A.3 Program of Instruction

Curricular Framework & Design

"Human consciousness comes into the world as a flaming ball of imagination. Everything invented by man, physical or mental, is the fruit of someone's imagination." Dr. Maria Montessori, To Educate the Human Potential

Dr. Montessori referred to her elementary curriculum as *Cosmic Education*. The word, *cosmic*, derives from the Greek word, *kosmos*, which means "ordered world". Camino Montessori maintains this tradition by referring to our elementary curriculum in the same way.

Cosmic Education, as defined by the American Montessori Society, has *six essential pieces* necessary to capture the whole person:

- *A unitary vision of the world*
- *Knowledge of the universe as an organizing whole*
- *An appreciation of interdependency*
- *An awareness of our own "cosmic task"*
- *Humanity's experience of a new way of life, and our great potential for peace*
- *A scientifically based pedagogy that passes from the whole to its details*

At Camino Montessori, *"Cosmic Education"* is the essence of our educational framework. Because our practice is guided by the developmental continuum (the natural needs and tendencies of children) this cosmic approach attracts the attention and imagination of elementary aged children, which leads to engagement, interest, and motivation, which, in turn lead to true learning. Our unified and integrated curriculum unfolds as a spiral, and uses themes, which are referred to as "Great Stories", designed specifically to engage the child's "awakened curiosity", and to provoke within them an awakening *sense of time*--When did all of this happen?; of *place*—Where did everything come from?; and of *purpose* for being—Why am I here?. These fundamental questions are universal, and at this age the child is beginning to think more abstractly about life. It is also during these years that the child's sense of justice, fairness, and life outside of the immediate family are emerging to the forefront of thought, intention, and action.

Peace Education (character education) became an integral piece of the framework. Montessori classrooms are viewed as "micro-democracies" which provide children a safe place and supportive environment in which to practice important life skills in real situations.

No two years are ever alike in a Montessori classroom—there are limitless possibilities of variation within our underlying themes for children to have opportunities to be active participants in the learning process. Essentially, our curricular framework provides the "fertile field" necessary for teaching children *how* to learn versus *what* to learn. Montessori education provides students with a strong foundation in the core academic skills (i.e., mathematics, reading, writing, and other language skills), and research tools and structures which can then be applied to learn about any subject, time, place, or event.

One of *our basic methods of* instruction involves using the power of 'story' to *connect* with and *engage* the child—hopefully activating their imaginations. The Great Stories set the stage for the presentation and unfolding of the integrated curriculum. These stories and impressionistic lessons give enough information to the student so that they become inspired to dig deeper into any of the related subject areas that they are interested in. The Montessori teacher serves as facilitator/director of student learning by actively engaging them in pursuing answers to their questions, either individually or in small research groups. Typically, the curriculum is organized into a 3 year, or 6 year cycle, which means that no two years are ever the same for students, or the teacher.

The *Five Great Stories* that Unify our Curriculum

Great Lesson 1—*Coming of the Universe and Earth Story*

The story of the beginning of the Universe and the Earth's origins.

- ***Leads to the study of:*** astronomy (the solar system, stars, galaxies, comets, constellations), meteorology (wind, currents, weather, erosion, water cycle, glaciers), physics (magnetism, electricity, gravity, energy, light, sound, heat, friction, motion), chemistry (reactions, elements, atoms, periodic table, compounds, molecules, chemical formulas, equations, experimentation), geology (rocks, minerals, land forms, volcanoes, earthquakes, plate tectonics, eras of the earth), geography (maps, globes, latitude/longitude, climates, land & water forms).

Great Lesson 2—*The Origin of Life on Earth*

The origins of life on Earth from single-celled organisms to plants and animals.

- ***Leads to the study of:*** biology (cells, five kingdoms, dissection, use of microscopes), botany (classification, plant kingdoms, families and species, plant functions, parts of plants), habitats (food chains/webs, symbiosis, adaptation, ecosystems, conservation), ancient life (eras of the earth, evolution, extinction, fossil records), animals (classification, animal kingdoms, families & species, adaptation and ecosystems), monera, protista, and fungi (what they are, classification, observation).

Great Lesson 3—*The Coming of Human Beings*

The story of the origin of humans and development of human civilizations.

- ***Leads to the study of:*** history (timelines, prehistory, ancient civilizations, world history, history of specific countries and continents), human culture (art, music, composers, dance, drama, architecture, philosophy, religion), social studies (current events, government, economics, commerce, mediation, peacemaking, volunteering & service), discovery and invention (scientists, inventors, scientific method, inventions).

Great Lesson 4—*The Story of Language*

The story of the development of the written alphabet including the study of pictographs, hieroglyphs, early alphabets, and the invention of the printing press.

- ***Leads to the study of:*** reading (literature, poetry, non-fiction, myths and folktales, authors, reading comprehension and analysis), writing (elements of style, function, voice, composition, letter writing, research, study skills), language (origins of spoken language, foreign languages, history of languages, speech, drama), structure (grammar, punctuation, sentence analysis, word study, figures of speech).

Great Lesson 5—*The Story of Numbers*

The story of the history of symbols, the magic of numbers, the use of geometry, different numbering systems used by humans and the modern decimal system.

- ***Leads to the study of:*** mathematics (operations, fractions, decimals, multiples, squares, cubes, percentages, ratio, probability, algebra), numbers (origins of numbers and systems, bases, types of numbers, scientific notation, mathematicians), geometry (congruency, similarity, nomenclature of lines, angles, shapes, solids, measurement, discovery of theorems), mathematical application (story problems, measurement, estimation, graphs, patterning, rounding, money concepts).

From these five stories come follow-up stories and impressionistic lessons designed to further activate curiosity and motivation to learn and know more. We always begin with "the whole" moving towards its parts. The Montessori Method's learning process occurs within a *"Story-to- study"* (instruction leading to learning cycle).

Camino Montessori 1st-3rd Grade Curricular Scope--3 Year Cycle				
Core Areas --"Tools" to access Cultural Curriculum		**Cultural Curriculum-The heart of "Cosmic Education"**		
Language Arts	***Mathematics***	***Social Studies***	**Assessment**	***Health & PE--"Practical Life"--"Peace Ed"***
Instruction & Activities *The Story of Writing*	**Instruction & Activities** *The Story of Math & Geometry*	**Instruction & Activities** **Instruction**	Adult observations, notes, reviews Products & Projects	Yoga, body movement, gym Nutrition

Nomenclature--Vocabulary

Reading & Writing

Phonics--Spalding based

Spelling

Mechanics

Grammar

Word Study

Comprehension

Reading Fluency

Silent Reading

Writer's Process

Research

Styles of Writing

Listening & Speaking

Directions

"Active Listening"

Oral presentations

Oral reading

Discussion & Conversation

Dramatic interpretation

Literature

Nomenclature--Vocabulary

Shared Experiences

Literature Circles, novel studies, etc.

Genres

Literary Elements

Assessment

Summative Examples

DIBELS

Slossen Oral Reading

Decimal System

Numbers & Numeration

Operations & Relationships of Numbers

Memorization--Facts

Study of Multiples

Fractions

Decimal Concepts & Operations

Squaring & Square Root--*Entry Level*

Algebraic Concepts--*Entry Level*

Measurement, Money, Time

Ratio & proportion

Graphs

Practical Applications

Equipment

Nomenclature--Vocabulary

Geometry

Instruction & Activities

Constructions

Geometric Solids

Geometric Figures

Point-Line-Surface

Angles

Polygons

Circles

Area, Perimeter & Volume--*Entry Level*

Pythagorean Theorem--*Entry Level*

Assessment

Summative Examples

Benchmark Assessments, e.g.,

Saxon – assessment/inventory

Impressionistic Lessons & Presentations

Research & Inquiry Driven

Time Line Studies

Continent Studies-Past & Present

Nomenclature--Vocabulary

History & Civics

Fundamental Needs of Humans

Community, State, Nation, World

Study of Time-clocks, years, eras, etc.

Past-Present-Future

Economic Geography

Economics

Trade & Commerce

Political Geography

Maps & Atlases

Democracy & Citizenship

Types & Forms of Government

Assessment

Adult observations, notes, reviews

Work Plans & Progress Notes

Student Work Samples & Notebooks

Cultural Projects & Products

Rubrics & Portfolio Samples

Science

Impressionistic Lessons & Presentations

Story of the Universe

Story of Our Solar System

Story of the Earth

Story of Life

Fundamental Needs of Life

Work Plans & Progress Notes

Work Samples & Science Notebooks

Rubrics & Portfolio Samples

Spanish Language & Culture

Instruction & Activities

Impressionistic Lessons & Presentations

Oral Proficiency

Reading

Writing

Listening

Speaking

Speaking

History & Time Lines

Cultural Experiences

Cultural Projects & Connections

Cultural Appreciation & Exchange

Nomenclature--Vocabulary

Assessment

Summative Examples

AZELLA-ELL

Foreign language standards

Formative Examples

Adult observations, notes, reviews

Conversation

Writing Skills

Products

Demonstrations

Art & Music

Instruction & Activities

Historical Timelines & Connections

Brain Gym

Team Games & Sports

President's Physical Fitness Program

Personal Development

Ceremonies & Traditions

Life Skills--responsibility, empathy, etc.

Problem-solving Skills

Independent Thinking

Classroom Meetings, Discussions, Debates

Cooperation & Collaboration Skills

Participation in Community Life

Conflict Resolution

Following "Ground Rules"

Self Reflection & Evaluations

Community Service

Personal Responsibility

Organization Skills

Time Management

Work Expectations

Test-taking & Strategies

Portfolio Management

Care of Environment--Jobs, animal care, etc.

Environmental Awareness & Responsibility

Going Outs--Field trips, excursions, etc.

Assessment Examples

Adult observations, notes, reviews

Self Assessment

Peer Assessment

Student Work Plans

Social Skills Checklist

Morris-McCall Spelling Inventory	*Brigance Basic Skills* Inventory-Pre/Post Tests	Nomenclature--Vocabulary	Appreciation	Work Habits & Skills Checklist
SRA placement tests	Teacher-made-written, oral, demonstration	**Physical Geography**	Theory	Participation
Phoenix Readers placement tests	Timed Facts-Four Operations	Composition of the Earth	Experiences, e.g.,	Adult & Peer Relationships
AIMS/Terra Nova	***Formative Examples***	Work of the Wind	*Geometric Constructions & Drawings*	Demonstrations
Formative Examples	Adult observations, notes, reviews	Work of Air	*Cultural Projects & Connections*	Portfolio artifacts
Adult observations, notes, reviews	Progress Checklists	Work of Water	Nomenclature--Vocabulary	
Reading logs, journals	Student Math & Geometry Notebooks	Land Forms	**Assessment**	
portfolio samples	Portfolio Samples	**Geology**	***Formative Examples***	
Performance rubrics--e.g., *6 Traits*	Demonstrations	**Biology**	Adult observations, notes, reviews	
Response Products	Observable Problem-solving Strategies	*Zoology*	Participation	
Student Demonstrations	Journals, Learning Logs, etc.	**Physics**	Products	
Completed Research		**Chemistry**	Rubrics	

The chart above provides an overview of the scope of our curriculum for the elementary level. The chart to the right presents a sample of how the curriculum might be sequenced over the 6 years of the elementary level. Math and Language Arts are interwoven and taught within this context as much as possible, which provides students endless opportunities to make many connections and discoveries across the curriculum.

These templates were drafted and based on the classroom and program development experience (and resources) of our Founder and Executive Director. Our templates are continued "works in progress", and will be routinely refined up to our planned start date of August 6, 2012. The Board will convene early in 2012 to formerly "adopt" our first year's curricular sequence.

Camino Montessori **Six Year Cultural Cycle--*"Cosmic Education"—Sample Sequence***

	1st Semester	*2nd Semester*
Year 1	**THE UNIVERSE**-Impressionistic Lesson/Story Nature of Elements-Stories & Study *Scientific process/Experiments* External Parts of Plants & Animals *Label/definitions/research*	Fundamental Human Needs *Vertical Studies* First Knowledge of Plants & Animals-Stories & Study *Labeling & Who Am I? questions/research*
Year 2	**OUR SOLAR SYSTEM**-Impressionistic Lesson/Story Sun & Earth -Studies External Parts-Invertebrates *Label/definitions/research* First Knowledge of Plants & Animals-Studies *Who Am I? questions/research* Fundamental Human Needs Horizontal Studies	**THE EARTH**-Impressionistic Lesson/Story Composition of the Earth-Studies Work of Air & Water-Studies Plants & Animal Studies External Parts *Next level-cont. research* Body Functions *Label/definitions/research*
Year 3	**STORY OF LIFE**-Impressionistic Lesson/Story Clock of Eras-Story & Study First Classification-Stories & Studies *Animal, Plants* *Prokaryote, Protoctista* *Fungi* *YEAR LONG*	Timeline of Life-Stories & Studies
Year 4	**STORY OF HUMANS**-Impressionistic Lesson/Story Timeline of Early Humans-Stories & Studies Advanced Classification-Studies *Animal, Plants* *Prokaryote, Protoctista* *Fungi* *YEAR LONG* Stellar Nucleosis-Stories & Studies *YEAR LONG*	Timeline of Modern Humans-Stories & Studies
Year 5	**STORY OF CIVILIZATIONS**--Impressionistic Lesson/Story First Cultures-Stories & Studies Ancient Civilizations-Studies China, India, Mesopotamia, Egypt, etc. *Vertical & horizontal studies* Vital Functions of Animals-Studies	First Americans-Studies Story of Arizona-Past to Present Age of Exploration-Studies *Vertical & horizontal studies* Vital Functions of Plants-Studies
Year 6	**STORY OF A NATION**--Impressionistic Lessons/Stories United States History *Colonial roots into the 21st Century* Human Biology-The Great River Story & Studies *Cells, nutrition, systems of the body, etc.* *YEAR LONG*	

Methods of Instruction

An authentic Montessori program stresses the importance of responding appropriately to each child's specific strengths and needs in all areas of development and learning. The Montessori teacher must "follow the child" by using scientific observation techniques. Through careful observation and recordkeeping, the teacher is able to plan appropriate sequences of lessons and remediation that responds more specifically to each child's, or group's need at any given moment. Although students have freedom to choose to study what interests them, they are also expected to learn

and master core academic skills. It is the teacher's responsibility to ensure that each student receives a well-balanced education and that they continually move toward mastery of the established minimum expectations in all areas of their development. Appropriate and mindful preparation of the teacher and the learning environment are at the root of all planning and instruction.

It is the teacher's responsibility to ensure the classroom is prepared so that it is responsive to the children's growing awareness and consciousness. It helps make them independent of the teacher's will and personal agenda. Learning materials are grouped according to subject areas and are displayed, as much as possible, in a logical sequence—from most simple & concrete to most complex & abstract. Everything in the environment should be for the student's justifiable use and should draw the child in and feed their interests. Teacher's spaces are integrated into the environment. Order of the learning materials maximizes the possibility of students completing specific cycles of activity in using materials. Montessori equipment and other learning materials assist in each child's conceptual learning and the development of abstract thinking. The Montessori classroom environment allows and encourages students to use a variety of learning approaches and styles. Many of the Montessori materials isolate for difficulty of specific skills and concepts, and have a control of error allowing children the independence to check their own work and self-correct. The teacher encourages students to have a sense of ownership and responsibility toward the classroom. Multi-age groupings allow opportunities for mentoring and diversity within small instructional groups. Typically, students spend 3 years in the same classroom which allows the teacher to better gauge progress and developmental readiness for moving to the next level. The teacher really gets to know children's behavior patterns, and can affect them accordingly.

Montessori teachers continually enhance the rich curriculum in order to respond to the current child's or classroom community's needs and interests. There is a fundamental belief that children learn best when they can construct their own knowledge and make their own discoveries and connections. Teachers present lessons in a variety of ways to individuals, small groups, and at times to the whole class. It is critical that the teacher prepares and presents all lessons in such a way that children are inspired and motivated to do independent follow-up and practice. Typically, Montessori teachers present new concepts by telling a story, presenting an impressionistic lesson which may include concrete props or materials that illustrate key concepts, or by posing interesting questions that promote thoughtful discussion and motivation to learn more. For example, the teacher may share a riveting story about Pythagoras prior to presenting the decanomial layout (the layout of the 1-10 multiplication table using colorful beaded material) in mathematics. Students not only learn the various formulas contained within the decanomial layout, but they have a historical connection that could spark their interest to learn more about Pythagoras, other Greek philosophers, ancient Greece, other mathematical concepts, etc. By presenting lessons this way, children are better able to internalize, and are more prepared for independent practice which leads to the mastery of the concept.

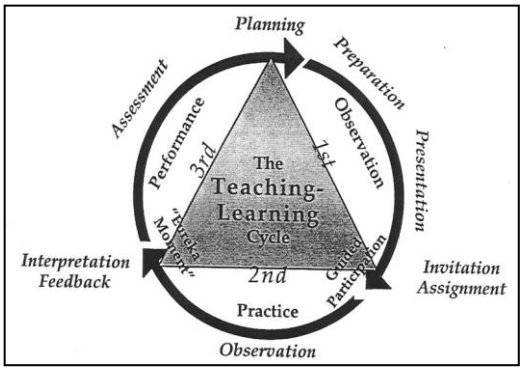
Assessment

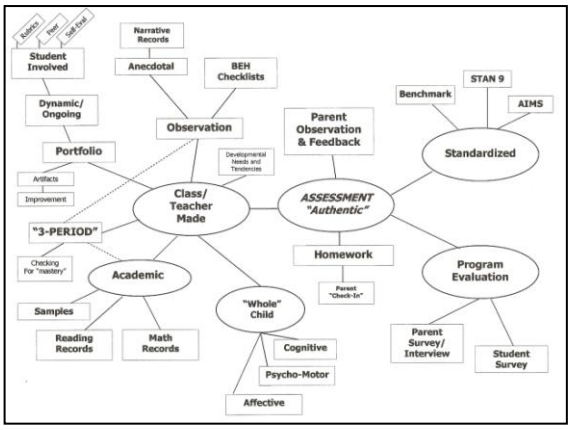
Camino believes in an authentic assessment practice that must always be grounded in scientific observations of the child. Our Montessori trained teachers believe that authentic assessment must reflect the development of *whole child*--cognitive, social, emotional, physical, and spiritual—regardless of disability, learning challenge, or other special education need. Our assessment process is grounded in our belief that there are *multiple learning styles and ways of learning*—we view each child's intelligences, abilities, and characteristics as an inherent (and celebrated) aspect of our diverse community.

Teachers are responsible for ensuring each student receives lessons in all areas of the curriculum and that they meet the Common Core State Standards expectations for mastery. They are continually observing students, collecting data, and monitoring student success and difficulties. They are able to evaluate quickly and provide appropriate responses and/or interventions by adjusting their teaching and/or the learning environment to better meet the child's needs and/or style of learning. Teachers are responsible for the input of all lessons presented, progress notes, student progress/mastery of learning objectives, and CCSS into the MRX student tracking software in order to provide various reports to be used in the evaluation and assessment of their cognitive, social and emotional growth.

Assessment and evaluation of student work and progress is done in a variety of ways in the Montessori classroom. We believe there must be a balance between formative and summative assessment processes. In the Montessori classroom grades are not emphasized, however summative assessments are given at various points in order to add to the overall evaluation of the child's academic progress.

Montessori teachers often use what is referred to as the 3-Period lesson to assess students after teaching a concept. The first period is the presentation of the concept to the child; the second period is the practice and follow-up work the child completes; and, the third period is when the child is checked for mastery of the concept taught. The practice period can vary in time depending on the complexity of the concept. Sometimes the practice period takes only minutes within the context of the lesson, or it can take days, or even weeks of practice before mastery is checked. The chart at the right illustrates the 3-period cycle (Teaching-Learning Cycle), and a triangle is used to quickly notate where the child is in terms of mastery. The first side of the triangle represents the lesson or presentation was given; the second side of the triangle indicates the lesson was given and the student is currently in the practice phase; and the third side, or enclosure of the triangle indicates mastery has been achieved for the given learning objective or skill. Throughout the 3-period process the teacher is observing and evaluating how the student is doing, and they are able to monitor and provide support and/or additional instruction where needed. Data collected from the 3-period lesson often provides more accurate summative assessment, because the teacher can see precisely where the break-down in learning occurs.





The illustration to the left presents a web of our "authentic assessment" components & process. Formative assessments include teacher observations and anecdotal records, student portfolio samples and artifacts of work, student & teacher created rubrics, peer & self evaluations, individual and group projects & presentations, etc.

Summative assessments include both teacher made assessments, and standardized assessments, such as summative screening and diagnostic assessment tools used to establish benchmarks and track progress in the core academic areas of math and reading, as well as the required norm and criterion referenced assessments (i.e., AIMS, and Stanford 10).

At the beginning of each school year, and at regular intervals throughout each year, teachers will administer, record, and monitor scientifically based diagnostic assessments in reading and math to measure student progress toward mastery for reading and math benchmark targets (see PMP). Student progress will be monitored by comparing baseline data to ongoing diagnostic data, teacher observations/assessments, and student's portfolio of work to determine performance growth, strengths and weaknesses as they relate to mastery of the CCSS for reading and math. All assessment information (formative and summative) will be used to assist in establishing new learning goals and outcomes objectives. The Executive Director will ensure these procedures are followed by checking in with teachers as part of the routine staff meeting process.

The Curricular Sequence chart presented earlier in this section highlights specific examples of formative and summative assessments within each curricular area.