



# The Village School

Montessori Education | est. 1977

## Toddler Program (18 to 36 months)

The Toddler Program provides a safe, supportive environment that introduces the child to the Montessori classroom in a small, intimate setting. Our primary goal in this program is to foster in the child a sense of independence, a joy in exploration, and a love of learning. Each child is respected as an individual.

The Toddler environment is prepared especially for this age group, with materials and activities that introduce the young child to basic concepts, support large and small motor development, and nurture self-esteem. Here a child begins to explore the world outside the home, learning to communicate with others, establishing self-control, developing social skills, and building self-confidence.

The classroom is designed to appeal to children's unlimited curiosity as they explore within a safe environment. Children freely choose activities that have been carefully selected and prepared by their teachers with the developmental needs of each child in mind. The daily routines of the classroom provide the consistency that toddlers need as they learn to coordinate and organize their movements with a growing sense of independence.

### **The Toddler Classroom is divided into the following work areas:**

#### **Practical Life**

This area focuses on daily living activities that help develop a sense of accomplishment and self-esteem. The children learn how to care for their classroom environment and physical needs, such as dressing, undressing, using the bathroom, hand washing and table etiquette.

#### **Sensorial**

This area includes materials that encourage children to use their five senses to develop classification and discrimination skills. Sensorial materials that engage the child in matching, sorting and grading activities form an important foundation for learning in all other areas such as math, language and science.

#### **Language**

Language development, a critical area for children in this age group, is encouraged through imitation, modeling and facilitation of creative expression. The classroom includes materials for naming, matching and sorting objects and pictures. A reading corner provides a cozy area where children may look at books by themselves or with friends, encouraging conversational skills. Teachers read to individual children as well as to the class, inviting active participation in the stories. Students are exposed to different types of music and musical instruments. Singing with puppets and finger-play is a favorite daily activity that fosters language development. Children are developing vocabulary rapidly during the first three years of life. The Toddler Program fosters the child's understanding and internalization of newly acquired words and the ability to use them expressively.

## **Mathematics**

Providing a sense of order within the class routines, designing sequencing activities and introducing number concepts all help develop mathematical thinking. Classical Montessori, as well as teacher-prepared materials, reinforces the child's understanding of quantity and number recognition.

## **Science**

Beginning concepts in science are incorporated into many areas of the indoor and outdoor environments. These include books, songs, puppets, puzzles and language area activities which spark an awareness of plant and animal life. In addition, classroom pets provide opportunities for children to observe and care for animals, fostering a sense of responsibility for living things.

## **Art**

This section includes finger painting, painting with brushes, sponges, strings, stencils and a variety of other materials. Through use of a variety of materials, which include crayons, markers, chalk, stamps, stickers and Play-doh, children express themselves independently and creatively as they develop their small motor coordination.

## **Physical/Motor**

The classroom contains cause-and-effect activities, as well as building materials which promote creativity and imagination. These less-structured activities are very important for development of language and social skills. Part of the daily classroom routine includes singing and movement activities, so important for gross motor development. These are also incorporated into the outdoor play time and weekly gym period. Indoor circle time helps children learn patience, self-control and improve listening skills, as well as learn to follow verbal directions.

## **Specials for Toddlers – Music, Movement and Spanish**

Children respond spontaneously and express themselves freely when they hear music, naturally incorporating their listening into physical movement and dance. Music forms an integral part of the activities in our Toddler and Primary Programs; daily circle time involves singing and movement that integrates rhythm, language and physical coordination through a variety of familiar and newly introduced songs. A weekly scheduled visit from our music teacher enriches their musical exposure through the introduction of Orff instruments and related songs and movement activities.

Maria Montessori emphasized the importance of physical movement as integrally linked to mental and cognitive development. Coordinated, purposeful and expressive movement is an inherent part of the Montessori prepared environment at every program level in our school. Toddler and Primary students visit the gymnasium with their classroom teachers to enjoy activities designed to develop coordination, motor planning, control of movement, and cooperative play.

Young children learn their first language(s) through immersion and absorption of the spoken languages that surround them. They are at the most sensitive period for learning new languages, as well as their native one.

Children in our Toddler and Primary programs are introduced to Spanish within their classroom settings, through the use of songs, objects, pictures and culturally related stories from Spanish speaking countries. Basic vocabulary of familiar, everyday objects and expressions are introduced in Spanish through direct involvement in engaging and enjoyable activities. Classroom materials invite the children to practice with the vocabulary introduced during class lessons.

Each classroom has 10 children and 2 teachers, a 5 to 1 student/teacher ratio.



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## Primary Program (Ages 3 to 6 years)

The Village School primary program is specifically designed to meet the needs of children ages 3 – 6 years. For details of our curriculum please see the descriptions of the individual areas below.

**A key principle of the Primary Program (indeed, of all our programs) is the multi-age classroom.** We know that children progress at different rates in different areas. In a mixed-age group the younger children have role models in the older children, and the older children acquire additional confidence by being the classroom “elders”. For them, teaching a younger child is an excellent way to consolidate their own learning.

**The Primary classroom environment is carefully planned and is rich with Montessori materials that encourage hands-on learning.** The children learn by doing; they work with concrete self-correcting materials that aid in the grasping of abstract concepts. Materials are carefully organized from the simplest to the most complex, with each activity broken down into logical and sequential steps. The children are given individual lessons by their teacher on each material and are encouraged to master one before moving on to the next. Everything in the classroom is child sized; each classroom includes a child sized private bathroom. It is the children’s environment, designed to support their feeling comfortable and confident in their own ‘work’ place.

**The Primary Program focuses on the whole child; close attention is paid to each child’s academic, social, emotional, physical and cognitive growth.** The Village School works to provide the child a wholesome learning experience where each individual child is respected. The children become naturally self-motivated as their independence is developed and encouraged. This in turn nourishes their self-image and helps them to be self-motivated. Each child feels success and enthusiasm because they are appropriately challenged to their abilities.

**Teachers keep thorough notes and observations and plan appropriate work for every child.** Respect for each other, as well as for the environment is part of the Grace and Courtesy that is modeled and encouraged, not just at the Primary level but also throughout The Village School. The children are introduced to public speaking as they are given opportunities to speak to their class as a group and respond to questions and comments. They begin to understand the idea of research and investigation through various activities found in the environment. Children work independently, in pairs and small and large groups, learning problem solving, social skills and organization in the process.

The Primary Classrooms include the following integrated curriculum areas: **Practical Life, Sensorial, Math, Language, and Cultural Studies (including Geography, Science, Art and Music).**

### Practical Life

Practical Life activities are the first lessons the child is invited to experience and explore. These beautiful and enticing materials are carefully set up to draw and speak to the child’s curiosity and exploration. Exposure to these activities lays the foundation for future academics. They prepare the child for activities which require more developed levels of order, concentration, coordination and independence.

The Practical Life area at The Village School encompasses the refinement of everything you do in everyday life. The materials enable the child to develop independence, a sense of order, the ability to focus, concentrate, build coordination, and develop organizational skills. The tasks help children learn to control their movements, master the care of themselves and care for their environment. The activities in Practical Life include objects and materials normally encountered in everyday living experiences, such as cleaning, sweeping, pouring, dressing, learning to tie, and caring for class plants and animals. The underlying, indirect aim of the work, to aid in the training of the eye for reading and the strengthening of the hand and pincer grip for writing is what makes these materials so important at this stage of development. Grace and courtesy form an integral part of all classroom activities. Children are encouraged to shake hands, act as hosts, use polite manners, clean up after snack, and serve peers first after food preparation, all helping to develop important life skills, such as patience and understanding.

### **Sensorial Materials**

Maria Montessori said that a primary purpose of the sensorial exercises is that “the child train himself to observe, that he be led to make comparisons between objects to form judgments, to reason and to decide”

The Sensorial area enables the child to gain information through the exploration of his or her senses. Our beautiful Montessori materials encourage children to use their five senses to develop classification and discrimination skills. Between the ages of three and six, the child is drawn to things that stimulate their senses. With the use of various materials, the child begins to develop the foundation for math skills, spatial relations, preparation for reading and writing, visual discrimination of length, height and width, volume, colors and shapes. All of these exercises are designed to enhance and refine the child’s sensory awareness.

### **Language**

Language is an intricate part of The Village School Montessori classroom. Maria Montessori said, “Language is an instrument of collective thought.” It is the thing that separates us from other forms of life. Early childhood is the sensitive period when language is formed. It is during this time that children take pleasure in listening to and then repeating the spoken language.

Vocabulary building takes place daily in our classrooms through the use of big books, poetry, and daily read alouds. These many varied language experiences throughout the classroom create the foundation of writing and reading. The child is first introduced to the sounds of the letters. Children learn through their senses using sandpaper letters to trace with their fingers while at the same time saying the sound of the letter out loud. When we present a letter to a child and enunciate its sound, they fix the image of the letter by means of the visual sense. What they see they can recognize and read, and when they trace they learn how to write. After several sounds are mastered, they can begin to encode (spell) and decode (read) words by linking these sounds together. At any one time coming into a primary classroom at The Village School, you may see one child writing a story with our moveable alphabet, another may be reading a chapter book and still another may be learning their first sounds. Since the children progress at their own rate, we are able to constantly challenge their reading and writing abilities at the level that is appropriate for each child.

### **Math**

The Montessori math materials at The Village School are perhaps some of the most attractive and alluring materials in our classrooms. Children and adults are drawn to these materials. Visitors to our classrooms often wish that they had learned math this way.

Maria Montessori believed that children could absorb mathematical concepts naturally. She deduced via observations that there were periods in children's development where they absorb mathematical concepts and ideas naturally through the environment, as well as through the manipulation of concrete materials. The Practical Life, Sensorial and other areas in our Montessori classrooms help lay the foundation for math. These areas provide the children with opportunities to order, sequence, measure, and grade. Some examples of these are when children learn about estimating by determining how many objects are in a glass jar and about precision and exactness by learning to measure out the snack they serve themselves every day. These activities not only help the child gain independence, but also provide the indirect preparation for higher-level math skills.

Math comes alive in our classrooms, as the children work through the math materials in a sequential order, learning basics such as numeral recognition to developing concepts of addition, multiplication, subtraction and division. Children are able to internalize the concepts of number, symbol, sequence, operations fractions and more. The concrete materials help the children to internalize the basics with understanding and help them obtain a clear vision of what they are learning. It is not uncommon in our primary classrooms to see young children adding four digit numbers together using Montessori math materials.

## **Science & Cultural Studies**

### **Science**

Primary science curriculum aims to cultivate a lifelong interest in observing nature and discovering more about the world in which we live. Children work with activities that include exploring magnetism, growing plants, learning about the lifecycles of plants and animals, animal classification, the solar system, the human body, dinosaurs, and doing simple physics & chemistry experiments.

### **Geography**

The Geography curriculum creates opportunities to explore and develop concrete foundations for understanding the world. The children study the seven continents over the three-year cycle in Primary. They experience concrete examples of each continent's countries, people, language, literature, dress, and wild life. Exploration and research through use of maps, puzzles, booklets, and artifacts introduce the child to the planet's great diversity of land and people.

### **Art & Music**

Art and Music develop the child's creativity and sense of beauty through expressive use of materials and activities. The art curriculum is integrated throughout the classroom environment through various activities and also includes a designated area for children to explore and express themselves through various art implements. Music is incorporated in many ways in the Primary classrooms from circle time songs and games to formal music classes where different instruments are introduced and children are given the opportunity to learn tone and rhythm through singing.

## **Kindergarten Program (Ages 5 & 6)**

**The Village School Kindergarten program is a unique and wonderful experience for children that are 5 years old by September 30.** The class consists of 12 children with one teacher. This program offers the opportunity for the sustained independent work that is the core of the Montessori Method, as well as additional academic challenges within a whole group experience. The Kindergarten year is a critical component of our three-year Primary Program. This is a period when the work that students have practiced during the first two years in Primary is integrated academically and conceptually into a new level of understanding.

**Our Kindergarten program is a full-day academic program and serves as a bridge to elementary (particularly Montessori elementary), offering in-depth explorations of academic materials.** Children are in a Montessori environment for the entire day, which affords them many advantages. One half of the day is spent with their same aged peers, while the other half is spent in the multi-age (3 to 6 years) classroom. In the multi-age classroom, they often naturally assume positions of responsibility and leadership while serving as mentors to their younger peers. They develop increased attention to a task as they work on activities that require multiple steps and a longer period of time to complete. Leadership skills emerge and social skills are refined as the children accept more responsibilities within the mixed age group.

The classroom contains the traditional areas of our primary (3-6) Montessori classroom, which are **Practical Life, Sensorial, Math, Language, Geography and Science** with the addition of many advanced Montessori materials. The children have a teacher-created work plan that guides them through their required activities for the week, such as writing books, math books, and journals. It helps them learn important life skills such as time management and independence. Opportunities are made available for students to expand the research abilities learned in their Primary class. They build upon their public speaking skills during group activities and reading aloud.

**The Special Programs, Art, Music, Physical Education, Technology and Health** are taught by dedicated specialists in those fields and form an important part of the Kindergarten program.



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## Lower Elementary (6 to 9 years old)

**The Montessori approach of our classrooms provides the framework for students to become academically strong, proficient and curious learners.** Students are expected to become knowledgeable in content areas and are taught how to think, rather than what to think. They actively engage in building a strong academic foundation necessary for all future learning. They are becoming lifelong learners. For details of our curriculum please see the descriptions of the individual areas below.

**The Lower Elementary Program is designed to address the child's complete development.** Children in this age group explore their environment with an insatiable curiosity, accompanied by a growing imagination that is ready to move from concrete experiences to a gradually more abstract perception of their world. They are searching for an understanding of who they are and where they fit into the world of their classroom, family and society at large. This is the time for big questions and learning about their world and the universe through a story-telling format.

**This is an important period where children are developing a strong sense of morality and fairness.** Class group meetings encourage open dialogue among members of the classroom community. Grace and courtesy lessons and role modeling form as important a part of children's experiences as any other aspect of their learning. Through teacher modeling and facilitation, students develop conflict resolution skills and learn to use active listening and "I" statements to come to mutually respectful and acceptable agreements with peers.

**The individual academic, social and emotional aspects of a child's development are inseparable and hold equal importance in their growth and learning.** The Lower Elementary classroom provides an environment in which the child is given the opportunity to explore the rigorous academic curriculum within a framework of respect and support. Individual learning styles are supported through the use of concrete materials, as well as varied teaching methods that most appropriately address the individual's needs for success. Students are given the opportunity to work individually, in small groups, or with a partner on various assignments. They learn time management through use of individualized weekly work plans. This is accompanied by a growing expectation of responsibility for completion of homework assignments in a timely and thorough manner. Each child is considered a contributing member of the community by fulfilling classroom responsibilities and participating in larger volunteer community projects.

### Language

#### **Communication**

Language is the vehicle through which students explore their world. The Lower Elementary Language curriculum integrates the individual areas of Reading, Grammar, Writing, Spelling, Vocabulary. Oral Communication and Penmanship.

## **Reading**

A balanced literacy program provides students with a phonics background, along with other strategies to grasp meaning from text. Students read independently during silent reading periods, with a partner and in small groups. Stories come alive while listening to stories being read aloud. Students gain fluency as they transition from “learning to read” to “reading to learn”. Students are exposed to different literary genre and become involved in author studies, where a particular style of story writing is explored.

## **Writing**

Students learn all aspects of the writing process as they move through the three -year cycle of the Lower Elementary program. From construction of simple sentences to short paragraphs and longer writing pieces, students develop organization and clarity in expressing their ideas. Writing is integrated throughout the curriculum, with the cultural and science areas providing many individual motives for students to express and share what they have learned in short reports. Journal writing provides opportunities for free expression of ideas and feelings on a personal level. Creative story writing taps into the inner drive to give form and life to ideas, emotions and mental images that are a part of a child’s imagination.

## **Research**

The rich and stimulating curriculum of the classroom provides many opportunities for the child to pursue particular areas of interest through independent and partner research. An introduction to the five subclasses of vertebrate animals, for example, may provide the incentive for a student to learn more about a particular animal of interest. The classroom library contains a wide selection of books at different reading levels to support student research. Classroom computers and visits to the technology classroom allow students to conduct their search for information as they learn to use technology in a productive manner. Research becomes a natural process of learning at greater depth, based on curiosity and interest.

## **Grammar and Vocabulary**

The six to nine year-old child is developmentally at a sensitive period for learning the structure and complexity of language. Children are fascinated by new and interesting words as they study new topics in history and science. Through concrete experiences with the Montessori grammar materials, students progress from learning about the parts of speech to analyzing simple sentences. Learning the meaning of words transcends mere definitions to encompass the many ways in which they may be used, forming a rich foundation for development of interesting and descriptive writing.

## **Oral Presentations and Performances**

The confidence in speaking before an audience grows naturally and gradually in our students by having many opportunities to share their thoughts and feelings in a variety of formats. From informal class group meetings, to sharing newly learned information in small groups, to holding up pictures as part of a larger presentation during a school assembly, to reading researched information aloud for a program level presentation, students become very comfortable speaking before a large audience. Students know and feel they are part of a supportive and respectful community where each person’s work is valued.

## **Mathematics**

### **Mathematics**

Mathematical concepts are presented in a logical sequence, beginning with the concrete and leading to more abstract concepts. Students have the opportunity to process new concepts through use of a variety of materials which support the development of a mathematical mind. Understanding takes

precedence over memorization, which develops through repeated work with the four operations. Student work and practice lead to recognition of patterns, probability, and practical applications of mathematics.

The three-year curriculum includes practice with the four basic operations, word problem solving, work with fractions, time measurement and reading, value of monetary denominations and simple exchanging, graphing, estimation, solving for the unknown, positive and negative integers, mixed numbers, squares and cubes of numbers, perimeter and area study. Through their work with the Montessori and other supporting materials, students are introduced to advanced mathematical concepts and learn to gradually make the connection between the concrete representation of the idea and the application of the concept on a wider scale.

### **Geometry**

Geometrical concepts that are introduced at the sensorial level in the Primary Program are explored further through the use of Montessori materials. The study of lines, angles, basic shapes, plane figures, polygons and quadrilaterals form an important foundation for further exploration of geometrical concepts.

### **Science & Cultural Studies**

This area includes the interdisciplinary study of history, geography, geology, physical science, zoology and botany and forms the core of the Lower Elementary curriculum.

#### **Geography**

Students learn about all the continents, including the biomes of each, as part of a three cycle. They develop an understanding of the climatic impact upon the plants, animals and people living within each region. Mapping skills, familiarity with landforms, the composition of the Earth, and the effects of wind and water also form an integral part of the cultural studies curriculum.

#### **History**

History is taught through impressionistic stories, intended to inspire and spark imagination. Children learn to construct the concept of time through guided lessons, stories and classroom materials, which include the nomenclature related to time measurement on a small and large scale. The history of mankind's accomplishments, such as the histories of writing, math and measurement are studied using a timeline approach.

The history of the Earth is explored through narrative presentations, hands on demonstrations, use of models, picture and nomenclature cards and a variety of classroom activities for individual student practice and exploration. A study of the fundamental needs of humans and the interdependence among all human beings develops over the three years cycle, with many lessons, projects and opportunities for students to explore and internalize these concepts at a level that matches their period of development.

#### **Biology**

Students are introduced to observable external features of the five vertebrate classes and the external parts of plants. The study of body functions of animals and plants follows the observation of external features. Classification of different life forms follows this simpler introduction to the study of living things. Recording observations of class pets helps students develop skills associated with objective and detailed observations.

#### **Physical Sciences**

Introductory topics of study include the solar system, weather, food chains, geology and chemistry. Students learn about the scientific method through observations and conducting simple experiments.

### **Field Trips**

Day trips for students at the Lower Elementary level make it possible for children to directly experience concepts presented in class. Trips to the Sterling Hill Mining Museum, the Brooklyn Botanical Gardens, Great Swamp Nature Preserve, the Turtle Back Zoo, the Newark Museum Planetarium, and NJPAC are some of the places we visit over the three-year cycle of the Lower Elementary Program.

### **Community Service**

The Lower Elementary Program has been responsible for coordinating the Baby Basics Program at our school over the past seven years. Students make posters and fliers to be displayed throughout the school, and collect and organize the donated items for the Children's Aid and Family Services. The older third year students tally and categorize the types of items and load the van used to transport the supplies to the agency. Students develop awareness of the needs of others in their community through engagement in service activities of this nature.



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## Upper Elementary (Ages 9 to 12 years old)

**The Upper Elementary Program for grades 4 through 6 is designed to address all aspects of a student's learning.** The individual academic, social and emotional needs of the student are inseparable and equally important. The classroom provides an inquisitive, cooperative, and respectful environment with academic opportunities and challenges that enable students to grow as open-minded, critically thinking individuals. For details of our curriculum please see the descriptions of the individual areas below.

**The Upper Elementary Montessori classroom provides the framework for students to become academically strong, proficient and curious learners.** Students become knowledgeable in content areas and are taught to think critically and creatively rather than merely memorize information. They actively engage in building a strong academic foundation through continual exploration of new ideas. Students experience learning as a natural and life long process.

**The curriculum supports the passage from concrete to abstract thinking, providing the materials and experiences to make it a successful transition to content based instruction.** Individual, partner and small group projects are integral parts of the learning process, helping students develop time management, organization and cooperative social skills. Students become motivated and interested participants in learning as they experience the challenges of a stimulating academic environment. Through the process of seeking out the necessary assistance and resources in the classroom, collaborating with others and receiving feedback about their work, students develop greater independence and understanding of their personal learning styles.

Through regular community meetings and teacher modeling and facilitation, students develop intrapersonal and conflict resolution skills.

**Public speaking develops on a small scale through participation in class group presentations and progresses to oral presentations before an entire school community assembly.** Sixth year students conclude an entire year of study on a topic of their choice by presenting their research to their fellow classmates, parents, teachers and other members of the school community.

### Language

#### Reading

The reading curriculum supports the process by which readers actively construct meaning and relate prior knowledge to written text. Proficient readers use a variety of strategies to adapt to increasing levels of complexity and respond to text in a critical manner.

#### Writing

The writing curriculum is designed to develop effective communication skills that may be incorporated into a variety of writing styles and genres. Writing techniques and concepts are introduced and expanded over a three year period. Students apply concepts on an increasingly independent level and

begin to develop a personal writing style. Student writing will evolve and progress in length, sentence complexity, level of vocabulary and organization. Students are taught the mechanics and elements of writing as they practice with creative writing, letter writing, tall tales, memoirs, news writing, fairy tales, essays, reports and poetry.

### **Research**

Students build upon the research skills practiced in Lower Elementary to learn about topics of study in greater depth. With their developing reading and writing skills, students use classroom library and Internet resources to gather information and prepare reports of a depth and length that is appropriate for the developmental skills of each learner. Sixth year students conduct extensive research on a topic they select to pursue during the course of the school year. A variety of sources are used in preparation for writing their in-depth research paper.

### **Grammar**

The grammar curriculum is designed to strengthen language skills as they apply to reading and writing. Students learn the complex structure of language and draw finer distinctions between the functions of words. Sentence analysis study provides the tools for understanding and developing awareness of the structure of language.

### **Vocabulary**

The development and use of vocabulary is essential to effective spoken and written communication. The Montessori classroom is rich in opportunities to study multiple word meanings, etymology and development of a rich foundation of words.

### **Spelling**

*The Instructional Level Spelling Program* meets the needs of a variety of learners and fosters the development of standard spelling. Students are introduced to one specific spelling pattern per week and learn words that fit that specific rule.

### **Oral Presentations and Performances**

Speaking formally and informally and listening to others are all essential components of the learning process. Students engage in discourse and dialogue about literature, nonfiction and other topics on a daily basis. They are presented with opportunities to prepare and participate in presentations to small and large audiences. The Sixth Year Expert Project Presentation represents a very important right of passage for Upper Elementary level students who are moving on to Middle School, as they present their research before a full auditorium of students, parents and teachers. The confidence that our students display in speaking before such a large audience is an outgrowth of having many opportunities throughout their years in Lower and Upper Elementary to practice and develop essential oral speaking skills.

Students rehearse and perform a yearly play before the entire school community. All students are actors in these performances, which usually involve literature or cultural themes.

## **Mathematics**

### **Mathematics**

The Math Curriculum provides a concrete foundation for new concepts being introduced, while maximizing successful passage to abstraction. Students continue practicing with materials to enhance the internalization of increasingly more complex operations. Emphasis is placed on the use of math as a

part of daily life to solve problems. As students progress through the program, they will appreciate the relevance and usefulness of mathematics.

Students learn and practice strategies involved in solving word problems. They read the problem, determine the method for solving it and execute the necessary steps to reach a reasonable solution.

### **Geometry**

The Geometry curriculum includes the study of equivalence between shapes, calculation of area, volume and surface area, and the study of the circle. Teachers present lessons using concrete materials to demonstrate concepts. Students derive the abstract formulas for calculations through their practice with the Montessori geometry materials. The Customary System of Measurement and the Metric System of Measurement are explored.

### **Science & Cultural Studies**

The Cultural curriculum integrates studies in History, Biology, Physical Science and Geography.

#### **History**

The History curriculum focuses on the role that humans have played since their arrival on the planet. Students study evolution and the cosmic role of humans in the universe. Fundamental needs throughout time are studied as students learn about the similarities and differences in how these needs were met while researching the great achievements of past civilizations.

Part of the three year cycle of study in History entails learning about the structure of the government and history of New Jersey.

#### **Biology**

Students study the vital functions of plants and animals, classification of all the kingdoms of life, and a study of the human body as a system. The science of life and life processes are explored, including the structure, function, growth, origin, evolution and distribution of living organisms. Students learn that all forms of life are specially adapted for their own survival.

#### **Physical Science**

The Physical Science curriculum provides the foundation for understanding the basic laws of physics and chemistry. Students study the physical forces that shape our planet while developing knowledge of the characteristics of nonliving elements on Earth. They are continuously involved in researching and refining their observational skills. The scientific method of observation is used to make predictions, conduct experiments, make observations, evaluate results and draw conclusions. Students learn about simple machines, electricity and magnetism, basics of chemistry, the solar system the wetland environment and weather as units of study.

#### **Geography**

The study of geography includes exploration of the Earth's physical characteristics, as well as the study of patterns of human settlement and influence on the Earth. Students develop map- reading skills with use of geographic tools and acquire understanding of patterns that shape the Earth's surface. They study land and water forms, the characteristics of ecosystems and processes that create patterns on Earth.

**Field Trips**

Field trips are designed to enhance the cultural and science curriculum by providing students with direct exposure to topic areas they are studying in the classroom. Museum trips, trips to zoos and nature preserves, visits to the New Jersey state capital and theater performances all make it possible to extend the classroom boundaries to the outside world. A yearly away trip helps students formulate appropriate responses to a variety of scenarios outside the home and school as students develop stronger bonds with their peers.

**Community Service**

Upper Elementary students are given opportunities to experience the concept of community on many levels. Within their classrooms, students play a daily role in assuming responsibility for the care of their immediate environment. They serve their larger school community by helping younger students in the Toddler and Primary classes as well as in the Main Office. Students at this level are responsible for coordinating all aspects of our yearly food and coat drive.



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## Middle School (12 to 14 years old)

**The Middle School Program provides a challenging and supportive environment** in which the adolescent may explore, question and formulate principles related to academic, personal and social growth. Critical thinking, decision-making and personal involvement are essential elements of learning in this intellectually stimulating environment.

**A strong focus is placed on developing appropriate study skills** that include effective note taking, test taking in a variety of formats, active listening, reading for meaning analysis, and learning to organize and manage time and information. Students utilize a three-week planner that outlines their assignments for this time period, providing practice with organization, planning and management of their time. Students learn to organize and review information to effectively study for quizzes, topic tests, midterm and final exams, all as preparation for high school and later in life.

**Oral presentations that follow classroom research projects** in History, Science and Language Arts, formal classroom debates and writing in a variety of formats help build self-confidence and strong communication skills, preparing students for all future school experiences. Reading and writing are closely integrated throughout all subject matter and emphasize detailed research and report writing skills.

**Montessori Model United Nations** is a wonderful elective program that provides interested students with the opportunity to serve as “delegates” of a given country as they learn about the workings of the United Nations, research their assigned country, write position papers for specific UN committee topics, and debate resolutions designed to solve global problems. A year of research, writing and preparation culminates in a four-day conference that involves collaboration with Montessori students from across the nation and around the world to address world challenges and propose solutions. Three days of conferencing and caucusing conclude at the United Nations, where students vote on the resolutions drafted by their fellow “delegates” during the conference.

### Language Arts

The Middle School Language Arts curriculum comprises the areas of Grammar, Literature, Vocabulary, and Writing. Through these subjects, the students are exposed to and practice the concepts in a variety of manners, including small and large group discussions, note-taking through lectures, hands-on, experiential projects (independent and cooperative), presentations, and writing pieces.

### Literature

Literature classes at the Middle School level are primarily discussion-based. Students are expected to read 5 to 6 novels per year, as well as one play and several short stories. Generally, the novels and stories share a common theme, several of which are directly related to the Science and/or History curricula. Students of a mixed 7<sup>th</sup> and 8<sup>th</sup> grade level group meet once per week to discuss assigned reading in greater depth, exploring relevant themes/motifs, symbolism, literary devices, author intention, character analysis/motivations, plot line, and inference. At the conclusion of each novel,

students complete one of the following: a test, a formal response essay, or a creative project as assigned by the teacher. Students are also sometimes exposed to film adaptations of the literature selections. The following is a compilation of reading selections that have been deemed appropriate for the Middle School level:

### Novels/Plays

- *Fahrenheit 451* by Ray Bradbury
- *The Curious Incident of the Dog in the Night-Time* by Mark Haddon
- *Animal Farm* by George Orwell
- *Twelfth Night, The Merchant of Venice, & A Midsummer Night's Dream* by William Shakespeare
- *Night* by Elie Wiesel
- *Across Five Aprils* by Irene Hunt
- *My Brother Sam is Dead* by Collier & Collier
- *The Crucible* by Arthur Miller
- *Lost in Yonkers* by Neil Simon
- *The Evolution of Calpurnia Tate* by Jacqueline Kelly
- *A Separate Peace* by John Knowles
- *All Quiet on the Western Front* by Erich Maria Remarque
- *Lord of the Flies* by William Golding
- *Frankenstein* by Mary Shelley
- *The Chosen* by Chaim Potok
- *To Kill a Mockingbird* by Harper Lee

### Short Fiction

- "A Sound of Thunder" by Ray Bradbury
- "All Summer in a Day" by Ray Bradbury
- "The Bet" by Anton Chekhov
- "The Curious Case of Benjamin Button" by F. Scott Fitzgerald
- "Everything that Rises Must Converge" by Flannery O'Connor
- "The Cask of Amontillado" by Edgar Allan Poe
- "A&P" by John Updike
- "Harrison Bergeron" by Kurt Vonnegut
- "The Mask of Red Death" by Edgar Allan Poe
- "The Story of an Hour" by Kate Chopin
- "The Lottery" by Shirley Jackson
- "The Lady or the Tiger" by Frank R. Stockton
- "A Small Good Thing" by Raymond Carver
- "Rip Van Winkle" by Washington Irving

### **Writing**

Writing instruction at the Middle School level assumes many forms. Students study and practice formal essay writing organized in the standard five-paragraph format. During this period, they explore many topics ranging from those persuasive in nature to expository or informative. Students also develop response essays for the novels they have read. They learn about the writing process and practice following through with each of the essential outlined steps. They compose creative pieces in which they explore character development and dialogue, use an active voice, and develop setting, tone, and mood. Seventh year students are assigned a creative autobiography portfolio that is to be composed over the course of several months and comprises a variety of writing formats. During this time, eighth year students participate in NaNoWriMo (National Novel Writing Month). Focusing on meeting their independently chosen word count goals, students work towards completing a compelling novel by the

end of November. Subsequently, during the month of December, all students focus on editing and preparing their pieces for teacher submission.

### **Grammar**

The primary goal in regard to Grammar is for students to be able to transfer their knowledge of concrete grammatical concepts to more abstract applications through their oral communication and writing pieces. This is implemented first through generating a basic understanding of the concept by means of a lesson that typically involves note taking and teacher modeling of the proper usage of the given concept. Then, students independently practice the concept through a relevant homework assignment, which leads to a larger-scale creative component, such as a group project to create a brochure, skit, poster, game, presentation, etc.

Because Grammar permeates many areas of a student's learning, it is revisited during Writing classes when the students are expected to reflect what they have learned in their writing. Topics covered during Middle School Grammar classes include the parts of speech, types of sentences (simple, compound, complex, compound-complex), clauses (independent & dependent), punctuation usage (commas, colons, semicolons, apostrophes), direct and indirect objects, appositives, participles, gerunds, & infinitives, sentence errors (fragments & run-ons), active vs. passive voice, homophones and common usage errors.

### **Vocabulary**

Literature and Vocabulary are integrated through the selection of words that are drawn directly from the reading material. The manner of introduction to new vocabulary words varies. In some instances, students take notes on each new word and its definition, while at other times, they are provided the words in their context from the book and are asked to formulate definitions based upon the context given. Students are expected to explain their understanding of word meanings and to compare their thought process to that of their peers. It is through these discussions and practices that students familiarize themselves with previously unknown words. Emphasis is placed on applying newly learned words to student writing and speech, providing practice using new words with context clues and developing creative stories using the words appropriately.

Equally important to learning word meanings, is learning to use words correctly, according to their parts of speech, and acquiring a general understanding of word roots and parts. Through this instruction, students are able to gain critical knowledge that will not only serve to expand their vocabulary, but will also provide them with the necessary tools to decipher unknown words in the future. In addition to the aforementioned tasks, Middle School level, students are required to take Vocabulary assessments, which are typically administered on a biweekly basis. During review classes, students often practice applying the words through games and cooperative group activities.

### **History**

#### **History Curriculum Overview**

The Middle School history curriculum is a two-year study of American History, designed to foster in depth study and hands-on involvement in research and creative projects. Oral presentation skills are practiced throughout the year as a follow-up to research activities. The course of study proceeds with the use of a variety of resources. Texts are used as only one type of resource; students learn to evaluate the degree of text objectivity and points of view as they read. Primary documents form a very important source of information for students, as they experience the writings and viewpoints of the people who shaped the time period they are studying. Visual materials, such as photographs, art of the specific periods, and documentary and other films provide additional dimensions for students to experience historical topics and events.

The format for the study of history involves presentation of background information on given topics, followed by class discussion and individual or partner research projects. This format provides students with opportunities to explore topics in-depth, using multiple resources. Students have the freedom to present their research in a variety of creative formats: PowerPoint presentations, creation of poster displays, three-dimensional representations, re-enacted interviews with historical personages involved in the topic, letters and journal writings, skits, and many others. All research projects involve presentations to the class, providing students with opportunities to teach and learn from their peers as they develop their presentation skills.

Present day foreign and domestic conflicts and challenges are explored within the larger framework of human decisions and patterns of behavior that impact the lives of others. Ethical questions and the changing role of government within the context of social, economic and political pressures and challenges are raised and discussed. This leads to a broader understanding of the forces that shape history and lead to higher order thinking in our students.

### **First Year of History Cycle**

One year of the American History two-year cycle focuses on the first human settlements of the Americas, early European exploration and settlement of North America and its impact on native inhabitants, growth of settlement villages, growing identity of colonists as separate from their mother country and the Revolution that followed, development of the Constitution, the formation of a new government that met the separate and common needs of the newly formed states, expansion and the resulting changes in the nation, dissension and the struggle to keep a nation united as economic, social and cultural differences among geographical sections were tearing it apart, the Civil War that resulted, and the Reconstruction period.

### **Second Year of History Cycle**

The second year of the cycle involves a study of the United States as an industrial, military, political, economic and social power within the framework of topics such as the rise of cities, growth of the Western United States, political and social reform during the turn of the 20<sup>th</sup> Century, US involvement in the affairs of other nations, financial growth, the Great Depression, the prominent role of government in the lives of its citizens during different time periods, the rise of dictatorships, America's involvement in foreign wars, the Holocaust, the Civil Rights movement, the Cold War and post-Cold War period.

**Current events classes** also facilitate awareness of national and global developments, as well as provide opportunities to draw parallels between past and present human decisions and their outcomes.

## **Science**

### **Science Curriculum Overview**

Our Science curriculum follows a two-year cycle, with Physical Science as the focus during one year and Life Science the following year. Life Science and Physical Science are taught in an integrated manner and actively involve students in the process of observation on a microscopic and macroscopic scale, questioning information and ideas, developing new ideas and solutions, and experimenting with concepts being studied. Students work on individual and cooperative activities that provide opportunities to internalize new concepts, expand upon them through research, and creatively design and present them to their classmates. The importance of the scientific method as a systematic process in scientific inquiry is learned through practice, as are other manners of observing and making connections in science.

### **Physical Science**

The Physical Science curriculum stresses the importance of observation and measurement through direct activities and experiments.

Topics of study include motion, forces, work and machines, energy, power, characteristics of waves and the electromagnetic spectrum, electricity and magnetism, the properties of matter, atoms and the Periodic Table, and chemical bonds and reactions. Students apply the abstract concepts being studied through projects they design and construct, including demonstrations of Newton's laws of motion, building roller coasters and constructing molecular models. Through the process of planning, constructing and testing students learn the importance of precise measurement and recording, the use of controls, distinguishing between dependent and independent variables, and drawing conclusions from observable and measurable results.

### **Life Science**

The Life Science curriculum focuses on the overriding concept of adaptation as a framework in which all life forms are studied, from the simplest to most complex. The interrelatedness of biology and the physical sciences is stressed, as students learn about the life sustaining processes that take place in all cells. Classification of living organisms is studied within the context of the human need to organize and categorize organisms based, initially on observable characteristics, and subsequently including biotechnological findings. The study of the kingdoms of life involves an emphasis on levels of organization related to representative organisms in each group. The very concept of a kingdom of life is viewed, not as an absolute finality, but as a dynamic reflection of what science represents; changing information based on experimentation and new observations. Evolution is studied as change over time in response to changing environments and the possession of the necessary adaptations to ensure survival. The study of heredity and genetics provide a connection, on the cellular level, to the passing of inherited traits and the evolution of living organisms.

Lab work engages students in developing observation skills through a variety of means, observing directly with the naked eye, using compound and dissecting microscopes, making careful measurements and recording data objectively.

### **Mathematics**

#### **Math Curriculum Overview**

The Middle School math curriculum includes Pre-algebra, Algebra, and Geometry. In all courses, students problem solve by investigating and exploring mathematical ideas and developing strategies for analyzing complex situations. In order to solidify their understanding, students analyze situations verbally, numerically, graphically, and symbolically. Student work independently, and in cooperative groups. They apply mathematical skills across content areas and make connections to real life experiences.

#### **Pre-Algebra**

In Pre-algebra, students extend their elementary skills and begin to learn Algebra concepts that serve as a transition to formal Algebra and Geometry. Students explore and develop confidence working with rational numbers and proportional relationships. They learn to think flexibly about relationships among fractions, decimals, and percents. Students learn to recognize and generate expressions and solve equations and inequalities.

#### **Algebra**

In Algebra, students develop fluency in working with linear equations. They extend their experiences with tables, graphs, and equations, solve linear equations and inequalities and systems of linear equations and inequalities. They generate equivalent expressions and use formulas. Students simplify polynomials and study quadratic relationships. Students use technology and models to investigate and explore mathematical ideas and relationships.

## **Geometry**

In Geometry students develop understanding of Euclidean geometric structure and apply the resulting theorems and formulas to address meaningful problems. Students use experimentation and inductive reasoning to construct geometric concepts, discover geometric relationships, and formulate conjectures. Students employ deductive logic to prove theorems and justify conclusions.

## **Problem Solving**

Middle school students participate in a Problem Solving class dedicated to investigating a variety of mathematical topics. Students work in an enquiry-orientated environment to construct an understanding of mathematical concepts by doing, creating, questioning, testing and verifying their ideas. Students may explore fractals and the chaos theory, the Konigsberg bridge problem, the Treasure Island problem, Caesar cipher, Rotational symmetry, logic puzzles, population modeling and predicting. They create math videos and lessons, utilizing and developing their problem solving skills and strategies in the process.

## **Field Trips**

Adolescents, at this, more than any other developmental period, need to make relevant connections between their learning in school and the world outside. Topics of study in the classroom must be periodically experienced beyond the academic and abstract scope of study that takes place in school. Field trips provide experiences that connect, solidify and expand new and prior knowledge. They place students in a broader context of learning, cooperation and respectful interactions with people in a variety of social and educational settings. A minimum of two overnight trips of three to four days during the course of the school year, at the beginning and later in the spring, provide connections to specific areas of study and help develop bonding among peers.

Students visit a working farm, where they report for their assigned chores at daybreak and work productively and collaboratively throughout the day, as they directly experience the complexity of running a farm.

Part of our biology curriculum culminates in visit to a university marine science research station to learn, firsthand about the process involved in studying aquatic life forms in their natural environment. They learn to collect live specimens, set them up responsibly in the lab, observe, research and design an experiment to carry out during the course of their stay. Students learn about the ecosystem of a marine tidal environment from university instructors and graduate students. At the conclusion of their trip, they share their observations and conclusions fellow classmates, engaging in the process of communication within a scientific community.

Visits to historic locations in Boston, Philadelphia, Williamsburg, Gettysburg and Washington connect the places, people and events we study in class to a more concrete reality. As students listen to people who are knowledgeable about the historic site they are visiting and hear stories of the people who lived at the time, they experience history within a new and broader context.

Student trips to the MIT campus and the MIT Museum provide opportunities for them to engage in hands on projects, such as robotics programming, electric circuits, and building bridges.

## **Community Service**

Through community service projects within the school and in the outside community students develop practical life and leadership skills while helping others. Service activities include coordination of our annual Pancake Breakfast to raise funds for national and international relief projects. This event is attended by families throughout our school community, with Middle School students engaged in all steps of the process. As the need has arisen, students have volunteered in food banks, organizing and

wrapping toys for children in foster care and created designs and sold t-shirts to raise emergency for tsunami survivors.

Serving others within the school community engages adolescents in relevant and purposeful work that builds a sense of belonging and value as members of their immediate classroom and school community. Household chores related to maintaining an orderly environment, care of plants and pets, serving as tour guides for school visitors, as well as conducting tours during Saturday Open Houses help students feel connected to their school in a positive and meaningful manner.