



The Children's Cooperative Montessori School

36 Shaw Street, West Roxbury, Massachusetts 02132

Lower Elementary Curriculum

Language Arts Curriculum

- I. Written Language
 - a. The History of Writing
 - i. The Story of communication in signs
 - ii. Key Lessons on the history of writing
 - b. Composition
 - i. Imaginative Writing
 - 1. Stories
 - 2. Poems
 - 3. Plays
 - ii. Factual Writing
 - 1. Reports (fact gathering, paraphrasing, editing)
 - 2. Biographies (interviewing)
 - 3. Letter writing
 - c. Mechanics
 - i. Spelling
 - ii. Punctuation
 - iii. Sentence and paragraph formation
 - d. Handwriting
 - i. Letter formation (cursive and manuscript)
 - ii. Calligraphy
 - iii. Illuminated letters and borders
 - e. Word Processing
 - i. Keyboarding
 - ii. Publishing
- II. Spoken Language
 - a. The Story of Spoken Language
 - b. Discussions
 - c. Oral Reports
 - d. Recitation of poetry



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- e. Drama
- III. Grammar
 - a. Word Study
 - i. Root words and affixes
 - ii. Compound words
 - iii. Synonyms and antonyms
 - iv. Homonyms
 - v. Word Families
 - vi. Etymologies of words and names
 - vii. Vocabulary development
 - b. Parts of Speech
 - i. The noun family (article, adjective, noun)
 - ii. The verb (forms, tenses, mood, voice)
 - iii. Preposition
 - iv. Adverb
 - v. Pronoun
 - vi. Conjunction
 - vii. Interjection
 - c. Sentence Analysis
 - i. Kinds of sentences (simple, compound, complex)
 - ii. Parts of the sentence (subject, predicate, direct and indirect object)
- IV. Reading
 - a. Mechanics (phonograms and sight words)
 - b. Comprehension
 - i. Words and phrases
 - ii. Commands
 - iii. Interpretive reading
 - iv. Total reading (books, periodicals, etc.)
 - c. Oral and silent reading by adults and children
 - d. Literature (prose, poetry, drama and non-fiction)
 - e. Discussion of shared readings
- V. Research
 - a. Areas of language research
 - i. History of language
 - ii. Comparison of words in different languages



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- iii. Study of the works of an author or illustrator
- b. Resources
 - i. Dictionary and thesaurus
 - ii. Encyclopedia and other reference materials
 - iii. Use of the library
 - iv.

Math Curriculum Outline

- I. The History of Mathematics
 - a. Story of Numbers
 - b. History of number systems (Babylonian, Egyptian, Chinese, Roman, Hindu-Arabic, Mayan)
- II. Numeration and Concepts of Numbers
 - a. Whole numbers from 1 to 1,000 (sequence and place value)
 - b. Ordinal numbers
 - c. Number lines
 - d. Positive and negative numbers
 - e. Odd and even numbers
 - f. Commutative and associative properties
 - g. Skip counting (by a number to its cube)
 - h. Properties of zero (in addition and subtraction; multiplication)
 - i. Hierarchies (formation, reading, and writing of numbers to a million)
 - j. Rounding to the nearest ten, hundred or thousand
 - k. Estimation
 - l. Expanded notation
- III. Whole Number Operation
 - a. Memorization of addition and subtraction facts
 - b. Memorization of multiplication and division facts
 - c. Number sentences with missing addends etc.
 - d. Fact families and inverse operations
 - e. Static and dynamic addition (with a variety of addends; column addition)
 - f. Static and dynamic subtraction (including zeros in the minuend)
 - g. Addition and subtraction of decimals (money)
 - h. Multiplication with one, two and three digit multipliers
 - i. Division with one, and two digit divisors (with remainders)
 - j. Distributive and group division; long division algorithm



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- k. Negative numbers
- IV. Fractions and Decimals
 - a. Fractions from the whole to tenths (quantity and symbol)
 - b. Comparing fractions ($>$, $<$, $=$)
 - c. Equivalence of fractions
 - d. Adding and subtracting fractions with like denominators
 - e. Mixed numbers and improper fractions
 - f. Adding and subtracting fraction with unlike denominators
 - g. Reducing fractions to lowest terms
 - h. Adding and subtracting mixed numbers
 - i. Introduction to fraction multiplication and division
 - j. Decimals from the unit to millionths (quantity and symbol)
 - k. Comparing decimals
 - l. Adding and subtracting decimals
 - m. Multiplication and division of decimals by whole numbers
- V. Multiplication Factors
 - a. Table of multiples
 - b. Common multiples and the search for the lcm
 - c. The decanomial (geometric and numerical)
 - d. Common factors and the search for the GCF
 - e. Divisibility
 - f. Prime numbers
- VI. Power of Numbers
 - a. Squares and cubes of numbers from 1 to 10 (bead material)
 - b. Notation of powers (exponents)
 - c. Square roots of numbers less than 100
 - d. Squares of binomials and trinomials
 - e. Square of the decanomial
 - f. Square roots of numbers greater than 100
 - g. Powers of Two
 - h. Powers of Three
- VII. Measurement
 - a. History of measurement
 - b. English and metric measurement of length, liquid volume, and weight
 - c. Temperature (Fahrenheit and Centigrade)



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- d. Measurement of time (analog and digital clocks, the calendar)
- e. Money (counting, coin equivalences, making change etc.)

VIII. Geometry

- a. History of Geometry (Babylonian, Egyptian, Greek contributions)
- b. Design elements (metal insets, the geometric cabinet etc)
- c. Use of tools (straightedge, ruler, compass, protractor)
- d. Computer application (LOGO)
- e. Symmetry
- f. Geometry in art and architecture

IX. Plane Figures

- a. Point, line, surface, solid
- b. Study of lines
- c. Study of angles
- d. Study of plane figures (triangles, quadrilaterals, regular and irregular polygons)
- e. Perimeter of plane figures
- f. Congruence, equivalence and similarity
- g. Concept of area
- h. Computation of area of rectangles, squares, parallelograms etc.
- i. Names, parts and classification of the geometric solids
- j. Concept of volume
- k. Finding the volume of rectangular prisms and cubes

X. Problem solving

- a. One and two step problems involving all four operations
- b. Mental math
- c. Problems using whole numbers, fractions and decimals
- d. Problems applying time, money and measurement
- e. Other practical applications e.g. cooking, sewing, constructing
- f. Writing original problems
- g. Reading and making tables and graphs

Biology Curriculum

I. Introduction to Biology

- a. Living/Non-Living
- b. Classification system
- c. Plant/animal/human



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II. Zoology

- a. Who Am I? Animal stories
- b. Needs of animals and how they are met
- c. External parts of vertebrates
- d. Internal functions of vertebrates
- e. Animal Kingdom charts
 - i. Invertebrates -study of phyla
 - ii. Vertebrates - study of classes
- f. Time Line of Life - study of evolution of animal life in the Paleozoic, Mesozoic and Cenozoic Eras

III Botany

Who Am I? Plant stories

Needs of plants and how they are met

Study of functions and parts of plantsxq

Functions of roots, stems, leaves, flowers, fruits and seeds

Parts and types of roots, stems, leaves, flowers, fruits and seeds

Plant Kingdom chart

Time Line of Life - study of evolution of plants

IV Ecology

Study of biomes and habitats

Interdependence of living things

Student research about endangered species

Student research ways to preserve the natural environment

Lower Elementary Geography Curriculum

I. Physical Science

- a. Creation of the Universe (story, charts, experiments)
- b. Parts of the universe: our solar system and the Milky Way
- c. Laws of the Universe
 - i. Gravity
 - ii. Centripetal and centrifugal force
 - iii. Solids, liquids and gases
 - iv. Solutions and mixtures

II. Earth Science

- a. Relationship of earth and sun



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- i. Rotation and revolution of the earth and their effects
 - ii. Effects of the perpendicular and oblique rays of the sun
 - iii. Solstices, equinoxes, and seasons
 - b. Composition of the earth
 - i. Layers of the earth
 - ii. Types of rocks (igneous
 - iii. Plate tectonics
 - iv. Mountain formation, volcanoes and earthquakes
 - v. Types of fossils and the fossil record
 - c. The atmosphere and its work
 - i. Composition of the air and properties of gases
 - ii. Wind and ocean currents
 - iii. Wind erosion
 - d. The hydrosphere and its work
 - i. The water cycle: evaporation, condensation, precipitation
 - ii. Ice glaciers
 - iii. Functions and parts of rivers
 - iv. Water erosion
- III. Physical Geography
- a. Continents and oceans
 - b. Climate and vegetation zones
 - c. Latitude and longitude, time zone
 - d. Definitions and identification of land and water forms
- IV. Political Geography (with an emphasis on cultural studies)
- a. Countries of the world
 - b. Detailed study of the United States
 - c. Massachusetts
- V. Economic Geography
- a. Natural resources
 - b. Production and consumption patterns
 - c. Interdependencies
- VI. Geography Resources
- a. Map reading
 - b. Atlas and almanac work



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Lower Elementary History Curriculum

- I. Introductory Lessons
 - a. The Story of the Coming of Life
 - b. Black Strip and Clock of Eras
 - c. Key lessons on the Time line of Life
- II. History of Early Human Beings
 - a. Hand Time Line
 - b. First Time line of Humans
 - c. Second Time Line of Humans
 - d. Study of human evolution
- III. Measurement of Time
 - a. Family time line, personal time line
 - b. Parts of the days of the week, months of the year
 - c. BC/AD Timeline
- IV. Study
 - a. Great Civilizations
 - b. Fundamental Needs of people
 - c. How one need is met by different civilizations
 - d. How all needs are met in a particular civilization
 - e. Great inventions and contributions to history
 - f. The study and research of great women and men
 - g. History of a particular country
 - h. Introduction and research of American and Massachusetts History

Lower Elementary French Curriculum

- A. Enrichment of Vocabulary
 - a. Objects of the Environment
 - i. Sensorial Materials
 - ii. Collections of Pictures/Objects
 - iii. Games
- B. Total Reading
 - a. Phonetic Object Game
 - i. Phonetic Reading Cards
 - ii. Phonetic Booklets
 - iii. Word Baskets



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- iv. Reading Story Booklets
 - v. Sensorial Materials
 - vi. Collections of Pictures/Objects
- C. Spoken Language
- a. Simple Sentences
 - b. Singular and Plural
 - i. Masculine and Feminine
 - ii. Correct Expression
 - c. Discussions
 - d. Recitation of poetry



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Lower Elementary Fine Arts Curriculum

I. Art

a. Artistic Awareness and Sensitivity

- i. Exploration of natural and man-made objects and environments
- ii. Discovery of art elements: line,color,shape,texture,form,space and pattern
- iii. Principals of art:unity,emphasis,balance,variety,movement,rhythm and proportion
- iv. Reading and research about artists

b. Creative Expression through Art materials and Tools

- i. Expression of feelings using a variety of media:drawing,painting, printmaking,constructing 3-D forms, and using fibers and collage
- ii. Production of individual and group art projects

c. Art Appreciation

- i. Viewing and discussing works of art
- ii. Appreciating artworks from various cultures
- iii. Analysis and evaluation of works of artists

II. Music

a. Music listening and appreciation

- i. Active listening for musical elements:melody,harmony,rhythm, meter, timbre, dynamics, major and minor modes
- ii. Identification of simple musical forms
- iii. Recognition and classification of musical instruments
- iv. Music History, focusing on great composers
- v. Appreciation of music from around the world

b. Music Production and Response

- i. Vocal production
- ii. Playing rhythm and melody instruments
- iii. Performing action songs and movements to music
- iv. Dancing and creating dances
- v. Keeping steady beat; distinguish macro and micro beats

c. Music Theory



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- i. Notation of pitch; the treble staff, notes, scales
- ii. Notation of rhythm: note, values, rests
- iii. Notation of meter
- iv. Reading and writing music
- v. Composing music
- vi. Use of dynamics
- vii. Distinguish major and minor tonalities
- viii. Recognize duple and triple meters