictions based on evidence, and make connections to literature and/or personal experience.

WRITING

Writing is taught systematically and directly. Much of the writing that students do, particularly expository writing, is connected to their assigned reading. Many of the critical thinking strategies that students learn in class discussions are transferable to their learning about effective writing. Students progress toward the goals of writing with a clear purpose or thesis, including all necessary background information using the 5 W questions (who, what, when, where, why), determining the best organizational structure to present their information, and utilizing the steps of the writing process as they move a piece from inception to completion. Students learn specific strategies, techniques, and approaches for both narrative and expository writing. Following are specific goals for students in each major form of writing.

<u>Narrative Writing</u>
Write narratives with a story arc and a clear purpose
Demonstrate effective brainstorming and planning techniques
Write more sophisticated narratives with multiple episodes centered around one main purpose
Demonstrate understanding of how elements of effective narrative writing are transferable to expository writing

Demonstrate increasing sophistication in plot structure, characterization, and scope of pieces
Write with clarity, voice, and strong connective language
Demonstrate increasing independence moving through the stages of the writing process

Expository Writing
Identify a main idea and develop it with supporting details
Use transitions appropriately and organize writing logically
Develop understanding of the writing process for expository writing, including brainstorming, preplanning, revision, and editing
Develop the thesis and supporting points in essay format
Use elements of quality narrative writing to develop effective introductions and conclusions
Demonstrate understanding of different types of essay structures, including personal essay, narrative essay, and literary essay
Teachers in all subject areas, especially social studies, world religions, and science, address these writing, listening, and critical thinking skills. Effective communication strategies are developed and reinforced across the curriculum.

SOCIAL STUDIES

Students growing up in the 21st century are in the midst of an information explosion unlike any in the history of humankind. It is crucial that students are prepared for the responsibilities and challenges they will face as citizens living in the Information Age. Social Studies education is comprised of the skills and understandings that students need to be effective and responsible citizens and stewards of the planet.

In designing our Social Studies curriculum, we use Grant Wiggins and Jay McTighe's *Understanding by Design*, as a framework for our planning. For each unit, we design "essential questions" as the driving force behind the unit. These questions represent the major understandings we would like students to reach from the unit, and they are designed to engender deeper inquiry and eventual transfer to other units of study. They are broad and by nature spark debate. This use of transferable concepts fosters the kind of critical thinking necessary for students to examine points of view and analyze the sources of the information they receive.

"How have societies organized themselves over time?" is one of the essential questions that are threaded through both fourth and fifth grade Social Studies. Students compare the societal structure of the particular era on which they are focusing with the ideals stated in the Constitution and the Bill of Rights. Students are also consistently asked to examine the responsibilities of citizenship. As citizens of the oldest constitutional democracy, our students must be taught the structure of their government and the responsibilities that they have as citizens. One of the major tenets of our democracy is that all people are created equal. Often, we as a culture have not been true to this principle in our actions and our thinking. We encourage students to look at the ideals that guide a society and the causes and forces that derail a city or country from those ideals. Social Studies education is an attempt to arm our students against past pitfalls and sophistry. Learning to listen to and appreciate divergent points of view is a central tenet of all our units of study.

Current events are used to tie the past to the present. Students need to see explicitly that societies over time face similar problems, and that they frequently do not pay attention to the lessons of the past. Students then examine why that is the case. Other essential questions that are part of any unit are: “Is history repeating itself?” “Who is telling the story?” “Why do winners usually get their version of events to become the most accepted one?”

In the fourth and fifth grade Social Studies curriculum, because our goal is that students understand the tools, methods and mindset employed by historians as they research and write about history, we keep our curriculum focused around a few broad topics that allow us to cover different eras depending on the interests of the students, what’s happening in the world, and even what might be a thought-provoking exhibit at a city museum. An example of a broad topic is Revolution, which might include: the American Revolution, the French Revolution, the Enlightenment (as a revolution in thinking), the Industrial Revolution (both in the early 1800’s in Europe and in China today), the New Deal, or the Digital Revolution.

Exploration is another central topic. Who were the first people in the Americas? How did they get here? Why did they come? How did they survive? What were their cultures like? There is a focus on the Aztec, Incan, Mayan and Anasazi cultures in order to develop students’ understanding of the great cities that existed in the Americas both before and at the time of the European exploration. Columbus is examined as both a villain and a hero depending on your perspective. Students develop understanding that who is telling the story is essential to examining information. Students study the exploration of the New York City area, Henry Hudson in particular and both the Dutch and English colonies with a special emphasis on looking at the lasting impact of the Dutch tradition of tolerance. The age of extremes, late 19th century and early 20th century rise of Rockefeller, Carnegie and J.P. Morgan offers students the history behind those names that are city icons.

Colonialism is studied not only in New Amsterdam and New York, but also in the 13 original colonies with special contrast between Virginia and the Massachusetts Bay colonies. The Mayflower Compact and a backward glance at the Magna Carta lead into the Declaration of Independence and the Constitution. Timelines are developed with the students so that they can develop a mental image of history’s unfolding and learn key dates.

In sixth grade, students continue the exploration of what is means to be a good citizen with an exploration of what it means to be a good human being. They undertake a study of world religions with the goal of developing working knowledge of the concept of religion as well as the distinguishing and fundamental features of six of the world’s major religions. The program is structured to enable students to see differences between religions, and then more importantly, to perceive and assimilate the underlying commonalities in all religions. Students consider the process by which individuals become not just human, but humane, and how compassionate, ethical decision-making is essential to this process.

Goals

The following are more specific learning outcomes for Social Studies.
I. Content Area Reading Skills
Demonstrate self-monitoring comprehension strategies during reading
Determine importance of information – look for the 5W's
Analyze Social Studies material for author bias
Summarize and synthesize nonfiction information
Demonstrate thinking, engagement, and problem solving skills

II. Content Area Writing Skills
Take notes during and after class discussions
Organize information hierarchically using an outline or other graphic organizer
Identify evidence and details to support a major topic or idea
Draw conclusions and include original thinking about historical events in writing

III. Inquiry and Thinking Skills
Listen to, question, and express opinions and observations in class discussion
Draw analogies from other times and places
Develop the ability to compare cultures objectively
Infer cause-effect relationships
Draw conclusions based on evidence
Research and develop arguments for both sides of an issue

IV. Democratic Participation Skills
Listen to and discuss varying points of view
Work cooperatively to clarify a task and plan group work
Understand and analyze current events issues and to develop the ability to take an informed position on these issues

WORLD RELIGIONS

The program in World Religions provides sixth grade students with a working knowledge of the concept of religion as well as the distinguishing and fundamental features of six of the world's major religions. The program is structured to enable students to see differences between religions, and then more importantly, to perceive and assimilate the underlying commonalities in all religions. It is designed to have the student experience that life is a process the purpose of which for the individual is to learn how to become human, and to see how religion can assist that process. The discussions and questioning of the program lead the student to see that life requires of the individual a constant series of choices, that at every moment each individual possesses the ability/responsibility to choose, and that religion in its "wisdom tradition" form offers them guides to compassionate, ethical choice making. Further, we seek to have the students "embrace the world" by understanding the values, philosophy, and cosmology of the wisdom traditions that shape the different regions of the world.

This program is further designed to help students to develop their research and analysis skills as well as their expository and personal narrative writing, listening, questioning, note-taking, and speaking/presentation skills. Students will use a variety of resources, including non-fiction commentary and analysis, readings from the sacred texts, biography, and historical fiction texts. Students will engage in their learning in various

ways throughout the project: brainstorming, class discussions and debates, questioning, reading non-fiction and fiction texts, developing and implementing both research and evaluation tools, as well as making presentations. Embedded in all discussions is the development of empathy as the students are challenged constantly to step into the shoes of the other person to determine how and why choices are made, practices are created, and values are adopted.

Students will encounter, reflect upon, discuss, research, write about, understand, and begin to discover a personal independent voice on:

- What is religion? Who creates religion? How? Why? What is a prophet? What is spiritual life?
- What does it mean to become human? Why is this "becoming human" the job of development of each person and not just natural? What is choice? How does responsibility impact choice?
- What is God? How do individual religions qualify and locate God?
- What are the "unanswerable questions" that people have wrestled with throughout time and regardless of place? How have people answered them in the past and in different places? How do we respond to them?
- What are the "wisdom traditions" of each individual religion? What are the practices? How and where did each religion begin and evolve?
- What are the common threads that weave through all religions and underpin all human development?
- What can go wrong with religion? How? What is extremism? Fundamentalism? How can these attitudes seep into any authority? What can/must you do as an individual when presented with "truth" and the "only way?"

GEOGRAPHY

Geography is integrated into all disciplines. Mathematical word problems may focus on data from various countries. Library research skills are built with finding answers to questions in almanacs and atlases as well as on-line. Understanding the physical setting in a novel is important to understanding both the constraints and opportunities of time and place. Social studies demands geographical understanding as do current events. The students approach geography from three perspectives: political, scientific, and cultural. In so doing, we weave a thread between all the social sciences and use one to shed light on the meaning of developments and events of another. The children discover how these geographical factors have forced populations to move and led humans to make, and fight over, political boundaries throughout time. Timely topics like global warming all help to reinforce that we all need to be stewards of the whole planet because eco-systems are connected.

SCIENCE

In Upper Elementary, topics include life science, earth science, comparative anatomy and physical sciences. Classes include hands-on engineering, design, and STEAM activities that combine science, technology, art and math. The Scientific Method is also implemented in lab experiments. Students begin class with a problem to solve and are encouraged to form a hypothesis, gather research, and apply their inferences to an experiment. Students hone their observation skills and develop the ability to carefully

and accurately record and assess changes in the natural and physical world. Black Rock Forest Consortium visits are interwoven into the class curriculum, therefore allowing students to assume the role of a scientist or researcher in the field. Scientists are often invited to give discussions and trips to museums and other sites that enhance units of study are planned throughout the year.

BLACK ROCK FOREST

Black Rock Forest is a picturesque nature preserve located on 4,000 acres in the Hudson Highlands, 50 miles north of New York City. It is a consortium of many New York area schools designed to facilitate research, education, and conservation. Upper Elementary students take frequent trips to Black Rock Forest and develop an appreciation for the flora and fauna of the landscape as well as the conservation practices employed by the forest staff. Fourth and fifth graders take several day trips and focus on forestry skills such as tree identification and orienteering. Sixth grade students, as part of their science curriculum and community service work, take on a larger scale project rooted in science and mathematics and designed to have a direct, positive impact on the forest itself. One such project was the construction of a bridge to complete a walking trail.

FRENCH and SPANISH

The language curriculum for the Lower and Upper Elementary schools seeks to provide the student with an initial fluency in spoken, reading, and writing skills in French and Spanish. In addition, the child is acquainted with the culture of the country to introduce him or her to the ways and customs of the people.

Proficiency in a language is attained only when the student is taught and trained at a very early age. Considering this factor, the teaching of French and Spanish begins in Extended Day (five year olds) and continues until sixth grade. Small class sizes enable students to benefit fully from this learning process by allowing them to express themselves more extensively.

The Upper Elementary language program seeks to reinforce already learned basic structures and teach new advanced structures in grammar. From fourth grade to sixth grade the level of expectation gradually increases along with the child's developmental abilities. Students are required to display a high level of autonomous learning as well as management of their work and they are constantly guided through this process.

First Year:
At the fourth grade level, students start the journey toward acquisition of grammar rules, conjugation of verbs, and use of vocabulary. They engage in varied listening, speaking, and writing activities. Moreover, their learning is assessed through regularly scheduled exams, tests, and homework, as well as through their ability to participate and express themselves in the classroom. A wide array of materials is constantly present which enables students to learn and evaluate their knowledge of the culture and its history.

Second Year:
The goal of the fifth grade French/Spanish curriculum is to provide a comprehensive introduction to the written language and fundamental grammatical structures. Students

are developing their written and presentation skills as they work on various research projects on current events and culture. Assessments such as essays, quizzes, dictations, oral, and chapter tests are given.

Third Year:
At the sixth grade level, students are using the languages with confidence as they undertake various written and oral activities. Weekly assessments help them sharpen their skills and prepare them for continued study in middle school and beyond.

PERFORMING ARTS: MUSIC, DRAMA and MOVEMENT

In the Upper Elementary program, we not only encourage the development of musical skills and knowledge, but also an appreciation for the other performing arts, movement and drama. The children are introduced to singing, pitch, notation, and rhythm, a variety of movement styles, and theater games and improvisation. Students also have the opportunity of receiving group instrument instruction in violin after school.

Students learn to utilize their voice as an instrument, singing clearly without tension and with clear intonation. Students develop their sense of rhythm and timing, and learn to recognize visual and aural rhythmic patterns. Students work on these skills in smaller, grade-level groups and in a large ensemble group with the entire Upper Elementary. In the larger group, students also practice choral techniques such as listening to the ensemble for blending and learning to sing harmonies with multiple parts. Movement is integrated throughout through folk and choreographed dances and theater games are used to enhance expression.

In the annual Upper Elementary play, students have the opportunity to combine musicianship, movement, and drama as they come together to produce a large-scale performance. Each student in the Upper Elementary is an integral part of the production, and all students are expected to put forth the effort and energy required for success, including memorizing and rehearsing their parts outside of school. Students learn skills and have the opportunity to develop talents that are unique to this type of experience. In particular, the community experience is at the forefront, as students work as a team to prepare their production. They develop motor skills and coordination as they memorize choreography. They learn to improvise and to be flexible in the face of unexpected changes in the script. They work closely with classmates from all grade levels, and all students have a chance to showcase skills different from those developed in the classroom. The play is a unique and crucial opportunity for students to develop poise, skill in presentation, a community-minded attitude and self-confidence.

PHYSICAL EDUCATION

Children of this age differ a good deal in motor and physiological development. These differences can affect a child's ability to master particular activities at different stages. A Montessori physical education program provides the space for a child to mature at his or her individual pace and therefore encompasses multiple levels of ability.

During these years, physical activity is essential to a child's growth and fitness. This is a good time for children to learn new skills and become adept in such activities as gymnastics, dance, and group games. They learn sports with fewer players so there is

more time for each individual. They begin to understand the spirit of cooperation and the requirements of team play. All play steers the child towards refinement of motor skills by building strength, endurance, ability, speed, and flexibility. All activities provide practice in running, jumping, skipping, throwing, catching, sliding and the like. Later, we practice combinations of these skills as the first step toward developing individual, specific sport skills.

In both competitive and noncompetitive settings as appropriate, the children build team and individual skills, which lead to participation in more intensive skill instruction and practice of specific sports and/or gymnastic skills and combinations of skills as they may occur in a game (dribble, pass, run, catch, shoot).

The Upper Elementary curriculum encourages skill improvement through the following challenges:

Problem solving, decision-making, teamwork and cooperation
How far and accurately can you throw?
How far and accurately can you kick the ball?
How well can you strike the object?
Can you run a little further today?

We seek to have children enjoy all the benefits of healthful physical activity, share adventure and enthusiasm, and develop pride in their own athletic prowess. Lastly, we strive for children to play as children, to develop skills that lead to self-confidence, and to see physical activity as a pleasurable part of everyday life.

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.

ART

Art, since it encompasses drawing, painting, ceramics and sculpture, provides a medium through which a child gains sensitivity to subtleties and relationships of form, color, light, and surface. However, it is also important that the child understands and gains an appreciation of design, which is the link between art and the functional objects we use

and see every day. Art at the Upper Elementary level is a workshop focused on observation and comprehension of the concrete world, introduction to materials and techniques, and methods of translating and manipulating concepts.

We strive to create a habit of awareness of environment, both. We explore, experiment, and practice organizing ideas to create with thought and intention. Writing about, discussing, and critiquing the work we see and do leads us to create a dialogue between image and idea and to internalize a life-long touchstone in the mind.

The students refine the use of materials such as charcoal, pastel, watercolor, textiles, clay, collage, weaving, and explore line, form, surface and perspective. We look at light and its qualities and learn basic color theory and tonal scales. The children are introduced to various artists and styles in relation to our lessons and they experiment with techniques. The children perceive the environment through the art objects they use and begin to create the linkage between function, designer technique and process, and the finished product.

COMPUTER SKILLS

Upper Elementary students agree annually to abide by the rules set out in the Acceptable Use Policy. The children are exposed to word processing, on-line publishing, and collaborative digital communication. Independent research using online resources is a vital part of their education. All work on the computers is supervised by teachers. iPads are available in most classes for on the spot research and reference use, as well as for communicating through classroom blogs or discussion groups. Students experiment with multiple forms of media to compose, edit, and share responses to books and reflect on lessons.

THE EXMISSIONS PROCESS AND THE SIXTH GRADE YEAR

The ex-missions process for graduating sixth graders and their families is a yearlong, highly individualized undertaking that encompasses academic preparation, student and family counseling, and personal reflection, building on the traits fostered by the school. In the preceding spring, the head of school, associate head of school, and Upper Elementary coordinator hold individual meetings with parents to discuss potential on-going schools. Many factors are considered, including the family's preferences and needs, the child's academic performance, test scores, interests, and personality. The school and the family develop an initial list, and parents are encouraged to investigate all options.

Immediately after school reconvenes in the fall, the head of school and associate head of school meet with parents to lay out the steps involved in the formal school search, including registering for tours, interviews and testing, and completing essays and applications. Copies of all materials are given to the school's information coordinator, who organizes required school records, letters of recommendations, and work portfolios. Upper Elementary teachers work with students on test-taking, essay-writing, interview skills, and stress management. Through the process, teachers re-enforce the school's

values, including independence, motivation and work ethic, organization and accountability, respect and gratitude. Students are asked to consider their own strengths and weaknesses, and develop personal goals to help them in assessing whether a school is a good fit. As test results and admissions decisions are announced, teachers work with students on evaluating possibilities and managing triumphs/disappointments.
In the last quarter of the year, the curriculum is oriented to hands-on exploration and collaboration, with several trips to Black Rock Forest to complete the sixth-grade project, as well as a three-day trip to a place of historical importance. In May, students begin to reflect on their unique experience at MMS as they prepare their contributions for the yearbook and their speech for graduation.

Graduation is the culmination of a family's experience at the school. Each child writes and delivers a short speech about meaningful experiences and lessons learned; a teacher gives a speech about the child that celebrates the child's strengths and underscores the personal bonds that develop at the school. Each sixth grader graduates with a sense of which s/he is and with the maturity to take on new challenges.

SUMMARY OF UPPER ELEMENTARY

Maria Montessori has written that above all education for the child must be "an aid to life." Our children live in the metropolitan 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 perhaps a very abstract and teacher-centered approach to work. The MMS Upper Elementary program is designed to prepare our children for the demands and reality of this new world. **Our Upper Elementary program, in particular, seeks to provide this "aid to life" by combining Montessori curriculum, philosophy, and pedagogical principle with several elements more commonly seen in traditional education.** In so doing, the students become skilled in the elements of traditional education by understanding their use and structure.
We provide Montessori lessons and approach with physical materials proceeding to abstraction (work on paper only), stories, experiments, and demonstrations, individual and group research, and field trips.
We also use:

Textbooks: Appropriate, carefully selected textbooks supplement the curriculum.

Journals: The students maintain journals in several subjects, containing the entire year's work in lesson notes. At the end of the three-year program, the children have created essentially a set of their own textbooks and a portfolio of their work.

Assignment Books: The children receive multiple assignments with varying due dates, some overnight and some longer term. Each child tracks responsibilities in an assignment book and learns to manage multiple deadlines.

Homework: Between one and two hours of homework, Monday to Thursday, flow from and supplement class work; the support of the parent is encouraged to ensure that the homework is considered important and is accomplished with the proper care, attention, and quality. There is independent work time during the day that allows students to either complete or get a good start on assignments.

Tests, quizzes, examinations: These flow from and review or supplement classwork and homework; the structure and evaluation of each such effort are prepared and reviewed carefully to ensure understanding and learning from mistakes as opposed to viewing them as defeats.

Schedules: In order to assist the children in developing organization and planning skills, we create and use a schedule of lessons each year. We utilize both a weekly and a daily schedule of lessons. The weekly schedule sets out a pattern for the week and day and assists the child in selecting appropriate work. The daily schedule sets out the specific lessons and assignments for each child on that day. With this daily schedule, the child knows what part of the day is available for independent work and can budget his or her time accordingly.

Student conferences: Held as necessary on an individual basis between child and teacher, these conferences enable the child to review academic performance and discuss future goals.

Portfolio Analysis: Student work is carefully reviewed, assessed, and commented on. In this way, both the child and the teacher possess a record of progress, timely suggestions for improvement, and a comprehensive body of work for ongoing reference and counseling. Parents participate in conferences with a team of teachers twice a year; fourth, fifth and sixth grade equivalent children also receive report cards twice a year. Fourth graders do not receive letter grades but fifth and sixth graders do.
At the heart of our work you will find:

Values and Self-Development:
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 support the children to take risks. We focus on these issues directly during our class meetings, in our individual child/teacher conferences, and in "laboratories" for behavioral and emotional development, including a three-day trip focused on an academic theme but also designed to develop new and positive peer relationships, and an ongoing program of community service.

Community Service:
One of the themes of MMS is community service. Each child is a member of a larger group, which thrives only when each member contributes and has the opportunity to grow. Children may undertake projects such as sponsoring a school in a developing nation. They may raise money for UNICEF, or start a composting project. Whatever the task, community service helps children develop a strong sense of values. The sixth graders participate in community service weekly in different levels of the school.

A Program of Field Trips and Visitors:
Classroom discussion opens our eyes and ears; the experience of going to the source and site of an event, or simply leaving our known environment stirs our passions and deepens our understanding to a level of sharing and empathizing. Each year, Upper Elementary embarks on field trips that take advantage of the rich resources of New York

City and the region. In addition, visitors such as storytellers, artists, and musicians are invited to share their worlds in our classrooms.

CONCLUSION

The Upper Elementary program takes a holistic view of each child and seeks to build a person and not simply a student. We assist children in evolving into independent and effective young adults who serve responsibly and compassionately to improve their complex world.

As Dr. Montessori wrote in *To Educate the Human Potential*: "Not in the service of a political or social creed should the teacher work, but in the service of the complete human being, able to exercise in freedom a self-disciplined will and judgment, unperverted by prejudice and undistorted by fear...Rather are our pupils equipped in their whole being for the adventure of life, accustomed to the free exercise of will and judgment, illuminated by imagination and enthusiasm. Only such pupils can exercise rightly the duties of citizens….."

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