



# Montessori Academy

## Upper Elementary Curriculum

(Grades 4-6/Ages 9-12)

"Education between the ages of six to twelve is not a direct continuation of that which has gone before, though it is built upon that basis. Psychologically there is a decided change in personality, and we recognize that nature has made this a period for the acquisition of culture, just as the former was for the absorption of the environment." – Maria Montessori

The Upper Elementary curriculum at Montessori Academy is a continuation of the skills and concepts taught during the Lower Elementary age. Students are given more independence within a prepared and structured environment to develop at one's own pace. We continue to strive for high academic achievement in a low pressure environment and promote strong character development. Students build upon the cultural lessons learned in earlier years and are exposed to civilizations that have provided great historical contributions throughout the ages. With this knowledge, students naturally begin to relate it to present day and how they can make a difference in the world around them. We encourage the Upper Elementary aged students to "think globally and act locally." The lessons, and the work that follows throughout the school year, allow children to develop a deep understanding of academic concepts as well as cultures of the world.

- The Upper Elementary Curriculum meets and/or exceeds Common Core Standards.
  - Daily PE is offered to all Upper Elementary students.
- Weekly Art/Music/Drama lessons are presented which connect to the cultural curriculum of the classroom.
  - Self-chosen research is encouraged. Students research and present their findings to the class.
- **Responsibility, kindness, hard work and perseverance are skills taught and encouraged all throughout the school year.**



# Montessori Academy

## Upper Elementary Geometry

### History

- Story of the Stars

### Lines and Angles

- Identify types of lines
- Identify parts and types of angles
- Measures and constructs angles
- Bisects angles
- Add and subtract angles

### Triangles

- Identify parts of a triangle
- Classify triangles
- Measure and add angles within a triangle

### Quadrilaterals

- Identify quadrilaterals
- Measure and add angles within a quadrilateral

### Polygons

- Identify polygons
- Measure and add angles within a many-sided polygon

### Circle

- Identify parts of a circle
- Measure parts of a circle
- Work with circumference, lines and radius

### Geometric Solids

- Identify geometric solids
- Identify parts of geometric solids
- Investigate heights and cross-sections

### Congruency, Similarity and Equivalencies

- Understand and identify similar, congruent and equivalent figures
- Theorem of equivalence
- Pythagorean Theorem

### Area

- Introduction to the concept of area
- Find area of rectangles, parallelograms, triangles, trapezoids, rhombus, regular polygons and circles

### Solid Geometry

- Introduction to the concept of volume
- Calculating volume



# Montessori Academy

## Upper Elementary Language Arts

### History

- Story and history of written language

### Proper Letter Formation

- Cursive handwriting

### Speaking and Listening Skills

- Public Speaking
- Drama
- Interviews
- Listening Skills

### Grammar

- Types of nouns
- Types of pronouns
- Types of articles
- Types of adjectives
- Identifying conjunctions
- Prepositional phrases
- Verb Study
- Types of adverbs

### Sentence Analysis

- Simple Sentences
- Compound Sentences
- Complex Sentences

### Reading

- Novel Study

- o Types of novels
- o Sequencing events
- o Plot elements
- o Cause and Effect
- o Inferring and predictions
- o Describing characters, identifying protagonist and antagonist
- Read fluently and continue to develop comprehension and summarization skills
- Poetry study
- Literary devices
  - o Rhyming
  - o Imagery
  - o Foreshadowing
  - o Repetition, verse and stanza

### Writing

- Proper use of punctuation
- Choosing topics for research
- Gathering Information
- Organizing Information
- Outlining
- Revising and editing process
- Creating a final draft
- Different forms of writing: Personal Narratives, Descriptive

Writing, Instructional writing, Persuasive writing, Compare/Contrast, Creative writing, Poetry and Research

### Word Study/Spelling

- 
- Homonyms
- Euphemisms
- Acronyms
- Foreign Words Used in the English language
- Word Roots
- Analogies
- Eponyms
- Personifications
- Commonly Misused Words
- Hyperboles
- Assonance/Consonance
- Simile/Metaphors
- Idioms, Proverbs, Adages
- Alliterations
- Onomatopoeia
- Homographs

### Reference Skills

- Dictionary, thesaurus, encyclopedias, atlases, newspapers, internet



# Montessori Academy

## Upper Elementary Math

### History of Mathematics

- Story of and history of early numbering systems

### Word and Logic Problems

### Place Value

- Review of writing/reading/identifying numbers up to trillions
- Rounding

### Subtraction

- Review of memorization of subtraction facts
- Solve equations with missing numbers
- Estimation of differences

### Multiplication

- Review of memorization of multiplication facts
- Abstractly multiply multi-digit problems
- Estimate products

### Binomial/Trinomial Equations

- Solves equations
- Consecutive and non-consecutive squares
- Graphical representations of square binomials and trinomials
- Uses variables to solve equations
- Solves equations using the order of operations

- Solves equations of binomial and trinomials cubed
- Finds the square root of a number

### Multiples

- Finds common multiples
- Finds least common multiples

### Factors

- Finds the factors of a number
- Understands prime and composite numbers
- Finds greatest common factors

### Division

- Review of memorization of multiplication facts
- Abstract long division

### Fractions

- Creates, identifies and changes mixed, improper and proper fractions
- Add/Subtract with common and uncommon denominators
- Multiply and divide fractions by whole numbers and fractions
- Finds equivalent fractions
- Reduces fractions
- Understands concepts of ratio and proportion

### Decimals

- Form and read decimals to millionths
- Place value in decimals

- Greater/Less than
- Perform mathematical operations using decimals

### Percent

- Convert fractions to decimals and percentages
- Solve equations with percentages

### Bases Other Than Ten

- History of the base 10 system

### Integers

- Classification of numbers
- Positive and negative numbers
- Absolute value
- Mathematical operations with integers

### Graphs

- Use and create bar, line and circle graphs
- Data Analysis: mean, median, mode

### Measurement

- Linear
- Time
- Temperature
- Liquid/Dry

### Money

- Make change
- Solve word problems



# Montessori Academy

## Upper Elementary Sciences

### History

- Evolutionary periods (Timeline of Life)

### Scientific Method

- Tools
- Techniques
- Experiments

### Zoology

- Characteristics of vertebrates and invertebrates
- Classification of animals by phylum to species
- Animal adaptations

### Health

- Systems of the human body
- Senses
- Safe food handling and nutrition
- Wellness
- Healthy relationships with self and others

### Botany

- Relationships between plants, sun, Earth and people
- Plants of different biomes and their needs
- Parts and functions of plants
- Propagation methods
- Identify and classify plants

### Astronomy

- Scientific theory of creation of universe
- Stars, Constellations, Light-Years
- Astronomical Tools
- Solar System
- Earth and the Sun
- Moon, Tides and Eclipses
- Asteroids, Comets and Meteors
- Outer Space Exploration

### Matter and Energy

- Atoms, Molecules, Chemical Elements
- State of matter
- Changes in matter
- Acids and bases
- Energy sources

- Sound
- Light
- Electricity and magnetism
- Gravity, Friction and Inertia

### Ecology

- Web of Life
- Food Chains
- Dependence and Interdependence
- Adaptation and Evolution
- Pollution

### Technology/Physics

- Simple Machines
- Technology and basic needs
- Engineering technologies
- Research

### Earth Science/Physical Geography

- Climate and atmosphere
- Weather
- Water cycle
- Hydrosphere
- Lithosphere



# Montessori Academy

## Upper Elementary Social Studies and Technology

### Maps and Mapping

- Atlases and various types of maps
- Latitude and longitude
- Measuring distance

### Continents

- Review land and culture of all continents

### Environment and Culture

- Climate and human needs
- World celebrations
- Research

### World History

- Passage of time
- Common needs and time
- History of time telling
- Prehistory
- Ancient civilizations
  - o Ancient China
  - o Sumer
  - o The Maya
  - o Ancient Egypt
- Early Exploration
  - o Polynesian Explorers
  - o Early Boats and Ships
  - o Early European Explorers
- European history to Modern Times

- o The Middle Ages
- o The Renaissance and Reformation
- o The Industrial Revolution
- o Research of modern countries

- Current events

### US History

- European exploration and settlement
- Indigenous people of North America
- Colonial America
- Formation of the United States
- Technological and Social Changes
- Effect of World Wars
- Government, Politics and Citizenship
- Current events

### Technology

- Responsible internet use
- Using the internet for research
- Balancing internet sources with paper resources
- Keyboarding skills
- Word processing skills
- Creating presentations