

## **The Lower Elementary Curriculum**

The international Elementary Montessori curriculum taps into the natural sensitivities of this age to create an energy that animates Elementary education. Dr. Montessori called this curriculum a ‘cosmic’ curriculum. Each year five great stories are told in a dramatic fashion in order to create a framework of information to which students will add detail and understanding throughout their elementary years: The story of the beginning of the universe, of life on the Earth, of human life and of the great human creations of language and of mathematics and science. These create a broad framework that invites students to explore all the traditional curriculums (the sciences, history and geography, as well as mathematics and language) creating greater depths of understanding each year.

### **LANGUAGE**

The Lower Elementary language curriculum focuses on further developing the reading and writing skills of the Casa level. The child explores written language factually through journal writing, letters, and research, and creatively through story writing, poetry, and drama. The technical aspects of language – spelling, grammar, syntax, punctuation and capitalization are taught separately and are applied to the student’s written work. Through the Montessori curriculum the student realizes that language is a powerful tool of communication through which they can learn about the world, past and present, and which they can use to express their own thoughts and ideas.

- Story of communication in signs
- The development of written language
- Word study
  - Roots of words
  - Suffixes and prefixes
  - Synonyms, antonyms, homonyms
  - Compound words
  - Syllables
  - Contractions
  - Phonograms
- Grammar
  - Parts of speech (nouns, adjectives, etc.)
  - Types of sentences
  - Sentence analysis – simple sentences
  - Sentence analysis – compound and complex Sentences
- Writing skills
  - Different forms of writing: fiction, expository, letters, poems, etc.
  - Cursive writing
  - Punctuation, capitalization

- Spelling
- Editing
- Literature
  - Poetry, drama, short stories, short novels, mythology
- Spoken Language
  - Presentation of reports, reading aloud, discussion, drama

## **RESEARCH SKILLS**

Helping students develop the skills they will need to explore and investigate independently is a cornerstone of the Montessori Elementary education. In the Lower Elementary class, the students begin to learn the basics of conducting their own research. These skills are taught in the context of research projects that the students themselves devise, with guidance from the director or directress.

- Navigating books
  - Tables of contents, indices
  - Alphabetical order and guide words
  - Dictionary, thesaurus, atlas, encyclopedia
- Expressing thoughts in original terms
- Techniques for organizing information coherently
- Illustration and model-making
- Presenting research to peers

## **TECHNOLOGY**

OMS takes seriously current research and recommendations about screen time for students from 6 to 9 years of age. While most families offer some screen time to their children of this age, at school we have chosen not to make use of screen technology on a regular basis at the Lower Elementary level. We wait until the Upper Elementary age to incorporate computer and Internet technology into our Montessori learning environments.

We carefully observed the interactions of Lower Elementary students with technology and concluded that students of this age develop more fully and learn more deeply without technology in the classroom. The use of didactic materials that are often used and discussed with other students, activates more areas of the brain than sitting in front of, and reacting to, a screen. We emphasize the use of books as books can be chosen with respect to the reading and academic level of the student; the information can be easily referred back to and shared with others; and books provide an easily accessed 'menu' to intrigue and broaden our perspective rather than simply the 'index' approach of a search engine (Seth Godin, *The Index and the Menu*<sup>i</sup>). If a Lower Elementary student has a question that requires the use of technology, a student or adult from an older class will willingly offer assistance.

Please see [http://www.screensmart.ca/school\\_success#did\\_you\\_know](http://www.screensmart.ca/school_success#did_you_know)<sup>ii</sup> for further considerations regarding technology and other resources.

## **MATHEMATICS AND GEOMETRY**

The work completed in the Casa classes provides a foundation for the Elementary work in math. Students at the Lower Elementary level have enormous intellectual ability and love to work with big numbers. They continue to use materials when working with math but the materials require even greater abstraction of the principles.

- The story of numbers (history and development of number systems)
- Numeration and place value
- Operations / Arithmetic (addition, subtraction, multiplication, division)
  - With whole numbers
  - With common fractions
  - With decimal fractions
- Laws
  - Commutative, distributive, associative laws
- Factors and multiples
  - Prime numbers
- Squaring and cubing
- Square root
- Measurement
  - Length, time, temperature
- Divisibility
- Word problems
- Money
- Congruence, similarity, equivalence
- Lines of symmetry
- Parts and properties of:
  - Lines
  - Angles
  - Polygons
  - Circles
  - Geometric solids
- Perimeter
- Area
- Volume

## **CULTURE – THE SCIENCES, GEOGRAPHY AND HISTORY**

Lower Elementary students are curious about the world and universe. They are intensely social, and they are discovering the power of their rational minds and their imagination. We take advantage of all of these characteristics in presenting the sciences, humanities, and arts. Small group lessons, the freedom to collaborate, and charts and timelines that create a strong visual impression are all designed to appeal to and inspire six to nine year old students. The lessons and curriculum are integrated so that the child can see the complex interdependencies in our

knowledge. We start by giving a general framework, and then slowly help the child fill in the details. The student will see the same kinds of topics each year, drawing more connections, branching out into different directions, and going deeper each time. Classification work, especially in botany and zoology, appeals to students of this age and allows them to hone their understanding, begin to organize their knowledge intelligently, and make finer and finer distinctions. History work is based on the fundamental needs that are common to all human beings, and the cultures that have arisen as different ways of satisfying those needs. The students follow up on these lessons in a variety of ways - research and writing, creative handwork and model making, work with timelines and charts, and hands-on experiments.

### **Chemistry and Physics**

- The story of the formation of the universe
- The solar system
- States of matter
  - Solids, liquids, gases
  - Degrees of rigidity
  - Viscosity
- Density
- Combining and separating substances
  - Solutions, mixtures, chemical reactions
- Crystallization
- Magnetism
- Gravity and weight

### **Geography and Earth Science**

- Composition of the Earth
- Plate tectonics
- Air
  - Properties of air
  - The winds
  - High and low Pressure
  - Erosion
- Water
  - The River
    - Parts of
    - Establishment of cities
    - Rivers of North America
  - Erosion
  - Water and ice
  - Rain and the water cycle
- Climate Zones, people and vegetation
- Ocean ecosystems
- Political geography

- Countries, capitals, bodies of water
- Land and water forms
- The Sun and the Earth
  - Day and night
  - Seasons
  - Climate zones

### **Biology**

- Botany
  - Needs and parts of the plant
  - Classification of plants
- Zoology
  - Five classes of vertebrates
  - Function of body systems
  - Invertebrates
  - Habitats
  - Food chains
- The Human Body

### **History**

- Story of the coming of life
- Evolution and the timeline of life
- The story of the coming of human beings
  - Study of early humans
- The fundamental needs of humans
  - Nourishment, transportation, defense, clothing, shelter, arts and culture
- Measurement of time
- Ancient civilizations

### **Music**

The music program is an opportunity for students to gain an appreciation of music. The students gain exposure to different musical genres and study the history of music and its development through time. Our music program teaches students that music is an integral part of their lives.

Students are introduced to the following elements of music:

- Dynamics
- Pitch
- Rhythm
- Notation
- Harmony
- Melody

The students are involved in various activities such as

- Choral singing
- Movement (including dance and games)
- Playing rhythm instruments
- Listening
- Ear training exercises.

## **Art**

The students are exposed to a wide variety of hands-on experiences with various media. These include painting, sculpting, sewing, paper-making, marbling, paper-mâché and origami. Students are also introduced to techniques such as pointillism, impasto, and shading. They learn about artists and their work, often with a chance to try to work in a similar fashion

- Colours: primary/secondary, warm/cool, colour mixing, complementary colours
- Composition and design
- Lines, space and form
- Clay work, including pinch pots and coil pots
- Symmetry
- Mask making
- Paper art and three-dimensional sculptural designs
- Painting
  - Watercolours
  - Pastels
  - Acrylics
  - Genre painting:
- Weaving
- Mixed media
- Mosaics
- Book making
- Salt-flour relief
- Sewing
- Pencil, pen, and ink
- Design and architecture

## **PHYSICAL EDUCATION**

The Lower Elementary period of childhood is marked by steady increases in height, weight, and muscle mass. Development during this period is marked by steady, incremental changes in the cognitive, emotional, and motor areas. This is an ideal time to develop and refine fundamental movements and skills to help students prepare for sports and sport-specific skills.

Fundamental Stability Skills

- Body rolling

- Dodging
- One-foot balance
- Beam walking
- Inverted supports
- Twisting and bending

#### Fundamental Locomotor Movements

Students will be engaged in activities to promote the proper development of locomotor movements, which are essential for future games and sports.

- Walking
- Running
- Hopping
- Galloping and sliding
- Leaping
- Skipping
- Jumping from height
- Vertical jumping
- Horizontal jumping
- Tumbling (basic gymnastic)

#### Fundamental Manipulative Movements

- Ball rolling
- Overhand throwing
- Catching
- Kicking
- Trapping
- Striking
- Dribbling
- Volleying

#### Social & Emotional Skills

- Team work
- Fair play and sportsmanship
- Hard work and determination
- Integrity and respect
- Self-esteem
- Communication

### **ENHANCED CORE FRENCH AS A SECOND LANGUAGE (FSL)**

The Lower Elementary Enhanced Core FSL Program focuses on building all components of language: speaking, reading, and writing. In addition to using traditional techniques, we also use the Accelerative Integrated Method (AIM)<sup>iii</sup>. The AIM program develops vocabulary, fluency, structures and conventions, through gestures, using a kinesthetic approach to learning. Paired with traditional methods,

our FSL program caters to all types of learners. Our AIM program uses gestures that accompany vocabulary and short plays.

#### Speaking:

- Oral
  - Discussion
  - Singing
  - Presentations
  - Reading aloud
  - Drama
- Comprehension
  - Oral Instructions
  - Oral response

#### Word study

- Vocabulary
- Syllables
- Phonograms
- Compound words
- Spelling

#### Grammar

- Parts of speech (articles, noun, adjectives, pronouns, verbs, prepositions, etc.)
- Verb conjugations and tenses
- Types of sentences
- Sentence analysis (Identifying and understanding the function of each word within the sentence)

#### Reading:

- Literature
- Songs
- Poetry
- Drama
- Short stories
- Comprehension
  - Written response to literature questions

#### Writing:

- Poems
- Letters
- Projects
- Surveys
- Booklets

Each component is developed through the guided exploration of various themes including:

- Colours
- Weather
- Numbers
- Alphabet
- Calendar (weekdays and months of the year)
- Seasons
- Shapes
- Body parts
- Clothing
- Activities
- Winter carnival
- Food groups
- Parts and life cycle of plants
- Mammals
- Insects
- Sea life and organisms
- Dinosaurs
- Hibernation

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<sup>i</sup> (The Index and the Menu. 2014. *Seth's Blog*, [blog] January 20, 2014, Available at: [http://sethgodin.typepad.com/seths\\_blog/2014/01/the-index-and-the-menu.html](http://sethgodin.typepad.com/seths_blog/2014/01/the-index-and-the-menu.html) [Accessed: 20 Jan 2014]).

<sup>ii</sup> "Screens & the Early Years." *Screen Smart*. Screen Smart, n.d. Web. 21 Feb. 2014. <[http://www.screensmart.ca/early\\_years](http://www.screensmart.ca/early_years)>.

<sup>iii</sup> <<http://www.aimlanguagelearning.com/>>