LOWER ELEMENTARY CURRICULUM

The Lower Elementary "cosmic" curriculum helps children explore big questions about their place in the world.

Young elementary children are fascinated by stories: stories of animals; stories of the origins of things; stories of heroic accomplishments. They love to ask big questions. Much of the Lower Elementary curriculum is designed to help children explore their natural questions about their place in the world. The history, geography, biology and physical science curricula examine broad concepts and provide a framework for more abstract study in later years.

Our Lower Elementary language curriculum offers a balanced approach to literacy. We bolster children's foundation in phonemic awareness and phonics, and we build their vocabulary by exploring word patterns and roots. By reading to them and with them, we help them improve their fluency. We coach students to utilize a variety of reading comprehension strategies, and we use the Junior Great Books Program to help students develop interpretation skills. Reading/writing workshops reveal to children how their reading informs their writing, and visa versa.

Our remarkable Montessori math materials offer a tangible foundation upon which mathematical thinking can grow. Our students use their hands to explore concepts integral to arithmetic operations and plane geometry. They also memorize basic math facts and solve problems. Eventually, the concrete materials give way to abstract calculations.

LMS Lower Elementary classes are conscious communities where children learn to support each other's academic and social-emotional growth. They use their meeting circles to celebrate each other and their community, to solve problems and resolve conflicts. In this way, children learn about their responsibilities as individuals within a group.
LOWER ELEMENTARY CURRICULUM

Language

Expressive and Receptive Language

Phonemic Awareness and Phonics

1. Recognize and produce rhymes

   **Activity Example:** A teacher stops while reading and identifies rhyming sounds from the page.

   **Activity Example:** A child takes two baskets filled with objects off the shelf. The child chooses one object from basket 1 and tries to find the rhyming object in basket 2. The child continues until the baskets are empty.

   **Activity Example:** A teacher sits with a child and asks the child to tell her if two words she will say after each other rhyme: “dog, fog”, “run, fun”, “hold, happy”, etc.

Speaking & Listening

2. Participate in conversations with peers, teachers and in small and large groups, using agreed-upon rules for discussions, including active listening, self-advocacy, regulating use of respectful language, and appreciation of a variety of perspectives.

   **Activity Example:** In opening classroom meetings and lessons, teachers demonstrate and explain the rationale for the protocol to be used in lessons. Expectations are clearly stated and reinforced throughout the year.

   **Activity Example:** During a birthday circle, children focus all of their attention to honor and appreciate the friend whose birthday is being celebrated.

   **Activity Example:** At a class meeting, children pass a “talking ball” to remind themselves whose turn it is to speak, and who should be quietly listening.

   **Activity Example:** During a discussion leading up to an exploration of the origins of the universe, children brainstorm “Big Questions,” acknowledging that they are not trying to answer the questions, but only asking them.

   **Activity Example:** A teacher takes two students who are in conflict with one another out of the classroom to hear each other out. Using an "active listening" protocol that they have learned, they each restate the argument of the other, seeking to understand their friend’s point of view.

   **Activity Example:** In a class discussion about teasing and bullying, children listen and speak to build a shared definition of emotional safety.

   **Activity Example:** Children who want to discuss a school rule write their topic in the Community Meeting book and, in a meeting, use the structure to brainstorm, propose a resolution, share opinions, and vote on it.
Activity Example: Through role play and scripted dialogue the teacher and older students model how to utilize “I statements” in the Conflict Resolution process.

Activity Example: At Community Meetings students are given a forum to discuss classroom issues. Teachers model how to facilitate, record and time a brainstorming and problem solving meeting. Future meetings are run by elders. Students learn to discuss issues clearly, objectively and with details.

3. Confirm understanding of text read aloud or information presented by asking and answering questions.

Activity Example: In a shared reading activity, children listen to others’ ideas about a character, use their knowledge of the character to speculate on his future actions, and brainstorm different ways of resolving a conflict in the story. They confirm their understanding of the story by looking back at the text.

Activity Example: In a lesson on the parts of a fish, children ask questions to understand the difference between gills and lungs. They then help one another label the parts of the animal.

4. Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

Activity Example: Anticipating an upcoming 3-day outdoor education trip, students describe to new students their experiences of past trips.

Activity Example: In a zoology lesson about a fish, children share what they know about fish: how they move what they eat, and how they breathe.

Activity Example: In a history lesson, children discuss what it would be like to be marooned on an island. They brainstorm what they would need, and how they would keep track of the passage of time.

Activity Example: During Great Books lessons students listen for details when a story is read. Students learn to collect facts from text, analyze them and understand different points of view. Students retell stories and reflect on the narrative.

5. Speak audibly and clearly, in complete sentences when appropriate.

Activity Example: At a daily community meeting, children review the routines of the day, share experiences in their lives outside school, and discuss issues of general interest.

Activity Example: At a monthly Elementary and Middle School assembly, children from a lower elementary class share announcements and important community wide information with their peers and with older students.

Activity Example: At the Halloween season, elementary children research historical figures. They dress up as these figures and present themselves to their peers at an event called Mystery History.

6. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

Activity Example: As part of a “country research project,” an eight-year-old gives an oral report to her classmates on fundamental human needs as they are met in a particular
culture, showing a model she has constructed of a typical home and offering samples of food she has prepared.

Activity Example: In preparation for a community event, children compose poetry and create illustrations to express what they have learned about the Earth’s formative time. They present their work to an audience of peers and parents.

7. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

Activity Example: Following a lesson on the clothing of Ecuador, a teacher asks the students what country they are studying and what topic they recently learned about.

Activity Example: A teacher tells a story and shows pictures of the asteroids that bombarded the Earth during its early history, explaining that this is one reason our planet was so hot that the insides melted and settled into layers. Afterwards, the teacher asks children to create drawings of the bombardment, and of the layers of the Earth.

Activity Example: A teacher uses a model of a mountain to show how water flows from the high ground through a carved course toward the low ground to the sea. She places flags with names of the parts of the river. Later, the students use outline drawings to replicate the labeling.

Grammar

8. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

a. Use common, proper, possessive, collective and abstract nouns.

b. Use singular and plural nouns, including irregular plural nouns.

c. Use personal, possessive, indefinite, and reflexive pronouns.

d. Ensure subject-verb and pronoun-antecedent agreement.

e. Use adjectives and adverbs logically; use comparative and superlative adjectives.

f. Use coordinating and subordinating conjunctions.

g. Use articles and demonstrative adjectives and pronouns.

h. Use frequently occurring prepositions.

i. Produce and expand simple and compound declarative, interrogative, imperative, and exclamatory sentences.

j. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs.

Activity Example: Students sort cards under several categories, distinguishing among common, proper, possessive, collective and abstract nouns.
Activity Example: After a mini-lesson showing the rules for forming plural nouns, students use a set of cards to convert singular nouns to plurals.

Activity Example: At a group lesson, a teacher introduces the function of the preposition in a sentence. She tells a dramatic story that provides a metaphorical basis for introducing the concept, and she connects the story to a stylized green “bridge” that serves as a symbol for the preposition. She introduces frequently occurring prepositions, and children draw the “bridge” to mark prepositions in sentences.

Activity Example: During a language lesson students listen to sentences read aloud and determine whether they are declarative, exclamatory, or interrogative. They then identify the appropriate punctuation as they write those dictated sentences.

Activity Example: During shared reading and as an independent work students use Montessori grammar symbols to identify and mark the nine parts of speech in prepared texts.

Activity Example: After a mini-lesson, students use a prepared text to practice replacing nouns with appropriate pronouns.

Activity Example: Children use grammar manipulatives to compose a sentence containing the elements of subject, predicate and direct object. paying particular attention to the agreement between the subject and the predicate.

Activity Example: Students work together to construct a simple sentence with subject, predicate and direct object. Using Montessori question arrows, they enrich the sentence with adverbial extensions and adjectives.

Conventions

9. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
   a. Capitalize dates, names of people and places, holidays, appropriate words in titles.
   b. Use end punctuation.
   c. Use commas in dates, words in a series, greetings and closings of letters, addresses, and dialogue.
   d. Use apostrophe to form contractions and possessives.
   e. Use quotation marks in dialogue.
   f. Form and use possessives.
   g. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words.
   h. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.
i. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

**Activity Example:** While composing a thank-you note to a classroom parent, a student demonstrates a working knowledge of proper letter capitalization and sentence punctuation.

**Activity Example:** During a Level 1 Language lesson story time, students discuss what the punctuation mark tells us. They add quotation marks to sentences that contain dialogue to see the impact of the feeling expressed.

**Activity Example:** After a mini-lesson showing the rules for forming contractions, students use a set of cards that ask them to change two words into contractions, with apostrophe.

**Activity Example:** After a mini-lesson showing the rules for forming possessives, students use a set of cards that ask them to create possessive forms.

**Activity Example:** During a leveled language lesson, students learn that the letters f, l and s are doubled when they are found at the end of a one syllable word that contains a short vowel sound. They practice this rule with partners and as a group using white boards and magnetic tiles.

**Activity Example:** After completing the first draft of a written work, students use a COPS editing checklist to proofread and correct errors of capitalization, organization, punctuation and spelling.

**Activity Example:** After mini-lessons that introduce various writing conventions, students use matching cards to practice capitalizations, punctuation and use of quotation marks.

**Activity Example:** After a lesson, children use dictionary guide words to locate a word and find its meaning.

**Activity Example:** Children compose a thank-you note to a classroom parent, self-checking for proper capitalization and punctuation.

**Vocabulary**

10. Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on reading and content, choosing flexibly from a range of strategies.

a. Use sentence-level context as a clue to the meaning of a word or phrase.

b. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., happy/unhappy, agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat).

c. Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.
Activity Example: An eight year old child encountering an unfamiliar word, having applied word attack skills unsuccessfully, uses a dictionary, with or without the teacher’s help, to locate the pronunciation and meaning of a word.

Activity Example: During Read Aloud the teacher stops after a potentially unfamiliar word. The teacher re-reads that sentence being sure to emphasize the words that would help give meaning to the unfamiliar word, and then asks the group what they think the new word means. The teacher solicits different responses from the group and combines that various answers to form an accurate definition of the new word.

Activity Example: During Language Lessons a small group discusses a variety of suffixes during a lesson, noting how the meaning of a word changes as a new suffix is added. These words are then used during dictation practice.

Activity Example: In a Great Books lesson, children explore and discuss the meaning of words that differ with context. For example, a biography of famous baseball umpire Amanda Clements uses the word “ran” to describe her job as director of the YMCA. The children contrast this meaning with “ran,” as used to describe a baseball player running to a base.

Activity Example: In Reading Group, unfamiliar vocabulary words are highlighted in the text. A student will use the glossary in the book to determine the meaning of that unfamiliar word.

11. Demonstrate understanding of word relationships and nuances in word meanings.

a. Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful).

Activity Example: After a lesson that introduces adjectives as descriptive words students write appreciations using words other than nice or awesome.

b. Distinguish shades of meaning
   i. Among adjectives differing in intensity (e.g., large, gigantic)
   ii. Among closely related adverbs (e.g., toss, throw, hurl)
   iii. Among related words that describe states of mind or degrees of certainty (e.g., knew, believed, suspected, heard, wondered).

Activity Example: Children use grammar manipulatives to compare the intensity of closely related adverbs and adjectives.

Activity Example: A child works her way through the Skyscraper Word Study Boxes to deepen her knowledge of word relationships and her analytic language skills.

12. Acquire and use accurately grade-appropriate conversational, general academic, and domain specific words and phrases, including those that
signal spatial and temporal relationships (e.g., After dinner that night we went looking for them).

**Activity Example:** While reading a chapter with a small group, students use a dictionary to research new vocabulary and recording definitions in a log book.

**Activity Example:** Two children work together on a dictionary word study, matching word cards to usage cards.

**Activity Example:** A child assembles cut-up descriptions of the body functions of a fern, recognizing sophisticated vocabulary to make meaning.

**Activity Example:** A teacher introduces the relationships of two straight lines on a plane, naming the geometric nomenclature and giving it meaning with concrete materials linked to the etymology of the terms.

**Activity Example:** A child matches the names of animals with the special names of groups, the homes, and the young of those animals.

**Activity Example:** A child works her way through the Skyscraper Word Study Boxes to deepen her knowledge of word relationships and her analytic language skills.

**Activity Example:** During a Junior Great Books lesson, the facilitator introduces vocabulary used by the author.

---

**Literature**

**Foundational Skills**

13. Know and apply grade-level phonics and word analysis skills in decoding words.

   a. Identify and know the meaning of the most common prefixes and derivational suffixes.

   b. Decode words with common Latin suffixes.

   c. Decode multisyllable words.

   d. Read grade-appropriate irregularly spelled words.

**Activity Example:** In a language lesson a child practices identifying and building words with magnetic letter tiles with different types of suffixes.

**Activity Example:** A child uses cards and full body movement to learn a specific set of sight words in a Fundations lesson and is expected to use them when writing sentences or a paragraph.

**Activity Example:** During language lessons first and second graders use tools such as clapping & syllable frames to separate words in syllables orally and by writing. They practice this skill when writing Haiku poems.

**Activity Example:** Using the “skyscraper” word study materials, a child builds words by adding prefixes to base words.
14. Read with sufficient accuracy and fluency to support comprehension.
   a. Read grade-level text with purpose and understanding.
   b. Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings
   c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

      Activity Example: During Quiet Reading Time, children choose books at their “just right” reading level and sustain reading for 20 minutes. (The “just-right” level is assessed periodically using the DRA2, running records, retelling and quick comprehension checks.)

      Activity Example: After a leveled group reading lesson a child answers, orally and/or in writing, questions about the text.

      Activity Example: During reading practice with a teacher, a six-year-old corrects himself as he makes decoding mistakes. He uses context and pictures to support comprehension.

Key Ideas and Details

15. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

      Activity Example: After reading “Who am I?” questions, a student uses cards and Animal Encyclopedias to research an animal’s behavior.

      Activity Example: During a lesson using Junior Great Books, the teacher reads aloud, stopping from time to time so she and the children can formulate and discuss questions about the story, citing specific passages in the text.

16. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.

      Activity Example: A teacher reads aloud creation stories from around the world, depicting the ways in which varying cultures use mythology to explain the creation of the universe and the beginning of life. Group works together to retell the story; discussing the deeper meaning and morals of the stories.

      Activity Example: A teacher reads aloud a biography, and the children retell the parts of the life story that reveal the legacy of the subject and the obstacles they overcame.

      Activity Example: After independent reading of a leveled story, children come together for a lesson and retell parts of it. They answer questions about main idea or central message justifying their answers with the text.

      Activity Example: In library class, students find and read folktales from the culture of their country research country. They compare details in the tale that relate specifically to the climate of their country.

17. Determine the main idea of informational text; recount the key details and explain how they support the main idea.
Activity Example: During their Country Research Project, third graders collect and read information from books, encyclopedias and websites. They organize the information to later write a report including many different aspects of the country of their study.

18. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

Activity Example: Together, a teacher and small group of students analyze and record the traits of a main character from a story that the teacher has read aloud. Students then use graphic organizers to analyze and record character traits on their own from a picture book or a book they are reading at their guided-reading level. Finally, students create their own fictional character to place in a story.

Activity Example: During a Reader’s Theatre session, students play the roles of characters, showing that they have interpreted the character’s motivation and feelings.

19. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

Activity Example: In celebration of MLK Day, students read biographies about Dr. King that reveal the historical context, sequences of events and cause/effect.

Activity Example: In preparation for the telling of the Creation Story, teachers read creation myths from a variety of cultures. Children discuss the stories to understand them and to place them into historical context.

Activity Example: Students conduct an array of science explorations that illustrate how the Earth has evolved. They connect these explorations with the Creation Story when they hear it.

Craft and Structure

20. Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.

Activity Example: During class read alouds and Junior Great Books discussions, teachers preview vocabulary words and invite students to identify words or idioms with which they are unfamiliar. Students then try to infer the meaning from the text, and they answer each others’ questions and share their interpretations.

Activity Example: In library class, when a new author is introduced, students explore words that are particular to that author and discuss why the author chose those words and phrases.

21. (Informational text) Determine the meaning of general academic and domain-specific words and phrases in a text relevant to age or subject area.
Activity Example: While matching pictures, labels, and definitions in a nomenclature work on *External Parts of a Fish*, a child infers the meaning of “gills” based on contextual clues: “Fish have gills to take oxygen from the water...”

22. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.

Activity Example: When discussing Fundamental Human Needs in a vertical study, children comprehend the sequence of one particular domain (housing, food, transportation) over time.

Activity Example: A teacher reads poetry aloud. She then analyzes it into component parts and talks about how stanzas relate to one another.

23. (Informational text) Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.

Activity Example: During the research phase of their Country Research Project the children use keywords to pull information from the World Book website. In this same site they find links to pages that might have the information they are looking for.

Activity Example: While researching an animal, students use the index of a book to locate information on predators.

Activity Example: In library class, students learn the words used for specific text features of encyclopedia articles so that they can locate information quickly in any article of interest.

24. Identify the author and illustrator of a story and define the role of each in telling the story.

Activity Example: During a writing lesson children identify the names on the covers of many books and the roles behind those names. They later work in their own stories with the option of have a peer illustrate their books.

Activity Example: During a read aloud of *Mouse Trouble* by John Yeoman, students recognize the illustrations and learn that the book is illustrated by Quentin Blake, the same illustrator as for *The Witches*, and other Roald Dahl books they know.

25. Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud.

Activity Example: A student volunteers to read aloud the Junior Great Books selection. *The Man Whose Trade Was Tricks*. In the dialogue between the King and Shakro, he uses a deep, know-it-all voice for the King, and a sly, humble voice for Shahkot.

26. Distinguish their own point of view from that of the narrator or those of the characters, or, in the case of informational text, from that of the author.
Activity Example: During a Great Books discussion of *Ooka and the Honest Thief*, children discuss the motives of Gonta, the honest thief, and Ooka who must punish him. Some think Ooka is innocent because he had no choice but to steal, and others want him punished for wrongdoing. The teacher shows that she can sway their opinions by the way she narrates the story.

Integration of Knowledge and Ideas

27. Explain how specific aspects of a text’s illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).

Activity Example: As part of a picture book reading session, a teacher guides students to scan the pictures on the page before he/she reads. Under the guidance of the teacher, students take a closer look at some illustrations throughout the story to make observations and draw conclusions about what the students have read.

Activity Example: In library class, students discuss examples of different styles of illustration.

28. Use information gained from illustrations (e.g., maps, photographs) and the words in informational text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Activity Example: During Reader’s Workshop students read a biography, discuss the illustrations, timelines and maps in the book. They then write a short report about the life of the subject, using their own words to paraphrase the text.

Activity Example: As part of a research project on a country, a child studies the climate, population density and product maps in a resource book.

Activity Example: After a science lesson on seeds, a child studies a diagram of the parts of a seed in a library book.

29. Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.

Activity Example: After hearing *Pippi Longstocking* read aloud, and after having seen the play performed, students fill in a Venn Diagram to compare and contrast the two tellings of the story.

Activity Example: A teacher has read aloud *Cinderella, Nomi and the Magic Fish* and *Yeh-Shen*. She leads a discussion about the common elements of the three stories.

30. Describe the logical connection between a series of events or a sequence of facts in an information text. (e.g., comparison, cause/effect, first/second/third in a sequence).

Activity Example: Following a lesson at Reader’s Workshop, students complete a graphic organizer in which they identify cause and effect, using specific examples from a book such as the Reading A-Z’s *The Umbrella Trick*. 
Activity Example: Following a lesson at Reader’s Workshop, students complete a graphic organizer in which they identify a sequence of events in the book such as *A Picture Book of Martin Luther King, Jr.*

31. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).

Activity Example: In library class, after reading two Percy Jackson books, students discuss how the author incorporated the Greek myth portrayed in each into Percy’s quests.

32. Compare and contrast the most important points and key details presented in two informational texts on the same topic.

Activity Example: When researching a country, students use encyclopedias, atlases and library resources, comparing the information found in each.

Activity Example: In library class, students look at several texts about the same country to determine which has the more relevant and complete information required of the Country Research Project.

Composition

Text Types and Purposes

33. Write opinion pieces on topics or texts, supporting a point of view with reasons.

a. Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.

b. Provide reasons that support the opinion.

c. Use linking words and phrases (e.g., because, therefore, since, for example) to connect opinion and reasons.

d. Provide a concluding statement or section.

Activity Example: Students have been meeting for lunch with the Green Team, a sustainability task force. They want the parents of the school to refrain from idling their cars during pick-up, and they write an open appeal for the community newsletter urging this and giving their reasons.

Activity Example: A child prepares his portfolio in advance of a conference with his parents. He includes his personal reflections about the work he selects.

Activity Example: After a class field trip, children write thank-you notes, using the appropriate form and voice as they talk about their favorite part of the trip and why they liked it.
34. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

a. Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.
b. Develop the topic with facts, definitions, and details.
c. Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.
d. Provide a concluding statement or section.

Activity Example: A child uses his knowledge about Fundamental Human Needs, reinforced by the available classroom chart, to structure his research on the Mayan culture.

Activity Example: In preparing for Mystery History Day, a child chooses a character to portray, and he writes down three clues that will help classmates guess his identity.

Activity Example: Students use a provided outline to research a country. They include topics such as the country’s history, government, culture, economy, weather, religious populations, etc. After collecting information, the students create a report using the sequence of the outline, and they add introductory and concluding paragraphs.

35. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

a. Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.
b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.
c. Use temporal words and phrases to signal event order.
d. Provide a sense of closure.

Activity Example: After a lesson about story structure, students are provided with a graphic organizer to plan out the important events in a story they are writing.

Activity Example: Using comic strips where the dialogue has been whited out, students write in their own dialogue that they feel represents the character and the theme of the cartoon.

Activity Example: Students bring in photos of themselves from birth to their current age. They sequence the photos and write a brief description of something they did each year.

Activity Example: In Reader’s Workshop, after reading Reading a-z’s Broken Arm Blues, students map the characters’ feelings about their broken arms throughout the story.

36. Write descriptive poetry about observations, particularly in nature, using information organizers, rhythm structures, and free form.

a. Identifies characteristics of the subject to be described.
b. Uses a variety of adjectives to enrich a writing piece.
c. Expresses a message that conveys appreciation for beauty.
d. Communicates feelings evoked by observing nature.

**Activity Example:** In preparation for Harvest Fest, students take a nature walk and look for signs of fall. They then write poems about what they saw and felt on their walk.

**Activity Example:** After picking apples, students cook a variety of apple treats. They then taste these treats and brainstorm words that describe the taste and texture of the food. Lastly, they use these adjectives to create poems about the food they cooked.

### Production and Distribution of Writing

37. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

**Activity Example:** A student is writing an expository piece about the life of a cheetah. He uses a graphic organizer to organize the paragraph, beginning with a topic sentence and including three details.

**Activity Example:** During a writing lesson a teacher identifies the essential parts of a story: the opening, the conflict, the resolution and the ending. The children then identify these parts in a story that the teacher has read aloud. Finally, they use a graphic organizer that distinguishes these parts to build their own story.

**Activity Example:** During a poetry unit, teachers identifying the features and purposes of various types of poems, including haiku, diamante, cinquain and acrostic. By reading model texts and analyzing the structure, students learn the connection between the style and the message.

38. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

**Activity Example:** A child uses an editing checklist or a chart detailing the steps of the writing process to refine his work.

**Activity Example:** A child has finished writing a piece, and a teacher reads it over to help proofread for writing conventions the child has been taught, offering suggestions for improvements.

**Activity Example:** After finishing a first draft of a story, a child meets with a classmate to have it read. The classmate gives feedback about the story. He also checks for conventional capitalization, organization, punctuation and spelling.

**Activity Example:** A child reads his story at circle and receives input from peers and teacher, which he then uses to edit his story.

39. Produce and publish compositions that are conventionally written and legible. With guidance and support from adults, use technology to (using keyboarding skills) as well as to interact and collaborate with others.

**Activity Example:** After receiving direct instruction in letter formation, vertical alignment, and spacing between words, children recopy work accordingly.
Activity Example: A child learning cursive is observes how the degree of his slant varies on the page.

Activity Example: In the final stage of the writing process, a child types her story on the computer, laying out each page to allow for illustration. After completing and illustrating her work, she binds it for inclusion in the class library.

Research to Build and Present Knowledge

40. Conduct short research projects that build knowledge about a topic.

Activity Example: After a biology lesson a student chooses an amphibian and reads information in resource books and online to gather knowledge about the animal. She collects the information and completes a creative project to demonstrate her understanding.

41. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

Activity Example: Students work with the Botany Question & Answer Game, reading informational cards about plants and categorizing pictures according to the answers. The students then write short paragraphs about the plant they researched.

Range of Writing

42. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Activity Example: Over several weeks in Writer’s Workshop students work on personal narratives, poems and fictional stories in preparation for presenting their published work at Spotlight on the Author.

Activity Example: At a session of Writer’s Workshop students start and finish a letter to a pen pal.
LOWER ELEMENTARY CURRICULUM
Math

In the Lower Elementary math program, children review and solidify skills acquired in preschool, extend their understanding of numeration through a study of the history of mathematics and early number systems, and move into levels of abstraction in number operations. During this period, children develop greater ease with number operations and properties and more experience with the application of mathematical knowledge in problem solving. Children acquire a mathematical vocabulary to identify the operations with which they are familiar as well as those they are just learning. Emphasis is now placed on accuracy in computations and on the memorization of number facts. Children work to understand the interrelationship of number operations (ex: subtraction as the inverse of addition) and to differentiate mathematical concepts such as equality and equivalence. When basic number facts are mastered, children concentrate on the understanding and manipulation of fractions and decimals.

Children also begin to manipulate fundamental Geometric concepts in the Lower Elementary years, including angles and lines, the properties of triangles, and plane figures. Study of geometry at this level culminates in familiarization with the concepts of congruency, similarity and equivalence.

The developmental interest children have in problem solving, categorizing, classifying, including, excluding, and grouping, as well as their interest in mastering skills, such as telling time and measuring, are incorporated in the Lower Elementary curriculum.

Learning Objectives and Activity Examples include:

1. Students will construct a concept of numbers to include whole numbers to the millions, and fractional numbers.
   
   **Activity Example:** A child uses the Golden Beads to count to 10, to identify 1, 10, 100, and 1,000, and to understand the concept of zero as it occupies the place of a missing hierarchical order element.

   **Activity Example:** Using Hierarchy Materials, a teacher indicates the geometric similarity among a small green cube representing a “simple unit,” and larger green cube representing a “unit of thousands” and a very large green cube representing a “unit of millions.”

   **Activity Example:** A child explores the varying value of a bead as he moves it from hierarchically color-coded square to square on the Checkerboard, noting that blue “ten thousands squares” lie on a diagonal, the product of various combinations of hierarchies.

   **Activity Example:** A child traces insets from the metal Fraction Circles, making a poster that shows the fractions that she has found that are equivalent to one-half.

   **Activity Example:** A child places color-coded beads and disks on a Yellow Decimal Board to form quantities that include decimal numbers.

2. Students will construct a concept of numeration symbols and mathematical notation to include
   
   - Identifying and reading whole number numerals to hundreds of millions

Lexington Montessori School    Lower Elementary Curriculum
• Comparing whole and fraction numbers using equal, unequal, greater-than, and less-than symbols
• Using the associative and distributive properties, with coefficients and parentheses, to form binomials and trinomials
• Using a decimal point to separate whole numbers from fractional numbers.

  **Activity Example:** Students practice correct formation of numerals from 0-9.

  **Activity Example:** A child identifies teens and tens with board and symbol cards and colored bead bars.

  **Activity Example:** Two children use the Hierarchical Cards to compose and read numerals ranging from 1 – 9,999,999.

  **Activity Example:** A student uses specially lined and color-coded paper to expand a four-digit multiplicand into its hierarchical components before using a Bead Frame to perform a multiplication.

  **Activity Example:** Following instructions from a command card, a child places sets of colored bead bars on each side of an open statement of comparison. After combining the beads on each side, she chooses a wooden sign to show which set is “greater than” the other. She then reverses the sign to show which set is “less than” the other.

  **Activity Example:** A child uses colored bead bars and wooden signs of operations to compose the binomial multiplication (5+3) x 4. After taking four bead bars for each term of the binomial and counting up the total, he combines the binomial and takes 4 “eight bars” to check the answer.

  **Activity Example:** A teacher gives a dramatic lesson showing that, when reading a number, the word “and” can only be used to denote the decimal point, which is the conjunction between the whole and decimal parts.

3. Students will construct a concept of number theory to include

   • Finding multiples of a number
   • Identifying factors a number
   • Finding the lowest common multiple of 2 or more numbers.
   • Finding the greatest common factor of 2 or more numbers.

  **Activity Example:** Two children skip-count multiples of eight using the long-chain of eight bars, identifying the values with prepared arrows.

  **Activity Example:** A child identifies odd and even numbers using Cards and Counters.

  **Activity Example:** Two students use colored bead bars to investigate together the multiples of the numbers 1 through 10. They replace the groups of like bead bars with equivalent quantities that employ ten-bars.

  **Activity example:** A group of students takes a quantity of pegs and explores ways to analyze the quantity into like numbered groups on the Pegboard. They note the component groups, or factors, that cannot be further broken into "group-lets."

  **Activity example:** A group of students places successive groups of pegs in a Pegboard, noting the totals that represent the multiples of the grouped quantity.

  **Activity example:** Two students place successive groups of pegs in a Pegboard, each making different sized groups. They explore together until they have made their total numbers of
pegs match. The first time this is achieved, they record the total as the "lowest common multiple."

4. Children will develop their knowledge of place value, demonstrating a clear and working understanding of regrouping by tens and studying expanded notation. Students will construct a concept of place value by

   • Regrouping: exchanging and borrowing
   • Holding the place of an empty hierarchy
   • Exploring the Principle of Invariance
   • Analyzing numbers into component hierarchies
   • Exploring the hierarchy resulting from the product of two hierarchies.

   **Activity Example:** While performing the subtraction (3004 – 1565), two children exchange a thousand-cube for 10 hundred-squares, then one of the hundred-squares for 10 ten-bars, then one of the ten-bars for 10 unit beads so that five units can be “taken away” from fourteen beads. They use color-coded Numeral Cards to compose the subtrahend, minuend and difference, and they then copy the problem in a notebook.

   **Activity Example:** Children use the Stamp Game to exchange 10 green unit stamps for a blue ten stamp, 10 ten stamps for a red hundred square, and 10 hundred stamps for a green unit-of-thousands stamp.

   **Activity Example:** A student uses specially lined and color-coded paper to expand a four-digit multiplicand into its hierarchical components before using a Bead Frame to perform the multiplication.

   **Activity Example:** A student uses a color-coded Checkerboard to discover the hierarchy of the product formed by the multiplication of various hierarchies.

5. Children will use the language of mathematics to express mathematical ideas precisely, including

   • Vocabulary of operations: addition (addend, sum), subtraction (minuend, subtrahend, difference), multiplication (multiplicand, multiplier, product) and division (dividend, divisor, quotient).

   • Key words of operations: addition (in all, altogether, sum, total, add); subtraction (left, more, fewer, less, difference, take away); multiplication (in all, groups, product, all together); division (each, quotient, equally, divide, separate)

   • Vocabulary of fractions notation (denominator, numerator, whole, part, third, quarter, half, etc.)

   • Nomenclature of plane geometric figures

   • Nomenclature of angles

   • Nomenclature of types of lines

   **Activity Example:** During a lesson, a teacher asks for a volunteer to “use the skittles to form the divisor.”

   **Activity Example:** Two children examine a word problem, looking for key words to figure out what operation they must perform. When they notice the word, “each,” they realize they must divide.
Activity Example: A teacher distinguishes between the numerator and the denominator of a fraction, explaining dramatically that the bottom number is “da nom o’ da family” (the name of the family) while the top number is the number of parts we are discussing.

Activity Example: A child combines Constructive Triangles to form quadrilaterals. S/he places a label saying “rhombus” under the appropriate shape s/he has formed.

Activity Example: A child uses a small, yellow measuring angle to search for right angles among drawers of geometric shapes.

Activity example: Two students explore the wooden plane figures in the Geometry Cabinet, searching for shapes bearing acute, obtuse and right angles.

Activity Example: As a teacher uses Geometry Sticks to lay out “divergent lines,” she uses a memorable narrative to introduce the concept. She tells a tale of two friends who move away from each other, and she places cartoon figures with sad faces on the lines. She reverses the direction of the figures, and makes them smile as they approach each other, introducing “convergent lines.”

Activity example: A teacher reviews with a group of students the characteristics of a rhombus. She reminds them of the etymology of the name, telling a story of ancient Greek spinning tops. Together they remember the equality of the sides, noting that the opposite angles are equal, but not the adjacent angles. They remember the names of the short and long diagonals, and identify the difference between the perimeter and the surface of the figure.

Activity example: A teacher holds a taught string, extending it from balls of string held inside both hands. “This is a line.” A student makes two marks on the string, and cuts on those marks. The teacher explains that the piece of string represents a "line segment, a piece of a line which has a beginning and an end."

Activity example: A teacher sits silently with a group of students. They intently watch the surface of some colored water in a glass container. When it is still, they compare it with the surface of a very still sea. They imagine looking out at the horizon, where sea and sky meet. Noting that that line is horizontal, they simulate it with a small stick on the surface of the water. It "follows the direction of still water."

6. Students will perform four basic operations to include

- Understanding the concept of addition as “combining” quantities.
- Understanding the concept of subtraction as “taking away” from a quantity.
- Calculating sums and differences in problems with terms ranging from one to seven digits, with and without regrouping.
- Understanding the concept of multiplication as sequential additions of the same quantity.
- Understanding the importance of place value in the process of multiplying by 2 and 3 digit multipliers; calculating products of multiplication problems with 2 and 3 digit multipliers.
- Understanding the concept of division as distribution of fair shares, and as formation of equal groups.
- Calculating quotients of division problems with 2 & 3 digit divisors, including special cases involving zeros.
- Mastering memorization of addition, subtraction, multiplication and division facts.
• Adding, subtracting, multiplying and dividing like fractions
• Adding, subtracting, multiplying and dividing whole numbers
• Understanding the inverse relationship of multiplication and division.
• Adding and subtracting of decimal fractions (as seen in money problems).

**Activity Example:** Two young students use the Golden Bead Material to learn about distributive division. They imagine sharing 6254 “pieces of pizza” among four “people.” They begin by passing out the thousand-cubes, exchanging when they are not able to distribute fairly.

**Activity Example:** A student pretends to have $5000. She tells her teacher she’d like to spend $259 on a birthday present, and her teacher helps write a subtraction problem. She uses the Stamp Game to figure out how much money is left. She decides to spend, donate, or misplace more money, and more subtraction work follows, finally bringing the difference to zero.

**Activity Example:** Three students distribute 4182 pieces of Golden Bead “fish food” to 123 fish. They create their divisor using 3 green “fish,” 2 blue “aquaria (each with ten fish) and 1 red “shelf” (holds ten aquaria with ten fish each, or one hundred fish). They realize that each time they give one piece of food to a “fish” then must give a ten-pack to each “aquarium,” and a one-hundred-carton to the “shelf.”

**Activity Example:** Following directions on a command card, a child uses green unit-stamps, blue ten-stamps and red hundred-stamps to form three identical quantities of 237. Noting that multiplication is sequential additions of the same quantity, he combines the like hierarchies, making exchanges as necessary to find a product of 711.

**Activity Example:** A child copies a multiplication problem with a 2-digit multiplier onto the left side of a piece of specially color-coded Bead Frame paper. On the right side, she analyzes the multiplicand into its hierarchical parts. She uses the principle of invariance to analyze the multiplier and transform it into two 1-digit problems. She then uses the bead frame to perform the operation, recording and combining the partial products.

**Activity Example:** A child counts out a dividend from Test Tubes of color-coded beads, placing them in like-colored bowls. He then places skittles that represent the two-digit divisor on special boards, also color-coded. He distributes the beads among the skittles, attending to the appropriate hierarchical matches, to find the quotient.

**Activity Example:** Two students use sectors of Fraction Circles to add fractional quantities with the same denominator.

**Activity Example:** With paper and pencil, students perform addition and subtraction of fractions with a common denominator.

**Activity Example:** A student reads a story problem, which ends with the words, “How many do you have altogether?” He writes the numbers down as an addition problem, and solves it using the small bead frame.

**Activity Example:** An advanced student works with the Checkerboard to read and solve multiplication problems like 5,684,621 x 34. She learns to record the partial products as she goes. After some weeks of practice, she asks the teacher, “Could I just do this in my head?”

**Activity Example:** Students use paper and pencil to check subtraction with addition and division with multiplication.
Activity Example: A child places color-coded disks on similarly coded sections of a Yellow Decimal Board to form decimal fractions, practice reading them, and then to add and subtract them.

7. Children will memorize addition, subtraction, multiplication and division facts using their knowledge of number properties to make their recall flexible.

Activity Example: Students use the Stripboard materials to understand the various numerical combinations that can yield a particular sum or a particular difference.

Activity Example: Two students quiz each other with subtraction flashcards to increase speed of number fact recall.

Activity Example: A child stacks tiles with “12” written on them to search a Chart of Multiplications to find various combinations that produce the same product.

Activity Example: Students use paper and pencil to check subtraction with addition and division with multiplication.

Activity Example: Children orally skip count to begin to learn multiplication facts, using materials and physical games like hopscotch.

Activity Example: Using a Pegboard, children find the common multiples of two numbers, reinforcing their knowledge of multiplication facts.

8. Children will pose questions and gather data about themselves and their surroundings, and they will represent this data using concrete objects, pictures and graphs.

Activity Example: A child counts lengths of unit squares to represent the ages of the members of her family. He creates a graph by pasting them along a baseline to compare them graphically.

Activity Example: Two students survey their classmates to find out how many of them have pets of various types. They then create bar graphs to show the results of their data collection.

Activity Example: A student uses the United Nations website to find data about the economy of a nation she is researching. She enters the data into a circle graph generating program to create a graphic for her display.

Activity Example: At a morning circle, a teacher leads a discussion on the probability of a snow closing the following day.

9. Children will solve problems related to their daily routines as well as to mathematical situations that are presented in stories.

Activity Example: A child counts out the pieces of snack available and figures out what the fair share will be for each member of the class. The teacher asks, “How did you figure that out?”

Activity Example: A child chooses a story problem from a set and reads, “The elders saw 215 yellow flowers in a tree. They saw an iguana eat 113 of the flowers. How many flowers were left?” He underlines the information that he needs to solve the problem, then writes the calculation and his answer.

Activity Example: A teacher puts a jar of marbles on the rug in front of a group of students. Pairs of the children are asked to estimate the number of marbles in the jar. Later, they discuss the methods they used.
10. Children will have experiences measuring, in metric and customary units, length, time, liquid capacity, surface area, perimeter, angles in degrees, volume, weight and temperature.

   *Activity Example:* Students prepare a recipe using measuring utensils.

   *Activity Example:* Following instructions on a command card, a child measures the length and weight of a variety of objects using both conventional and metric systems, recording her information in her notebook.

   *Activity Example:* A teacher tells a captivating tale of Babylonian priest-astronomers tracking the 360° cycle of a star through the sky. She shows how the Montessori protractor recreates that cycle to facilitate measuring an angle’s portion of that 360°.

   *Activity Example:* A child checks the rain gage to report rainfall in inches or in fractions of inches.

   *Activity Example:* A child places five-bars between the numerals on a special clock, using them to skip-count the number of minutes before and after the hour.

   *Activity Example:* A child reads a clock to figure out how much time is left until recess.

   *Activity Example:* Two students play the Money Game, counting money and making change as directed on command cards.

11. Students will master concepts of Geometry to include

   - Identifying properties and nomenclature of plane figures.
   - Identifying the triangle is the constructor of all polygons.
   - Identifying properties and nomenclature of types of lines.
   - Identifying positions of lines on a plane.
   - Identifying properties and nomenclature of angles.
   - Identifying relationships between two angles on a plane, including adjacent angles and angles formed by intersecting lines.
   - Measuring angles using various protractors.
   - Understand concept of closed plane figures: including closed-curved figures and polygons; regular and irregular polygons; circles.
   - Identifying properties and nomenclature of triangles, classified by sides and by angles.
   - Learning the concepts of congruence, similarity, and equivalence.
   - Identifying properties and nomenclature of solid geometric figures.

   *Activity Example:* Two children work together to match labels and written descriptions to the plane figures of the Geometric Cabinet, including triangles, rectangles, regular polygons, circles, and curvilinear figures.

   *Activity Example:* Using a box of Constructive Triangles, students combine triangles in various ways to construct and identify quadrilaterals, including rhombi, squares, rectangles, common quadrilaterals and trapezoids.

   *Activity Example:* Using Geometric Solids, students match labels and written descriptions to the cube, square-based parallelepiped, regular triangular prism, square-based prism, square-based pyramid, regular triangular pyramid, cylinder, cone, sphere, ovoid, and ellipsoid.
Activity Example: A teacher uses a string to give a dramatic illustration of a “ray,” showing that it has a point of origin, but goes on forever.

Activity Example: A child uses a stick from the Geometry Stick Box to measure the distance at various points between two straight lines to see if they are parallel.

Activity Example: A child uses the Geometry Stick Box materials to form parallel lines and cross them with a transversal. She traces various pairs of angles, cutting them out and pasting them together to see if they are supplementary.

Activity Example: A child attaches together two sticks from the Geometry Stick Box to form a vertex of an angle. He then uses a measuring angle as he decides whether to make the stick “sides” delimit an acute or obtuse angle.

Activity Example: Two children use the Constructive Triangle boxes to form, compare, and contrast figures, classifying them as congruent, similar, or equivalent.
LOWER ELEMENTARY CURRICULUM

History and Geography

In the Lower Elementary years, children are highly curious about their world, its origin, and their place within it. Continuing the geography and history studies begun in the Children’s House, students extend their understanding of time, begin to orient themselves to different periods of history, and appreciate the interdependence of human beings around the world. They learn that human beings, throughout history, have shared their own curiosity about the world and its people. Students are introduced to major concepts through impressionistic experiences, upon which they may hang details of subsequent studies. Their cultural awareness is both broadened and deepened as they study societies in depth, learning about their history as well as their cultures. They begin to understand the impact of one’s personal history on one’s own development, and they start to apply that understanding to the role history plays in the development of culture.

Learning Standards and Activity Examples include:

1. Children begin to understand political geography, including the bases for boundaries and the development of cultural and political differences within those boundaries.

   **Activity Example:** Using a puzzle map, children trace the outline of South America and then place puzzle pieces of the countries of that continent, exploring their shapes and those of the neighbors, tracing each in turn and coloring the composite.

   **Activity Example:** Using an outline map, children trace the continent of Africa and then fill it in, identifying by color and label the countries and major cities. Each child studies an African country in depth and then compares his findings with those of his classmates.

   **Activity Example:** Using a pin map, a student names and identifies a continent, its countries, their capitals, and their flags.

   **Activity Example:** Children learn to identify the parts of the flag (canton, field, fly end, staff, grommet, halyard, hoist, truck, finial, cleat), and develop an understanding of the flag as symbol. Informally, they begin to compare flags from different countries, noticing similarities and thereby deepening their concept of what a flag is.

   **Activity Example:** Children trace the story of a product from the origins of its raw materials through its delivery to consumers, exploring the interdependency of the workers along the way.

2. Children will be introduced to the basic concepts of economic geography: natural resources, industries, production and consumption.

   **Activity Example:** After receiving a lesson on the Interdependence of Humans in Society children will connect to their geography study to explain the cause and effect relationship between weather and climate, natural resources, industry, and production.

   **Activity Example:** After an intensive study of rivers, children take a field trip to a factory in Lowell, MA. Upon returning to class, they study Irish immigration and labor laws, setting up a classroom “assembly line” to “manufacture” holiday ornaments for a classroom Peace Tree. Later, they reflect on their own experience of performing the same task over and over again.
3. Children will expand their linear concept of time to include an understanding of consistent time units, centuries, eras, past, present, and future.

Activity Example: A teacher prepares a strip of paper with a horizontal line. The teacher and students discuss the passage of time and different ways of telling how time has passed. Making a mark on the line is one way to tell the passage of time for one day and is perhaps how ancient people kept track of their days. Students make a mark each morning for several days, then count to see how many lines have been placed to represent the number of days that have passed. Following this activity, a new line is set up to show units of days. A unit length is decided upon to show one day, and it is kept consistent over the course of the study.

Activity Example: A teacher rolls out one long calendar strip. The label “one whole year – twelve months” is placed to the right. The whole metal fraction inset, also representing “one”, is placed to the left. The strip is then folded to make two equal parts. Students count the parts. The calendar strips for six months are compared to the two equal parts. Students recognize that the two parts equal one whole. Students place the label “1/2 year – 6 months” to the right and the 1/2 metal fraction inset to the left. The presentation continues with “1/3 year – 4 months”, “1/4 year – 3 months, a season”, “1/6 year – 2 months” and “1/12 year – 1 month”.

Activity Example: Students lay out two thousand chains from the golden bead material, and a set of numeral cards representing the current year (i.e., 2 0 0 5). A teacher demonstrates that the remaining 9 are just short of one thousand. Students place an arrow labeled “this year” at the correct point. This exercise may be repeated with three chains of 100. Students understand that each bead will represent 10 years. Students count by 10’s and 100’s until reaching the end of two chains, which now represent 2,000. Another 100 chain is laid out and students count until they reach 2005.

Activity Example: A History of the Child: A student prepares a time line representing each year of her life with space to record something about each year. She asks parents or grandparents questions about their memories of her at each specific age on the time line. She writes one or more sentences and includes one picture for each year her life.

Activity Example: A teacher and students use models of clocks with moveable hands and divisions for minutes to study how a clock measures the minutes and hours of a day. Discussion includes the concept of 24 hours in a day, and the meanings of “noon”, “afternoon”, and “midnight”. Subsequent activities involve counting by 5’s, the study of half-hours, quarter-hours, and minutes.

Activity Example: A child makes a book of the typical things she does on a normal school day. At the top each page, she draws a clock that indicates the time at which she does each activity.

Activity Example: A teacher presents a chart with the three headings, Past, Present and Future. A red circle is placed above each heading, representing the verbs listed beneath them. Below the circles is a single purple triangle representing the pronoun. The teacher and students discuss the use of each of the words in relation to the pronoun in the first person singular, e.g. “I ate yesterday.” “I eat today.” “I will eat tomorrow.” The three words “yesterday”, “today” and “tomorrow” are written on the chart to correspond with the headings.

4. Children will acquire basic historical concepts and tools to effect historical analysis. These include a study of the fundamental needs of all human beings and their interdependence in Society. They learn to analyze historical events both vertically (same
society/same need, different time periods) and horizontally (one time period, different societies, different needs), and they participate in a study of evolution.

**Activity Example:** In a collaborative group lesson, children identify ten to twelve fundamental human needs (food, shelter, love, etc.) They discuss the difference between needs and wants and conclude that needs are constant. They explore the different ways people in different cultures, in different eras, have met these needs. Finally, they create individual pictorial collages for each of the fundamental human needs.

**Activity Example:** A teacher and students locate common items in their cubbies (a sandwich, a jacket). Selecting a common item, they discuss where they got it and how it was made, and by whom, stressing the interdependence among human beings to fulfill their fundamental needs. They may observe the interdependence of human beings within the school: Mike makes sure the heat is working, Jana makes sure Mike gets his pay check, Kelly delivers the raw materials for snack, and the upper elementary children invite Mike and Kelly for cooked lunch.

**Activity Example:** Students select one booklet of the Fundamental Human Needs set. They arrange the picture and story cards in order of time sequence, first to last, to create a time line of that subject. The cards are then placed alongside the appropriate space on the century (B.C.E. / C.E.) time line.

**Activity Example:** Students choose one period of time for study, choosing the one card for that time period from each “Stages in the Progress of Civilization” booklet set. They conduct a deepened study of that particular time’s environment, considering how each fundamental human need was typically met.

**Activity Example:** Children develop an appreciation of the magnitude of time in the earth’s history when a teacher unrolls fifty yards of solid black ribbon to symbolize it, recalling for them their knowledge of how the earth was formed. She then overlays a short piece of red ribbon on the end of the black ribbon to symbolize the length of time human beings have been on the earth. Children recognize the insignificance of humankind’s occupation of the earth relative to its history.

**Activity Example:** A teacher presents to students the Clock of Eras, wherein each historical era of time is introduced and described. Children assemble their own clock, reviewing information about each era from loose name labels and description or story cards.

**Activity Example:** Following the teacher’s presentation of the Time Line of Life, children engage in an extensive study using a blank chart, labels and descriptions of each era and its periods, and pictures with detailed descriptions of each organism represented in each period.
LOWER ELEMENTARY CURRICULUM

Science

In the Lower Elementary years, children are highly curious about their world, its origin, and their place within it. Questions about What, How, Where, Who and Why lead naturally to a study of how the world was formed, its physical laws, and the origins and evolution of life, including those of humans. When children ask questions, they are encouraged to form hypotheses and to test them out to reach their own conclusions and to become critical thinkers who do not take information at face value. Continuing the study of physical geography begun in the Children's House, students develop their knowledge of land, water and air. They learn that human beings, throughout history, have shared their own curiosity about how the world was formed, what physical laws govern it, and how its life forms are interdependent. Students are introduced to major concepts through impressionistic experiences, upon which they may hang details of subsequent studies.

Learning Standards and Activity Examples include:

PHYSICAL SCIENCES

1. Children develop an understanding of the “Nature of the Elements,” including states of matter, ways that substances combine, and the effects of gravity.

   Activity Example: Through the use of different materials, children explore the different ways matter can combine: mixture, suspension, solution, and compound.

   Activity Example: In a scientific experiment, children use heat to turn various substances to liquid and gas. Later, in a class discussion, they link this experience to their lesson on the creation of the world.

   Activity Example: A six-year-old works with a tray of objects and a magnet to see which objects are attracted to the magnet and which are not. She then is asked to state her hypothesis about magnets and to test it to make it increasingly specific.

2. Children will develop a general appreciation of physical laws through experimentation with sound, light, magnetism, static electricity, surface tension, gas, solids, liquids, using the fundamental tools of scientific measurement.

   Activity Example: Children experiment with a balloon taped to a straw that is threaded on a string. They watch the invisible force of air propel the balloon. They predict and observe, writing up their results.

   Activity Example: Through experimentation with different variables, such as height of dropper, diameter of opening, type of solution, children predict then measure the number of drops which an apparently “full” glass can hold. They record their findings in their observations book.

   Activity Example: Children experiment with different sets of variables, form hypotheses and make predictions related to light shining through prisms, effect of sound on a suspended and stretched slinky, effect of magnetic force on a variety of items.
3. Using scientific tools (rulers, scales, cups/quarts, thermometers, magnifiers), children become acquainted with scientific measurement and documentation.

   **Activity Example:** Children predict the weight of a bulb in its pot, the weight after full growth, the number of flowers, length of stem, number and length of leaves. Children observe, weigh, measure and water an amaryllis at regular intervals as it grows and then dies, documenting their results as they go. (Weighing then dissecting the remaining stem, leaves, bulb and roots is a good follow-up)

   **Activity Example:** After blowing up a black balloon within a container, children measure the weight then predict whether exposure to the heat and light of a hot spring day will change any variables they can observe or measure.

**LIFE SCIENCES**

4. Children will learn the methodology and language to help them organize and classify information about animal and plant life.

   **Activity Example:** Two children in a classroom test one another on their abilities to name and describe the five kingdoms of living things. They propose a scavenger hunt in which they will spend recess looking for living things and classifying them.

   **Activity Example:** Children in a lesson group identify the five classes of vertebrates and identify examples of Fish, Amphibians, Reptiles, Birds and Mammals.

5. Children will expand their knowledge of vertebrates and invertebrates to include their internal functions, in addition to their external features, and will acquire the beginning skills for comparative study.

   **Activity Example:** Using the Who Am I? Game, children will study selected animals and learn their names, categorizing them according to physical characteristics and behaviors.

   **Activity Example:** A child observes the classroom salamander and chooses to research it. In his journal, he describes its internal functions: movement, protection, support, circulation, respiration, and reproduction.

   **Activity Example:** After studying the characteristics of the vertebrate classes, children label vertebrate pets and friends around school who are “members” of the vertebrate classes.

   **Activity Example:** After comparing the characteristics of the different vertebrate classes, children examine the process of evolution through the Time Line of Life.

   **Activity Example:** Two children wonder about the floating carapace plate they see in the classroom turtle’s tank. They decide to record daily observations, noting that the turtle appears to be shedding its plates. Expressing curiosity about this, they are asked to make a hypothesis and referred to appropriate source material to prove it.

6. Relating their learning to their knowledge of the History of Life, children will study the major phyla of the animal kingdom.

   **Activity Example:** In pairs, children study one of the major phyla: Porifera, Cnidarians, Annelida, Mollusks, Arthropods, Echinoderms, and Vertebrates. After oral reports from each pair, the group compares and contrasts characteristics.

   **Activity Example:** In small groups, children dissect owl pellets, using their knowledge of vertebrates to help them identify what the owl has eaten.
Activity Example: After study of the animal phyla, children observe and discuss the increasing complexity of animals of the phyla and relate this to their study of the Time Line of Life.

Activity Example: Several children, after observing vertebrates in the woods adjoining their play area, speculate on how they can play in the woods without disturbing the lives of the animals.

Activity Example: A child who has removed a tick crawling up another child's pant leg places the tick under the microscope to examine. They study it and classify it according to the defining criteria they have learned for each phylum.

7. Children extend their knowledge of Plants, learning about their basic internal functions in addition to their external features, and will acquire the beginning skills for comparative study.

Activity Example: Using varied plant phyla she has collected on a weekend family trip, a child brings them to school and labels each plant by name, identifying the root, stem, leaf, axis, flower, fruit and seed of each.

Activity Example: Using the Classification Game (also known as the Question and Answer Game), children explore selected plants and categorize them according to their characteristics.

Activity Example: Children learn about the parts of a flower and the functions of each, and then they dissect a flower to identify all its parts.

Activity Example: Harvesting seeds, planting them, and charting their growth, children observe and explain the basic functions of life: nutrition, respiration, circulation, sensitivity, support, movement, and reproduction.

Activity Example: On an apple-picking trip, children observe how trees are planted to support the production of the fruit.

8. Relating their learning to their knowledge of the History of Life, children will study the major phyla of the plant kingdom.

Activity Example: Using plant samples they have collected in a variety of environments, children classify them according to type of seed receptacle, and learn the appropriate nomenclature.

Activity Example: Children compare fruits and vegetables and discuss the classification of each.

Activity Example: Children compare and contrast two different root systems from some plant samples they collected on the playground.

Activity Example: In September, each child selects one tree or plant in the woods and keeps a journal of observations made about the plant's growth and change during the year.

9. Children will study the conditions, flora and fauna of various biomes.

Activity Example: Using plant samples they have collected in a variety of environments, children classify them according to type of seed receptacle, and learn the appropriate nomenclature.
EARTH AND SPACE SCIENCES

10. Children develop their knowledge of land and water forms.

   Activity Example: Using three-dimensional models and water, children construct sensorial definitions of five basic land and water forms: island and lake, cape and bay, peninsula and gulf, isthmus and strait, and archipelago and lake systems.

   Activity Example: Children explore explore a large floor map, searching for land and water forms and placing labels on them.

   Activity Example: Children explore maps to identify examples of specific land and water forms, highlighting them and researching their names.

   Activity Example: Children study the parts of the river, building a large clay model that allows them to follow the river from its source to its mouth in the ocean.

   Activity Example: Children study the parts of the mountain, building a large clay model that allows them to compare and contrast various formations and how they came to be.

11. Children develop an understanding of the relationship between themselves, their community, the plant and animal life forms of their biome, state, country, continent, and world.

   Activity Example: A child orients himself to the world by correctly identifying, verbally or symbolically, the world, the seven continents and oceans, the eight major world biomes, the child’s own continent, the child’s country, state and local community.

12. Children will explore possibilities for the creation of the earth, becoming familiar with the basic underpinnings of physical science.

   Activity Example: Children observe and perform an experiment with materials having different densities (molasses, water and oil) and conclude that heavier liquids sink and lighter liquids float.

   Activity Example: Through the impressionistic story of the creation of the universe, children receive scientific instruction on the formation of the world and its components: earth, air, fire, water, and gas. The storytelling is dramatic and multi-sensory, engaging children’s sense of wonder as well as their intellects.

   Activity Example: Children read a series of creation myths from different cultures to develop an understanding that their own awe and wonder has been experienced by others throughout the world’s history.

13. Children will appreciate the complexity of the relationship between the sun and the earth, developing an understanding of the earth’s movements and the determinants of seasons, climate, daylight and darkness.

   Activity Example: Using a simple moving model, a child explores the orbital relationships of the moon around the earth and the earth around the sun. He is able to use the model to demonstrate and define revolution and rotation.

   Activity Example: In a simple experiment, a child swings a bucket with a little water placed in it, observing the effects of centrifugal force.

   Activity Example: In a weather report to her classmates, a child announces the time of sunrise and sunset and connects them to the earth’s relationship to the sun.
Activity Example: Curious about the different time zones, a child investigates the relationship of the earth’s movement around the sun to the passage of time, and is able to determine and explain the time of any country in the world.

Activity Example: After experimenting with a light globe and a sphere, a student explains to a younger child the effect of the earth’s rotation and the sun’s rays on the season, as well as the existence of the frigid, torrid, and temperate climate zones on the earth.

Activity Example: Using the Work Chart for the Seasons, a student manipulates the chart to show the seasons that exist in the earth’s zones at a particular point in time.

14. Children will develop a general understanding of the earth’s composition and its insulation, including concepts of radiation, fossil formation, and the “greenhouse effect”.

Activity Example: After a lesson, a child draws a diagram of the earth’s layers that includes the barysphere, lithosphere, hydrosphere, and atmosphere.

Activity Example: Using clay, vinegar and baking soda, two children construct a model of a volcano, demonstrate it in action, and use their drawing of a volcano cross-section to explain its principles.

Activity Example: After becoming interested in and researching igneous, metamorphic, and sedimentary rocks, a student categorizes a set of rock materials accordingly.

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

15. Children will learn to connect science to self-care through health, safety and nutrition.

Activity Example: Using role-play a teacher demonstrates how to wash hands effectively.

Activity Example: Using Petri dishes, students grow cultures of germs from many surfaces and also before and after handwashing.

Activity Example: Students analyze their lunches using the food pyramid to gain an understanding of what they are putting in their bodies.

Activity Example: Children learn about roles that vitamins, protein, carbohydrates play in nutrition.

Activity Example: Students learn proper ways to hold a knife to cut up fruits and vegetables.

16. Students study individuality and differences in the brain and body.

Activity Example: Students identify their own strengths and weaknesses to discover their unique learning profile.

Activity Example: Students learn about how the lungs work along with a student who has developed asthma.

17. Children will learn about large-scale changes in the earth’s environment as they relate to human activity.

Activity Example: Students learn about the importance of “reduce, reuse and recycle.” They learn why LMS distributes NW@LMS electronically vs. on paper.

Activity Example: Students track observations of a decomposing pumpkin to learn how micro-organisms break down food waste. Students are encouraged to compost their food waste.
Activity Example: During an Outdoor Education trip, students investigate how their food choices collectively impact the group’s food waste. They measure the volume of wasted food at the end of the meal.

Activity Example: Students read about climate change.

18. Students will develop an understanding of how organisms adapt to their environment over a long period of time.

Activity Example: Students use the Time Line of Life to track the evolution of vertebrates.

Activity Example: Using Biome card materials, students develop an understanding of how desert animals share characteristics like retaining water, nocturnal behavior, quick movement. They learn how these animals have adapted to their environments.

Activity Example: Two students use card materials to contrast animals and plants from different biomes.

19. Students learn about how humans meet our needs using resources in the environment, and they learn how humans can take care of their environment to take care of their resources.

Activity Example: Students brainstorm ways they could survive on a deserted island, attending to food, shelter, clothing and marking time.

Activity Example: Students explore various cultures in various historic periods, discovering similarities and differences in their use of resources.

Activity Example: Students use card materials to explore, “Where do we get our bread?” finding that interdependence is key to our survival.

20. Students learn about how advancements in scientific technology affect the world.

Activity Example: While contributing to the annual Trick-or-Treat for UNICEF campaign, students learn about the inequities in the availability of technology in various populations, including vaccines and safe water.

Activity Example: Through reading a biography of an inventor, students learn about how a particular invention can change society.

Activity Example: Students track the History of Light through the ages.
**LOWER ELEMENTARY**

**Spanish Curriculum**

Our long term goal is for all of our students to embrace language learning and to appreciate its role in multicultural understanding. In the early years, we aim for children to be exposed to Spanish in an integrated way and as part of their daily activities and to have fun while learning a second language.

Lower Elementary students meet twice weekly in the Spanish classroom for 30-minute lessons. The practice of vocabulary and conversational skills is ongoing, and the content of studies continues to be built around an appreciation of the diverse cultures of Spain and Latin America.

The first two years we aim to create an atmosphere that encourages children to take risks with the language and practice Spanish skills in a fun and non-threatening environment. We use familiar Montessori materials, games, songs, plays and rhymes to allow for children’s exposure to varied material at the same time that children practice conversational skills. During the third year, students move beyond conversational Spanish and begin to understand the mechanics of the language. Instruction utilizes familiar Montessori materials to introduce grammar concepts and sentence constructions that are distinctively Spanish. Students begin to practice written Spanish, as well.

Following are the Learning Objectives with examples of the types of activities used to accomplish them:

**Listening Comprehension**

**First and Middle Years**

1. Students match familiar vocabulary with its correspondent picture/object.

   **Activity example:** Children play a game of “Veo, veo,” (I see, I see.) The teacher (or a student) calls out the name of an object, and the children must find that object in the classroom.

   **Activity example:** Students play a game of “El bingo del cuerpo” (Parts-of-the-body bingo). Using familiar vocabulary, they match spoken words with pictures on game boards.

   **Activity example:** Students play a game of “¿Quién tiene ...?” (Who has the...?), trying to guess the identity of various objects hidden by a classmate.

2. Students understand frequently used questions and phrases and reply to them.

   **Activity example:** A student takes attendance when the group arrives in the classroom, as the classmates answer in Spanish, “Aquí” or “Presente” (here or present).

   **Activity example:** Children fetch materials from the classroom when instructed by the teacher. For example, “Pásame los lápices por favor.” (Pass me the pencils please.)
Activity example: Students open a Spanish class by practicing greetings like, “Hola, me llamo Penelope. ¿Cómo te llamas tú?” (Hi, my name is Penelope. What is your name?)

3. Students follow simple directions and commands in Spanish.

   Activity example: Students push their chairs in at the end of the class when the teacher reminds them, saying, “Empujen sus sillas por favor,” (Push your chairs in please).

   Activity example: Children play a game of “Despacio y Rápido” where they follow the same commands in different ways. (Slowly and Quickly).

   Activity example: The teacher asks, in Spanish, for help with tasks that prepare the classroom for activities. For example, the teacher requests, “Apaga la luz por favor.” (Turn the lights off please.)

Elder Year

4. Students recognize familiar commands, questions and directions.

   Activity example: Students play a game of “Simón dice” (Simon says) in Spanish.

   Activity example: In teams of two to three students, children play a charade game, acting out verbs and guessing what they are.

   Activity example: In pairs or groups of three, children follow directions from the Montessori “Command Box” of verbs.

5. Students understand the main point from a short, spoken passage with the assistance of visual cues.

   Activity example: Students recognize rhyming words in the poem “A Margarita” (To Margarita) and explain their meaning to the class.

   Activity example: Students play “Telephone,” relaying a message such as “Me gustan los frijoles rojos” (I like red beans) from one to another.

   Activity example: Students play a game of “¿Qué me pongo?” (What do I wear?), choosing appropriate clothing to wear after hearing a weather forecast.

Reading Comprehension

First and Middle Years

6. Students sound out words in Spanish.

   Activity example: While reading lyrics, students sing “La mar estaba serena” (The sea was serene) to practice the vowel sounds “A-E-I-O-U”

   Activity example: Students read cards with printed Spanish words and match them with Sandpaper Letters that represent the appropriate sound.

   Activity example: Playing a game of “I say it first. You say it after,” students read to their classmates vocabulary flashcards with familiar and unfamiliar words.

7. Students match written Spanish words with appropriate objects, pictures or categories.

   Activity example: Students play memory games in which they match pairs of picture cards with cards printed with corresponding Spanish words.
Activity example: Students match pictures with Spanish vocabulary and make a poster or booklet.

Activity example: Students read a set of cards printed with Spanish vocabulary, and they sort them into categories.

8. Students read a simple book.

Activity example: Students read a simple Spanish book in unison, sounding out full sentences to hear the Spanish. They use familiar vocabulary and illustrations to comprehend the text. (This activity is also done individually.)

Activity example: Students create a book that uses repetitive sentences. They then read the book, practicing fluency with their understanding of the content.

Activity example: The teacher reads a Spanish picture book and then uses familiar vocabulary to generate discussion of the content.

Elder Year

9. Students recognize the sounds of the letters rr, j, h, ll, and ñ.

Activity example: Children chant the Spanish rhyme, “Rr con rr” ( r with r) accentuating the rolling “r.”

Activity example: Students classify words with “j” and “h” and then read them to each other.

Activity example: During a cultural study of countries in South America, students practice /ll/ sounds and decide which one they prefer to use.

10. Students use visual cues to understand the main idea of short written texts.

Activity example: Students read a simple message from the “phrase of the day” basket.

Activity example: Students match a picture of a scene with a short sentence that describes that scene.

Activity example: Students read breakthrough-level picture books, like “Cerca y Lejos” (Near and Far), to each other. The books have one short sentence on each page.

Activity example: The teacher reads aloud a biography of César Chavez as the students listen for words they recognize and understand. The teacher records the words that the children identify, and together they review their “community knowledge.”

Speaking

First and Middle Years

11. Students ask and answer questions using familiar vocabulary and phrases.

Activity example: During circle time, children ask each other basic questions in Spanish such as, “Cómo te llamas?” (What is your name?) or “¿Cómo estás?” (How are you?)

Activity example: Students ask in Spanish for a drink of water (“agua por favor”) or to go to the restroom (“baño por favor”).

Activity example: The children bring a picture of a family member and introduce them to the class in Spanish. For example, “Ella es mi abuela. Se llama Sara.” (She is my grandmother. Her name is Sara).
12. Students hold a short conversation in Spanish, using a script, speaking prompts, or memorization.

   Activity example: Using a script from the “Los Tres Cerditos” (The Three Pigs), students act out the dialogue. They use gestures, pictures, and props to assist in connecting meaning to the words they are reading and speaking.

   Activity example: Children conduct simple surveys in Spanish.

   Activity example: At the LMS Festival of Lights, near the time of the winter solstice, students memorize and perform, the poem “Sol, solecito” (Sun, little sun).

13. Students sing along with Spanish songs and comprehend the meaning of key vocabulary and/or phrases.

   Activity example: Teacher and students sing “Había una vez un circo” (Once upon a time there was a circus) during LMS Circus Smirkus Residency.

   Activity example: Students sing and dance “El Yerberito” (The herb seller), as part of the Celia Cruz study.

   Activity example: Students sing “Don Alfredo,” (Mr. Alfredo), a song about body parts. Students add movements to the vocabulary to enhance their memory.

Elder Year

14. Given visual cues, students ask and answer simple questions about their interests.

   Activity example: Children ask a classmate about the clothes they are wearing: “¿Qué llevas puesto?”

   Activity example: Children ask each other about personal preferences. A partner asks, “¿Te gusta bailar?” (Do you like to dance?) The partner responds and asks a similar question: “No me gusta bailar. Me gusta saltar. ¿Qué te gusta a ti?” (I don’t like to dance. I like to jump. What do you like?)

   Activity example: Children practice asking a classmate, “¿Quieres jugar?” (Do you want to play?).

15. Students practice staged conversations.

   Activity example: Students put together a short scene from “La Ballena” (The Whale), creating a Readers Theater play that they perform for their classmates.

   Activity example: Using Montessori grammar symbols, children work in small groups to build sentences and short dialogues that they read to one another.

Vocabulary

16. Students can recognize and use expressions associated with grace and courtesy.

   Activity example: The teacher greets children as they arrive for their Spanish lesson, “¿Cómo estás?” (How are you?) and they respond, “Muy bien gracias. ¿Y tú?” (Very well, thanks. And you?)
Activity example: As students play games in which they direct one another, they use “por favor” (please) and “gracias” (thank you).

Activity example: Students sing the Spanish manners song “Hola, Don Pepito” (Hello, Mr. Pepito), adding movements.

17. Students can say words associated with the following themes: colors, shapes, numbers up to twenty, animals, body parts, food, classroom materials, basic adjectives, and basic verbs.

Activity example: As children play a card game, they recognize and name the items pictured.

Activity example: As they depart at the end of class, students recall a new vocabulary word to “earn” their exit.

Activity example: Students play a game called “Me gusta” (I like) in which they tell their classmates the names of favorite animals.

Activity example: In a “scavenger hunt,” students are given the names of various items, and they search the classroom for those objects.

18. Students recognize Spanish question words, including “qué?” (what), “donde?” (where), and “cuántos?” (how many).

Activity example: Students play “hide and seek” games, hiding an object and asking aloud in Spanish where it is.

Activity example: Students describe a mystery object using Spanish adjectives they have learned, asking a partner, “¿Qué es? (What is it?)” The partner uses the clues to guess the object.

Activity example: Working in pairs, students play hand games similar to “rock, paper, scissors,” but with numbers. They race their partner to add their finger totals together and give the sum in Spanish.

Elder Year

19. Students can recognize and/or say words associated with expressing likes, dislikes and needs.

Activity example: Students play a game called “Me gusta” (I like) in which they tell their classmates the names of favorite things.

Activity example: Students perform small role-play dialogues in which they make a request of a stranger using vocabulary of grace and courtesy, such as “por favor” (please) and “gracias” (thanks).

Activity example: Students sing and act out the song, “A Mi Burro” (To my donkey), in which a donkey goes to the doctor to complain of pain in various parts of its body.

20. Students can say words associated with the following themes: numbers up to thirty, clothing, family members, professions, days of the week, months of the year, weather and seasons.

Activity example: In pairs, children play a card game of “Vocabulary War,” racing to recognize pictures and name the objects in Spanish.

Activity example: As they depart at the end of class, students recall a new vocabulary word to “earn” their exit.

Activity example: Students fill in the blanks of Spanish crossword puzzles, using pictures as clues.
21. Students recognize Spanish question words, including “¿quien?” (who), “¿cómo?” (how), and “cuando?” (when).

**Activity example:** Students interview each other, using "la primera vez" (the first time) to learn about various first experiences.

**Activity example:** Children play a game called “¿Quién lo tiene?” (Who has it?), in which one child leaves the room for a moment and returns to guess who has a designated object.

**Activity example:** Children ask the teacher, “¿Cómo se dice?” (How do you say?) when they seek to know a Spanish word for something.

### Grammar

22. Students recognize the use of “o” or “a” at the end of a word to indicate gender.

**Activity example:** Children play “Yo soy alto” (I am tall), a game in which they must use simple adjectives to describe themselves.

**Activity example:** Children match Spanish adjectives to pictures, adding the appropriate missing last letter.

23. Students are able to have nouns, and articles agree in gender and number.

**Activity example:** Children match article cards with appropriate noun cards.

**Activity example:** Students write appropriate articles next to nouns on the whiteboard.

**Activity example:** Student play guessing games to match articles to nouns that don’t end in “a” or “o.”

24. Students know that question marks are used both at the beginning and the end of a question sentence in Spanish.

**Activity example:** Students proofread and correct questions written on the whiteboard.

**Activity example:** Students place loose question marks at the beginning and at the end of question sentences written on sentence strips.

### Elder Year

25. Students identify nouns, articles, adjectives, verbs, prepositions and interjections.

**Activity example:** Working in pairs or small groups, students use Montessori grammar symbols to identify parts of speech in sentences written in sentence strips.

**Activity example:** Children write sentences in their notebooks, describing objects. Using templates, they draw and color appropriate grammar symbols above each word to identify the part of speech.

26. Students build sentences.

**Activity example:** Children assemble sentence puzzles written in Spanish.

**Activity example:** Students take word cards with parts of speech from labeled drawers and, following patterns coded with Montessori grammar symbols, build sentences.

**Activity example:** Students build sentences in Spanish, following a pattern of grammar symbols.
27. Students understand article-noun-adjective number and gender agreement.

Activity example: Children write appropriate articles and adjectives next to nouns.

Activity example: Students match adjectives with pictures of nouns that differ in number and gender.

Culture

28. Students participate in age-appropriate traditional games, celebrations and songs from Spanish speaking communities.

Activity example: Children sing the traditional farmworker song, “De Colores” (Of Colors) in Spanish during the Harvest Fest performance.

Activity example: In springtime, children play “El Puente se ha quebrado.” (The Bridge’s Been Broken.)

Activity example: Children celebrate “El día de los muertos” (The Day of the Dead), replicating in their classroom costumes and traditions from many Spanish speaking communities.

Elder Year

29. Students participate in age-appropriate games and songs traditional in Spanish speaking communities.

Activity example: Children sing a Spanish birthday song, “Feliz, feliz en tu dia,” (Happy, happy on your day) to classmates.

Activity example: In the spring, children play “El lobo” (The wolf).

Activity example: While learning about Tito Puente, children listen to various genres of Latin Music, and they sing “Quimbara,” a popular Latin-American tune.

30. Students identify several influential Spanish-speaking people in the United States and around the world.

Activity example: In a card activity, students match notable Latino figures with their professions in Spanish.

Activity example: Students listen to a presentation on Pablo Picasso, and they explore drawing using techniques of Cubism.

Activity example: Students listen to and discuss bilingual picture books. For example, “Sonia: a Judge Grows in the Bronx,” is a bilingual biography of Supreme Court justice Sotomayor.

Writing

Elder Year

31. With support, students write a few short sentences.

Activity example: The teacher explains interjections and gives examples in Spanish. Children then follow cues they see on the whiteboard to assemble expressions.

Activity example: Students do a “This is me!” activity, drawing pictures of themselves and using Spanish adjectives to describe their individual characteristics.
Activity example: After reading Gabriela Mistral’s biography, children describe her by writing sentences in their notebooks.

32. Students use phonetic spelling to write dictated Spanish words.

Activity example: Children use the Movable Alphabet to compose Spanish nonsense words that are dictated by the teacher.

Activity example: Children use phonetic spelling to write vocabulary words dictated by the teacher.

Activity example: Students use syntax clues and their imagination to complete sentences with missing words.
LOWER ELEMENTARY CURRICULUM

Anti-Bias

LMS aims to nurture in each student the construction of a knowledgeable, confident identity as an individual and as a member of multiple cultural groups (such as gender, race, ethnicity, or class). We enable children to have comfortable, empathetic interactions with people from diverse backgrounds. We also foster each child’s ability to recognize bias and injustice, and cultivate each child’s ability to stand up, individually and with others, against bias or injustice.

Learning Objectives and Activity Examples Include: (The four objectives listed below are adapted from the goals proposed by “Start Seeking Diversity,” Redleaf Press)

1. Nurture the construction of a knowledgeable, confident identity as an individual and as a member of multiple cultural groups (such as gender, race, ethnicity, or class).
   a. We create conditions (prepare environments) so that all children are able to like who they are without needing to feel superior to anyone else.
   b. We challenge “internalized superiority” and “internalized oppression”?
   c. We help children of non-dominant cultures develop abilities to operate in both their home culture and the dominant culture.
   d. We help children develop the ability to negotiate and problem solve when issues arise from difference between home cultures and the dominant culture

   Activity example: LE classes also begin the year with community-building activities. At a class community meeting, the teachers and children together play the "I Like" game. A child takes a turn in the middle of the circle. She expresses a personal preference, saying, “I like math,” and others who share that preference join them in the middle.

   Activity example: Early in the school year, the class gathers for a community meeting to discuss all the variations in which our brains work. They talk about individual strengths and challenges, and they explore what that means to be part of a supportive, collaborative community.

   Activity example: A group of elementary children gathers for a regularly scheduled affinity group lunch, where they share commonalities of their Jewish heritage. (Other affinity groups include Hispanic heritage, Asian heritage, African-American heritage, and children with two homes.)

   Activity example: LE students discuss gender stereotypes after they have read Tomie diPaola’s Oliver Button Is A Sissy, and Charlotte Zolotow’s William’s Doll.

   Activity example: In a history lesson, LE students learn that calendars are human-created. As they learn about AD/BC and the alternative CE/BCE, they hear that these dates and eras are arbitrarily named. They also learn about Chinese and Jewish calendars.

   Activity example: Lower elementary students are learning about the Fundamental Needs of Humans, and their teachers are telling them Creation stories from many cultural backgrounds. Several students speculate about why people have religions. They discuss what happens when people disagree over religious beliefs.
**Activity example:** An LE teacher gives a lesson about the age at which we all learned to walk. Teachers and students collect the data from their parents or guardians, and they share the information in a circle discussion. They then take turns walking across the room and back, and they realize that, although they all learned at different times, some quickly and some slowly, they all walk well now! This lesson challenges internalized superiority and unnecessary competition.

**Activity example:** After an incident on the playground, a teacher sits privately with a child. She listens as he explains that his mother tells him to hit back when he feels threatened. Acknowledging this, she explains that here at school, he cannot do that.

**Activity example:** Lower Elementary teachers actively and weekly teach conflict resolution -- helping children identify and share feelings. Role-plays and other activities give opportunities for children to try out their voices and to discuss, learning from one another’s experiences. LMS creates a culture where it is understood that “everybody makes mistakes,” and we all try to learn from them.

**Activity example:** LE students gather with the rest of the school for a seasonal celebration called Festival of Lights. Faculty members share stories about how the theme of light is present and honored in the winter holidays of diverse cultures. The LE students take their turn singing a song for the assembly as candles are lit to celebrate unity and diversity.

**Activity example:** LE teachers read *All the Colors of Us* and *Children Are All the Colors of the Earth* to demonstrate how we all are various colors. The books present various positive ways of describing our colors and those of our friends. Children use language and art to express these ideas. Also, 3rd graders often celebrate home cultures when they do their country research project.

2. Promote comfortable, empathetic interaction with people from diverse backgrounds.
   a. We foster children’s interest in and empathy with difference.
   b. We counter children’s fear or judgment of difference.
   c. We help children learn to negotiate day-to-day natural discomfort, tensions, problems or conflicts that can arise from difference.
   d. We engender in children recognition of commonalities that all people share.

**Activity example:** A group of elementary children gathers for their regularly scheduled affinity group lunch, where they share commonalities of their Jewish heritage. (Other affinity groups include Hispanic heritage, Asian heritage, African-American heritage, and children with two homes.)

**Activity example:** Lower Elementary teachers actively and weekly teach conflict resolution -- helping children identify and share feelings. Role-plays and other activities give opportunities for children to try out their voices and to discuss, learning from one another’s experiences.

**Activity example:** After reading *All the Colors We Are*, by Katie Kissinger, children in an LE class discuss where they get their skin color. They then bring their hands all together in a circle, noticing the various shades of brown.

**Activity example:** LE students discuss gender stereotypes after they have read Tomie diPaola’s *Oliver Button Is A Sissy*, Charlotte Zolotow’s *William’s Doll* and Cheryl Kilodavis’ *My Princess Boy*.
Activity example: In a history lesson, LE students learn that calendars are human-created. As they learn about AD/BC and the alternative CE/BCE, explaining the origins of both terms. They hear that these dates and eras are arbitrarily named. They also learn about Chinese and Jewish calendars.

Activity example: Lower elementary students are learning about the Fundamental Needs of Humans, and their teachers are telling them Creation stories from many cultural backgrounds. Several students speculate about why people have religions. They discuss what happens when people disagree over religious beliefs.

Activity example: An LE teacher reads *Mom and Mum Get Married* and leads a discussion about different family structures to counter fear and judgment of people’s differences.

Activity example: LE teachers give a lesson on the history of bread making around the world, emphasizing how many cultures make and eat bread, but they all have different breads and customs surrounding that common theme.

Activity example: LE children choose books from rich classroom libraries that show people of varieties of backgrounds, nationalities, religions, special needs, shapes and sizes.

Activity example: LE classes begin the year with community-building activities. They play the “I Like” game, which places one person in the middle of a circle of children and teachers. When he or she expresses a preference, saying, “I like (reading/pizza/math/snow days, etc), others who share that opinion join them in the middle.

Activity example: LE children write lots of poetry. One popular poem style is the “I am…” poem, in which a child follows a formula to identify likes, dislikes, experiences, feelings, emotions, fears and traits.

Activity example: Lower elementary teachers present a lesson called “Happy to Be Me,” a game that focuses on developing a sense of pride in one’s heritage and opening dialogue about personal traditions.

3. Foster each child’s ability to recognize bias and injustice.
   a. We help children develop the knowledge and analytical skills to identify unfair and untrue images (stereotypes) directed at one’s own or another’s identity.
   b. We help children develop the knowledge and analytical skills to identify unfair and untrue comments (teasing and name-calling) directed at one’s own or another’s identity.
   c. We help children develop the knowledge and analytical skills to identify unfair behaviors (discrimination) directed at one’s own or another’s identity.

   Activity example: As LE children explore the history of writing and its various methods, they come to appreciate its importance to individuals of all cultures. They discuss the power that reading and writing gives a learner, including how and why dominant cultures have tried to prevent oppressed people from learning these skills.

   Activity example: LE students discuss gender stereotypes after they have read Tomie dePaola’s *Oliver Button Is A Sissy*, Charlotte Zolotow’s *William’s Doll*, Trudy Ludwig’s *My Secret Bully*, The Maligned Wolf,” Rath and Reckmeyer’s, *How Full is Your Bucket*, and “Maria’s Heart,” from Educators for Social Responsibility.
4. Cultivate each child’s ability to stand up, individually and with others, against bias or injustice.

   a. We help every child learn and practice a variety of ways to act in the face of bias expressed by other children and adults.

      Activity example: LMS elementary children use formal community meetings to raise and correct issues of perceived unfairness in their communities.

      Activity example: All LMS children participate in annual discussions of the ways that UNICEF seeks to counter inequitable distribution of goods and resources. They are encouraged to help raise funds during the Trick or Treat for UNICEF campaign.

      Activity example: Lower Elementary students read and act out stories that highlight people who actively resist expressions of bias. Examples include I Am Martin, Amazing Grace, The Story of The Araboolies and The Duke Who Outlawed Jellybeans.

      Activity example: Students and their families are welcomed to join faculty and staff in benefit walks such as Boston’s Walk for Hunger and Boston’s Gay Pride Parade.

      Activity example: In the “Standing Up” activity, LE students describe a time they felt they were being taken advantage of when they stood up for themselves. Children write down their experience on index cards and share with group.

      Activity example: In the "What Would You Do...?" activity, LE students respond to the question, "If you saw a fight starting between two people on the recess field, what would you do?"
LOWER ELEMENTARY CURRICULUM

Physical Education

In the Lower Elementary program, children build upon skills acquired in the Children’s House. Students will be able to vary the manner in which they perform and use these skills in combination with each other. Children will begin to identify and use critical elements for fundamental skills. Students will receive a basic introduction to the components of health-related fitness. They will know safe practices, physical education class rules and procedures, and be able to apply them with little or no reinforcement. Lower Elementary Physical Education allows for the attainment of maturing motor patterns for the basic locomotor, non-locomotor, and selected isolated manipulative skills. Students will acquire specialized skills basic to movement form and use those skills with a partner. They will continue to develop cooperation skills to enable completion of a common goal while working with a partner or in a small group.

First and second year students are beginning to function as members of a group. Their enjoyment comes from a growing competence of movement skills as they begin to master selected skills. Trying new activities provides challenge. They are beginning to express their feelings through their activity. With confidence for self-expression and the opportunity to share with others, children at this age level are beginning to learn how to become members of a larger community.

Third year students can identify activities that they consider being fun. They are challenged by learning a new physical activity and can recognize that success and improvement are attributed to effort and practice. Students become more involved in group activities and developing cooperation skills. They are beginning to develop individual responsibility and the skill of working together to enable completion of a common goal.

Learning Objectives and Activity Examples include:

1. Demonstrate locomotor and non-locomotor skills in a variety of activities.
   
   Activity Example: A child demonstrates walking, running, hopping, skipping, jumping, galloping, sliding, and leaping.

   Activity Example: Children perform various non-locomotor and balance activities.

   Activity Example: Children perform locomotor and non-locomotor activities to various rhythms.

   Activity Example: Children perform dodging, turning, swinging, rolling, landing, and stopping while participating in an individual/partner/group activity.

   Activity Example: A child applies basic movement concepts appropriate to the given situation (force, effort, time, flow, space, direction, range, and relationships) while participating in various activities.

   Activity Example: Children participate in a variety of modified and lead-up games.

2. Demonstrate manipulative skills using a variety of objects individually, with a partner, and in a small group.

   Activity Example: Children perform a variety of tosses and throws.
**Activity Example:** Children begin to catch a variety of objects and will also be able to perform kicking, striking, and throwing patterns

**Activity Example:** Children participate in a variety of activities that involve the manipulation of various objects.

- Dribble a ball with dominant and non-dominant foot
- Approach and kick a moving ball
- Kick a ball toward various targets at different levels
- Throw a small object overhand
- Throw an object overhand toward a target
- Participate in simple throwing techniques with a partner
- Catch an object from a rebound, with a scoop, and from a partner
- Strike objects with and without implements, stationary, and while traveling
LOWER ELEMENTARY CURRICULUM

Music

The Lower Elementary music program has as its aims to have each child expand his or her repertoire of songs and movement games in number and complexity and to practice the listening and cooperating skills in groups of various sizes. In addition to these aims, every effort is made to connect the activities of reading letters and numbers in the classroom to songs and the symbols for reading tones and durations using the rudiments of music notation. Elementary training is given on the marimba, the keyboard, the zither (koto) and hand drums.

Lower Elementary music builds on the skills of unison singing established in the Children’s House. The program aims to have each child expand his or her repertoire of songs and movement games in number and complexity and to practice listening and cooperating skills in groups of various sizes. In addition to songs and movement the rudiments of music notation are introduced, and the symbols for reading tones and durations are connected to classroom activities of reading letters and numbers. Elementary training is given on the marimba, the keyboard, the zither (koto) and hand drums.

Learning Objectives and Activity Examples Include:

1. Children will engage in creative and expressive exercise.
   
   **Activity Example:** (Improvisation) Students create short instrumental improvisations for their classmates in the circle.
   
   **Activity Example:** (Freeze Dance) Students perform freestyle dance moves in “Freeze Dance,” “Middle of the Ring,” “Four Kids Now,” or any other movement game that allows for expressive or interpretive movement.
   
   **Activity Example:** (Listen and draw) Students draw “what they hear” in response to recorded music from various parts of the world.
   
   **Activity Example:** (Sharing) Students present short vocal or instrumental performances for their classmates on a volunteer basis.

2. Students engage in kinesthetic movement and digitations.
   
   **Activity Example:** (Green Boards) Students manipulate three dimensional notes and clefs on a Greenboard staff.
   
   **Activity Example:** (Keyboard Geography) Students draw the geography of the keyboard by memory and label the notes by letter or solfege name.
   
   **Activity Example:** (Conducting) Students develop appropriate technique for producing several tones using hand drums. The strokes are combined to produce meters and the combinations are arranged and varied to produce sequences and routines.
   
   **Activity Example:** (Drum circle) Students conduct in 2, 3 and 4 beat meters while vocalizing, or in response to recorded music.
   
   **Activity Example:** (Orthography) Students practice drawing notes, clefs and other notation symbols on staves of appropriate sizes.
   
   **Activity Example:** (Rhythm Calculators) Students create a learning tool by means of folding paper and drawing note values in appropriate numbers.
   Activity Example: (Melody generators) Students roll “Melody Generator” dice to determine tones, and assemble them into melodies using Greenboards or staff paper.
   Activity Example: (Composition) Students create their own melody on Greenboards or staff paper. Then they play them on piano or marimba.
   Activity Example: (Instrument construction) Students use simple materials to create sonic structures, such as bullroarers, buzzing cups or simple fipple flutes.
   Activity Example: (Team Composition) Students work in small groups to create compositions using several instruments, and present them to their other classmates within the circle.
   Activity Example: (Sharing) Students present original songs or pieces for their classmates.
   Activity Example: (Discussion) Students offer comments and appreciations of performances they hear in the music circle.

4. To encourage ensemble, communication and teamwork among students
   Activity Example: (Song Circle) Students sing by memory or from songbooks in unison or two part (rounds), with piano or unaccompanied.
   Activity Example: (Discuss the Performance) Students record one of our songs and offer appreciations and comments after audition.
   Activity Example: (Being an Audience member) Students discuss the differences between listening and hearing and how to best appreciate the performances we encounter.

5. To encourage vocal and kinesthetic fluency among students.
   Activity Example: (Song Circle) Students sing by memory or from songbooks in unison or two part (rounds), with piano or unaccompanied. Songs are accompanied with movements according to the song narrative or the musical features.
   Activity Example: (Metric Movement) Students learn to recognize several meters and apply appropriate movements.
   Activity Example: (Circle Dances) Students learn the movements, and execute “Jump Jim Joe,” “Bow Wow Wow,” “The High Five,” “Old King Glory,” and other circle dances.
   Activity Example: (Conducting, cueing) Students learn to give cues and dynamic directions while keeping time with the baton in 2,3, and 4 beat meters.
   Activity Example: (Instrument training) Students are given rudimentary training on Marimba and Koto.

6. Objective: To make students aware of Social Issues through music
   Activity Example: (Discuss the songs) Students discuss the meanings, narratives and origins of songs we encounter.
   Activity Example: (Listen and Draw) Students imagine and wonder as they draw “what they hear” in our listening sessions featuring world music.
   Activity Example: (Group improvisation) Students resolve and synthesize the aesthetic differences that group improvisations frequently engender.
7. To build memory and performance skills, coordination and listening

   Activity Example: (Song Circle) Students internalize vocal repertoire in the song circle and sing from memory.

   Activity Example: (Drum circle) Students develop appropriate technique for producing several tones using hand drums. The strokes are combined to produce meters and the combinations are arranged and varied to produce sequences and routines.

   Activity Example: (Dance Sequences) Students learn the movements, and execute “Jump Jim Joe”, “Bow Wow Wow”, “The High Five”, “old King Glory” or other circle dances.

8. To help students understand note durations, rests and the relative textures of different note values, including dotted values and triplets.

   Activity Example: (Rhythm Rose) Students assemble a living “Rhythm Rose” of whole, half, quarter and eighth notes according to a narrative.

   Activity Example: (Rhythm machine) Students improvise the construction of a living “Rhythm Machine” with idiosyncratic parts.

   Activity Example: (Duration Calculators) Students create a learning tool by means of folding paper and drawing note values in appropriate numbers.

   Activity Example: (Music Math) Students choose and solve equations having to do with note and rest durations.

9. To guide students in understanding meter and to develop dexterity, aural recognition, and the appreciation of variation, omission, syncopation and complexity.

   Activity Example: (Time keeping) Students articulate a pulse together and provide emphasis according to different meters.

   Activity Example: (Drum circle) Students develop appropriate technique for producing several tones using hand drums. The strokes are combined to produce meters and the combinations are arranged and varied to produce sequences and routines.

   Activity Example: (Drum language) Students speak specialized syllables according to the timbre and sequence of drum strokes. They “say it” before they “play it”.

   Activity Example: (Conducting) Students conduct the drum circle.

10. To train the Ear and Voice of the student

    Activity Example: (Vocalizing) Students breath and intone together in unison.

    Activity Example: (Call and Response) Students learn new melodies and modes by repeating phrases and sequences offered by the instructor

    Activity Example: (Song circle) Students sing by memory or from songbooks in unison or two part (rounds), with piano or unaccompanied. Frequently students identify new songs to sight-read.

    Activity Example: (group and solo) Students volunteer to sing the solo parts in some of our arrangements.

    Activity Example: (Pitch Names) In lessons students learn to name pitches with letters and solfege syllables.
Activity Example: (Contour Models) Students categorize three-tone sequences according to an inventory or thirteen contour models.

Activity Example: (Pitch matching with Bells) Using (unidentified) bells, students match pitches by ear and assemble bells into sequences of rising or falling tones.

Activity Example: (Find the Error) Students follow musical notation and identify errors in a performance offered by the instructor.

Activity Example: (Hand drum vocabulary) Students recite drum syllables according to simple drum sequences offered by the instructor.

Activity Example: (Instrument training) In lessons, students appreciate the tuning differences between the piano (chromatic), the marimba (diatonic), and the koto (pentatonic).

11. To promote basic note reading concepts and literacy: Clef, Staff, Pitch names (in numbers, alphabet and solfege syllables), rests, dynamic and form markings, Bars, double bars and repeat signs

Activity Example: (Greenboards) Students manipulate three dimensional notes and clefs on a Greenboard staff.

Activity Example: (Alphabet messages) Students decode messages written on the staff.

Activity Example: (Melody Generators) Students locate tones on the staff, generated by rolling the "Melody Generators".

Activity Example: (Draw a keyboard) Students draw the geography of the keyboard by memory and label the notes by letter or solfege name.

Activity Example: (Composition) Using staff paper or greenboards, students compose melodies for one another to sight-read.
LOWER ELEMENTARY CURRICULUM

Practical Life

Practical Life activities in Lower Elementary build upon those established in the Children’s House. In the Lower elementary program this work builds on the child’s natural interest in peer relationships and in the world around him. Since these students are less interested in process and more interested in completing a task or getting a job done, practical life activities have specific and collective goals in mind. Participating in the creation of a caring classroom community, children develop abilities to help others, to mediate conflicts, and to observe ground rules. Their developmental interest in hierarchies and classifications lends itself to a deepening understanding of the responsibility of elders to youngers and of the individual to the group. As they naturally become more aware of and interested in differences, they learn to investigate, understand, and work with classmates’ varying learning styles, cultural backgrounds, and interests. Practical life activities for this age group become more interwoven with their learning responsibilities. As the academic demands of the elementary student increase, so too does the need for independence. The Lower Elementary student is expected to identify his or her needs and work towards meeting them. At this age time management, focus, self-care, caring for the environment and community are among the practical life skills integral to building confidence and life skills.

**Learning objectives and related activities include:**

1) Children will care for themselves and their learning: learning to focus intentionally, learning to follow sequential steps.

   **Activity example:** A child participates in The Number Game, waiting his/her turn to say a number in the group’s sequence using observation and non-verbal communication skills, and actively engaging in the game.

   **Activity example:** A child volunteers at a Morning Meeting to demonstrate a few yoga poses. The class then joins the group leader in the yoga pose.

   **Activity example:** A child practices his/her work cycle, choosing a work from his/her work list, following a step-by-step procedure to complete the assignment.

   **Activity example:** A child dresses himself/herself for recess, mindful of the weather for the day.

   Other such activities include:
   - Observing their own work and relational styles
   - Understanding work and social expectations
   - Identifying and using available sources of help
   - Keeping track of belongings while on an overnight classroom trip

2) Children will responsibly care for their belongings.

   **Activity example:** After finishing her work, a child puts it in the appropriate place: work drawer, portfolio, or backpack to take home.

   **Activity example:** Upon finishing lunch, a child cleans up his lunch box, washes his place at the table, and puts his lunch box in his locker/cubby.

   Other such activities include:
   - Homework: remembering to take it home, completing it, and submitting it on time
3) Children will take responsibility for the care of their environment.

   Activity example: A child moves about the classroom carefully stepping around the rugs that define other children's workspaces.

   Activity example: At the end of the day, a child removes all of the work rugs from the basket and neatly re-rolls and replaces each one.

   Activity example: At the end of the day, a child removes all of the materials from a language shelf; she dusts the surface, then each piece of material before neatly replacing it in sequence.

Other such activities include:
- Keeping cubbies tidy
- Caring for pets and plants
- Dusting, sweeping, vacuuming, and scrubbing
- Putting things away and re-organizing
- Setting and clearing the table
- Loading the dishwasher
- Laundering table linens
- Recycling
- Composting and gardening

4) Children will take responsibility for the care of their class community.

   Activity example: Arriving at a class meeting, a child chooses an appropriate spot in the circle, mindful of his neighbor’s personal space.

   Activity example: At a class meeting, a child acting as facilitator reads the items that her classmates have placed in the agenda book.

   Activity example: On his birthday, a boy chooses a partner to bake muffins with him, and he shares them with the class during his celebration.

   Activity example: A child rings a chime to interrupt work time so that she can make an announcement.

Other such activities include:
- Brainstorming classroom ground rules and observing them
- Sharing, listening, and making connections with others
- Resolving social issues at class community meetings
- Giving weather reports and news reports to classmates
- Serving snack
- Helping classmates with their work

5) Children will take responsibility for the care of their school community, realizing their increased influence in the school community and exercising it responsibly.

   Activity example: A child visits another classroom to borrow materials, and she enters the classroom quietly, asks politely for the materials, and returns them in good order when she has finished.

6) Children will express social and global responsibility.

   Activity example: Three children make an announcement at an elementary assembly. Their class has decided to raise money for Heifer International and the Children's Global Peace Project. They
will be making and selling fruit smoothies during a three-day period, and they invite everyone to bring money to school.
LOWER ELEMENTARY CURRICULUM

Visual Art

The art program at Lexington Montessori School is based on the premise that all children are natural artists and have an artistic voice. By modeling respect for the child and providing developmentally appropriate art activities, children in the 6-9 program are encouraged to experiment with self-expression and to explore new materials, tools and techniques. Children learn to think creatively, to use their “right brains,” and to take risks with ideas and materials. Mistakes become opportunities to try something different. Children actively engage in Visual Thinking Strategies to expand their visual literacy.

During their years in Lower Elementary, children make the transition from symbolic drawing to observational drawing. To help with this transition, from drawing what is in their imagination or memory to recording what they actually see, all children in Lower Elementary make and keep a Silent Drawing Notebook. Students silently study, draw, and develop their observational skills. These Silent Drawing Notebooks are then used both as a record of their emerging observational skills and a personal resource for future work.

Children come to the art room for an hour each week and participate in art class. We offer a broad spectrum of two- and three-dimensional projects: color mixing and painting, printmaking, ceramics, sculpture, self-portraiture, collage and mixed media, and more.

In addition to work in the art room, children create art in their classrooms. Students illustrate their writing, make models for the study of earth science, design scenery and props for plays, and other activities related to classroom curricula. In addition, the art teacher and classroom teachers collaborate on special projects. Each year, the 6-9 classrooms study an ancient culture and the children work on projects in the art room to enhance this learning. The art teacher is a resource for the classroom teachers and often helps supply materials and techniques for classroom art activities.

Children learn about art and artists through participating in the Visual Thinking Strategies curriculum presented by the art teacher throughout the year. This art appreciation curriculum helps children use their critical thinking and observational skills while interacting with works of art.

Exhibiting artwork throughout the school allows us to celebrate each child’s creativity and work. The annual LMS Art Show takes place during the month of May and each child in the school is represented. We create artwork for various school productions and assemblies, including the Harvestfest and residencies. Mural making and other community art projects further enhance our visual arts curricula.

Learning Objectives and Activity Examples may include:

1. Students will explore a variety of methods, materials and techniques in both two and three dimensions.

   **Activity Example:** Children learn to make coil pots, to produce variations on the coiling technique, to add clay pieces by scratching and slipping, and to experiment with potters’ tools.
Activity Example: Children learn about the color wheel, practice mixing colors, and experiment with a variety of painting tools.

2. Students will experiment with elements and principles of design using color, line, texture, shape and form, pattern and symmetry, and space and composition.
   
   Activity Example: Children draw a still life made from sports equipment that range in colors to include all primary and secondary colors. We practice cross-hatching, texturing and other visual methods to describe value.
   
   Activity Example: In our printmaking unit, children draw into Styrofoam, ink the plate, and then print the images. We touch upon the elements and principles of design especially color, line, texture, form, and composition in this unit.

3. Students will create art from direct observation.
   
   Activity Example: Children study examples from our life-like (but not life-sized) animal collection and then draw from careful observation in their Silent Drawing Notebooks.
   
   Activity Example: Children study the artwork of Georgia O’Keeffe and then paint a close-up of flowers in tempera from direct observation.

4. Students will brainstorm and use imaginative thinking throughout the artistic process.
   
   Activity Example: Children use recyclable materials to construct their own creations for an “Invention Convention”
   
   Activity Example: Children learn how to draw a self-portrait using basic shapes, and decide what background to put in to their drawing that represents something about themselves.

5. Students will express ideas, emotions, and beliefs through their art.
   
   Activity Example: Children use paint, collage, or other media to make pictures that tell stories to illustrate such themes as “My Worst Nightmare” and “What People Do Together.”

6. Students will apply analytical and critical thinking to respond to works of art.
   
   Activity Example: Children look at works of art presented before a lesson and respond to questions from the Visual Thinking Strategies curriculum: “What’s going on in this picture?” “What do you see that makes you say that?” and “What more can you find?”

7. Students will investigate the cultural and historical contexts of the arts.
   
   Activity Example: After a lesson on sculpting clay by a subtractive or “taking away” technique, children make their own figure inspired by Chinese Quin dynasty statues.
   
   Activity Example: Children learn about Ancient Egypt, and create a sarcophagus with mummy inspired by their study of Egyptian art.
   
   Activity Example: Children study the form of animal, create it in clay, and then, after the bisque firing, paint it with acrylic paints in the tradition of Oaxacan woodcarvings.

8. Students will connect the arts with other classroom curricula.
   
   Activity Example: Children use watercolor and collage in their classrooms to illustrate their writing work.
Activity Example: Children use clay to construct land and water forms, volcanoes, and dioramas to illustrate various classroom lessons on earth science or cultures.

Activity Example: Children create giant pendulum paintings, or accordion fold painted books to illustrate the Montessori creation story.

9. Students will participate in the community’s cultural and artistic life.

Activity Example: Children use art during the annual Residency program to produce scenery and props for the production.

Activity Example: All elementary children make a large paper quilt to celebrate Black History Month, or to participate in a worldwide art exchange – The Global Art Project.