



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

Upper Elementary Curriculum Outline:

LANGUAGE

- I. Written Language
 - a. The History of Writing(key lessons on topics such as cave paintings, the Rosetta stone, heraldry, paper making contributions of Charlemagne.)
 - b. Composition
 - i. Paragraph organization
 - ii. Kinds of paragraphs (descriptive, narrative, expository, persuasive)
 - iii. Reports (taking notes, outlining)
 - iv. Essays
 - v. Letters (informal and business)
 - vi. Poetry(quatrain, cinquain, haiku, limerick, etc)
 - vii. Stories(setting, characters, plot development, dialogue)
 - viii. Play writing
 - ix. Speech writing
 - c. Mechanics
 - i. Spelling
 - ii. Punctuation and capitalization
 - iii. Proofreading and editing
 - d. Handwriting
 - i. cursive and manuscript
 - ii. Calligraphy (italics, copperplate etc.)
 - iii. Illuminated letters and borders
 - e. Word Processing
 - i. Individual written work
 - ii. Class publications (newspaper, literary magazine, etc)
- II. Spoken Language
 - a. Theories of the origin of speech
 - b. Dialogues and interviews
 - c. Class discussions and meetings
 - d. Oral reports and recitations



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

- e. Drama
- III. Grammar
 - a. Word Study
 - i. Root words and affixes
 - ii. Word families and etymologies of words
 - iii. Synonyms and antonyms and homonyms
 - iv. Vocabulary development
 - b. Parts of Speech
 - i. Kinds of nouns, nouns in apposition
 - ii. Kinds of adjectives
 - iii. Verbs (infinitives, participles , gerunds)
 - iv. Kinds of verbs (action, auxiliary, linking, transitive and intransitive)
verb phrases and conjugations
 - v. Prepositional phrases
 - vi. Pronouns (cases and antecedents)
 - vii. Use of modifiers (adjectives and adverbs)
 - viii. Kinds of conjunctions
 - c. Sentence Analysis
 - i. Parts of the sentence (subject, predicate etc)
 - ii. Kinds of clauses(main and subordinate, noun, adverbial, adjectival)
 - iii. Sentence diagramming
- IV. Reading and Literature
 - a. Oral and silent reading by adults and children
 - b. Literary circles (discussions of shared stories and books)
 - c. Variety in Prose (mysteries, historical fiction, biographies etc)
 - d. Poetry analysis and appreciation
 - i. Meter
 - ii. Rhyme scheme
 - iii. Poetic devices: simile, metaphor, alliteration, personification
 - e. Reading and analysis of drama
- V. Style
 - a. Different writing styles
 - b. Voice and audience
 - c. Analysis of writing style, using grammar symbols



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

VI. Research

- a. Areas of language research
 - i. History of language, history of English
 - ii. Derivation of idioms
 - iii. Changes in spelling (historical perspective)
 - iv. History of a literary genre (drama, letter writing)
 - v. History of English Literature (British and American)
 - vi. Study of a selected author
 - vii. Introduction to independent research
- b. Resources
 - i. Library resources
 - ii. Other community resources (museums, theaters, universities, local newspapers etc)

Math

- I. The History of Mathematics
 - a. Key Lessons on the history of mathematics (invention of zero)
 - b. Work with different systems (Babylonian, Roman, Mayan)
 - c. Comparison of number systems (Number bases vs. place-value)
- II. Numeration and Concepts of Numbers
 - a. Writing and reading large numbers - expanded notation
 - b. Rounding to the nearest, ten, hundred, thousand etc.
 - c. Estimation
 - d. Properties of numbers: commutative, associative, distributive
 - e. Number sentences (order of operations, use of parentheses)
 - f. Ratio and proportion
 - g. Arithmetic mean and median
 - h. Statistics and probability
 - i. Integers (positive and negative numbers)
 - j. Representation of pairs of numbers on a coordinate plane
 - k. Numeration and operations in other number bases
- III. Whole Number Operation



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

- a. Review facts for all operations
 - b. Review of dynamic subtraction, especially with zeros
 - c. Mental multiplication of factors with zeros
 - d. Multiple-digit multiplication with division problems
 - e. Cross multiplication
 - f. All four operations with integers
- IV. Fractions and Decimals
- a. Adding and subtracting fraction with unlike denominators
 - b. Multiplication and division with fractions and mixed numbers
 - c. Changing fractions to decimals
 - d. Changing decimals to fractions
 - e. Decimals in expanded notation
 - f. Skip counting, comparing and rounding decimals
 - g. Addition and subtraction of decimals
 - h. Multiplication and division of decimals
 - i. Concept of percent
 - j. Comparison and equivalence of fractions, decimals and percent
 - k. Finding the percent of a number
- V. Multiplication Factors
- a. Factor trees and prime factorization
 - b. Using primes to find the LCM and GCF
 - c. Divisibility
 - d. Common factors and the search for the GCF
 - e. Divisibility
- VI. Power of Numbers
- a. Squaring a polynomial (geometric and algebraic representations)
 - b. Finding the numerical value of the square of a polynomial
 - c. Finding square roots, with materials and abstract
 - d. Cubing a binomial
 - e. Cubing a trinomial
 - f. Powers of ten
 - g. Powers of other numbers
 - h. Expanded notation, including with exponents
- VII. Measurement



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

- a. English and metric measurement (length, weight, liquid capacity)
Equivalences within a system (converting inches to yards)
- b. Introduction to very small and very large measurements. Scientific notation.

VIII. Geometry

- a. History of *Geometry* (contributions by various people and cultures)
Geometric design: tessellations, 3-D constructions, origami, scale drawing, symmetry, computer applications
- b. Review of triangles, quadrilaterals and their parts
- c. Translation, rotation, and reflection
- d. The circle, its parts and relationship to other figures
- e. The theorem of Pythagoras
- f. Area of triangles, rhombi, trapezoids, regular polygons, circles
- g. Review of solids and their parts
- h. Surface area of polyhedrons
- i. Volume of cubes, prisms, pyramids
- j. Volume of cylinders, cones, spheres

IX. Algebra

- a. Concepts (variables and constants, expressions, introduction to functions equations)
- b. Computations (order of operations)

X. Problem solving

- a. Techniques of problem solving
- b. Problem using whole numbers, fractions, decimals, percents and integer
- c. Problems involving traveling: velocity, distance, and time
- d. Money problems (purchasing, figuring tax, interest)
- e. *Geometry* problems (angles, perimeter, area and volume)
- f. Other practical applications of math (weather, sports etc.)
- g. Interpretation and construction of tables and graphs (line, bar, circle)
- h. Use of calculators and computers to record and relay data

Biology

I Introduction to the Five Kingdoms of Living Things



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

II. Cells (parts & functions)

I. Zoology

a. Vital Function of animals

- i. Physiology, respiration, circulation, nutrition, reproduction, locomotion, sensitivity
- ii. Adaptations

b. Human physiology (organs and systems)

c. Evolution & comparative physiology of animals by phyla

d. Classifications of animals by division, phylum, class, order, family, genus, species

e. Animal reports

IV. Botany

a. Vital functions of plants with emphasis on photosynthesis, transpiration, tropisms & reproduction

b. Evolution of plants

c. Classifications of plants

d. Plant reports

V Ecology

a. Ecosystems

i. Living and non living components

ii. Roles of living things: producers, consumers, decomposer

iii. Mineral cycles (nitrogen, oxygen, carbon)

iv. Endangered species

v. The role of humans in maintaining the environment

GEOGRAPHY

I. Physical Science

a. Astronomy

i. The study of the universe and the history of astronomy

ii. The solar system and deep space

iii. Space exploration

b. Physics

i. Newton's laws of motion and gravitation matter and energy

1. Potential and kinetic energy



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

2. Simple machines
 3. Gravity and motion
 4. Light
 5. Heat
 6. Sound
 7. Electricity and magnetism
- c. Chemistry
- i. States of matter
 - ii. Elements and the Periodic Table
 - iii. Atomic and molecular structures
- II. Earth Science
- a. Relationship of the earth and sun
- i. Rotation and revolution of the earth and their effects
 - ii. Radiant energy
 - iii. Solstices, equinoxes, and seasons
- b. Composition of the earth
- i. Layers of the earth
 - ii. Minerals and gemstones
 - iii. The rock cycle
 - iv. Plate tectonics and continental drift
 - v. Mountain formations, volcanoes and earthquakes
 - vi. Rock layers and the fossil record
- c. The atmosphere and its work
- i. Local and global winds and their effects
 - ii. Concepts of weather: cloud formation, precipitation air mass, fronts, storms
 - iii. Climate zones
- d. The hydrosphere and its work
- i. Rivers, lakes and oceans
 - ii. Glaciers
 - iii. Water erosion
 - iv. Caves
- III. Cartography and Reference Materials
- a. Global studies (hemispheres, latitude, longitude and time zones)
 - b. Map studies (directions, scale, symbols)



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

- c. Map-making (kinds of maps, different world-map projections)
- d. Atlases and almanacs
- IV. *Physical and Political Geography*
 - a. Land and water forms of the continents
 - b. Research on particular counties
 - c. Cultural studies
 - d. Detailed study of North America
 - e. Regional studies of the USA
 - f. Massachusetts geography
- V. *Economic Geography*
 - a. Natural resources and their distribution
 - b. Production and consumption of goods
 - c. Global trade and interdependence
 - d. Banking and currency exchange
- VI. *Massachusetts Geography*
 - a. Regions
 - b. Ecology
 - c. Cities
- VII. *Ocean Topography*
- VIII. *Use of Scientific method through experimentation*

HISTORY

- I. The history of the universe and geological time periods
- II. Key lessons on the Time Line of Life
- III. *Early Human History*
 - a. Significance of the Coming of Human Beings
 - b. The First Time Line of Humans
 - c. The Second Time Line of Humans
 - d. Study of Human evolution; Australopithecus, homo erectus,
- IV. *Civilization: Meeting the Physical and Spiritual Needs of People*
 - a. The agricultural revolution and literacy



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

- b. Selected ancient civilizations
- c. The Middle Ages
- d. The Renaissance and the Enlightenment
- V. American History
 - a. Story of the United States of America
 - b. American history time line
 - c. Key lessons (colonial history, the new nation, westward expansion, social upheaval, the age of industry and invention, the modern age)
- VI. Massachusetts History
 - a. Study of Native American Life
 - b. Massachusetts Timeline

FINE ARTS

- 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



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

- ii. Listening to American music of different genres and historical periods
 - iii. Recognition and classification of musical instruments
 - iv. Listening to music of different historical periods and cultures focusing on great composers
 - v. Appreciation of music from around the world
 - b. Music Production and Response
 - i. Vocal production (ear training)
 - ii. Playing rhythm and melody instruments
 - iii. Instrument accompaniment to songs and poems
 - iv. Recorder lessons and ensemble playing
 - v. Dance and choreography
 - c. Music Theory
 - i. Pitch:the grand staff(treble and bass) notes, chords, major and minor scales
 - ii. Rhythm and meter:note values, rests, dotted notes
 - iii. Reading and writing music
 - iv. Music terminology
 - v. Composing music
- III. Drama and Theater
 - a. Use of Body and Voice
 - i. Refining body and spatial awareness, stage terms
 - ii. Diction, inflection and elocution
 - iii. Identifying and portraying emotions
 - b. Creative dramatics
 - i. Storytelling
 - ii. Creating a character
 - iii. Producing various forms: readers' theater, puppetry
 - iv. Play production
 - c. Theatre Appreciation
 - i. Attendance of theatrical production
 - ii. Preparation of audience etiquette
 - iii. Discussion of theater event

FRENCH LANGUAGE CURRICULUM



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

- A. Mechanics
 - a. Spelling
 - b. Punctuation
 - c. Sentence and paragraph formation
 - d. Spoken Language
- B. Discussions
 - a. Oral Reports
 - b. Recitation of poetry
 - c. Drama
- C. Grammar
 - a. Word Study
 - i. Synonyms and antonyms
 - ii. Parts of Speech
 - iii. The noun family (article, adjective, noun)
 - iv. The verb(forms, tenses, mood, voice)
 - v. Preposition
 - vi. Adverb
 - vii. Pronoun
 - viii. Conjunction
 - ix. Interjection
 - b. Composition
 - i. Imaginative Writing
 - ii. Stories
 - iii. Poems
 - iv. Plays
 - v. Factual Writing
- D. Reports(fact gathering, paraphrasing, editing)
 - a. Biographies (interviewing)
 - b. Letter writing
- E. Sentence Analysis
 - a. Kinds of sentences (simple, compound, complex)
 - b. Parts of the sentence (subject, predicate, direct and indirect object)
 - c. Reading
 - d. Mechanics (phonograms and sight words)



The Children's Cooperative Montessori School

268 Fairmount Ave, Hyde Park, MA 02136

- e. Comprehension
- f. Words and phrases
- g. Commands
- h. Interpretive reading
- F. Total reading (books, periodicals, etc.)
 - a. Oral and silent reading by adults and children
 - b. Literature (prose, poetry, drama and non-fiction)
 - c. Discussion of shared readings
 - d. Research
 - e. Areas of language research
 - f. Comparison of words in different languages
 - g. Study of the works of an author or illustrator
- G. Resources
 - a. Dictionary and thesaurus
 - b. Encyclopedia and other reference materials
 - c. Use of the library

Outdoor Classroom - Incorporating Art, Science and Practical Life

Care of the Environment

- a. Composting
- b. Water Conservation
 - i. Research
 - ii. Design/Plan more effective ways of
- c. Organic Gardening
 - i. Selecting Plants/Planning
 - ii. Attracting Butterflies, bees, birds
 - iii. Growing Food
- d. Observation
 - i. Data Collection
 - ii. Drawing