



Developed by Dr. Maria Montessori,

Montessori is a child-centered educational approach based on scientific observations of children from birth to adolescence.

Unique Aspects of Montessori

Freedom Within Limits

The Montessori classroom balances freedom with responsibility.

The Prepared Environment

The Montessori classroom is warm, inviting, aesthetically pleasing and student-focused.

Multi-age Classrooms

The multi-aged groupings provide opportunities for broad social development and meaningful friendships which are often lifelong.

Intrinsically motivated learners

The Montessori teacher guides and empowers students with challenging, authentic, and meaningful work. As students begin to make independent choices they become actively engaged in an in-depth exploration of topics and skills, gain a deeper understanding of new concepts in an integrated fashion, and become better critical thinkers. There is no ceiling on what can be discovered and students are internally driven toward mastery.

Life-long learners

Each learning environment is organized to respect the diversity of learners and to support the natural developmental needs of the age-group it serves. The self-correcting materials facilitate self-directed learning and allow students to reflect on their own learning. This student-centered approach is enriched with real world experiences designed to provide conceptual context of how the natural and human-designed worlds are organized, interrelate, communicate and change.

Compassionate Global Citizens

A shared and profound respect for one another and the environment fosters a collaborative environment focused on shared values and peaceful discourse. The range of ages, abilities, and cultures builds acceptance and appreciation of individual differences as students form a diverse and cohesive community.



MATH

Abstract computation in four operations

Fractions, decimals, percent, concepts, equivalence, operations with mixed numbers

Math applications: graphing, money, budgeting and accounting, measurement, time, ratio, proportion, percentages

Multiples, factors, Least Common Multiple and Greatest Common Factor

Powers of numbers: exploration of simple, binomial, trinomial, polynomials

Squaring and cubing of numbers: square and cube root, base enumeration, exponents, integers

Problem solving skills and strategies: rounding, estimation, comparison, whole numbers, decimals, fractions, probability

Basic geometry concepts: equality, similarity, equivalence

Study of lines and angles

Plane figures: perimeter/ circumference, area, volume, extraction of theorems

Pythagorean theorem applications and extensions

Simple interest, compound interest

Data collection, line graphs, bar graphs, circle graphs, box & whistle, stem & leaf

SCIENCE

Zoology: internal anatomy and function of animals, classification and identification of animal kingdom, vertebrates, invertebrates

Botany: classification of plant kingdom, parts and functions of a plant

Ecology: web of life, biomes, food chain, ecological issues

Human biology: respiratory system, circulatory system, skeletal/muscular system, nervous system, digestive system

Cell biology: parts of a cell, types of a cell, similarities and differences

Earth science: solar system, weather and climate, atmosphere,

weather patterns, weather change, weather factors, earthquakes, volcanoes, weathering/erosion

Physical Science: study of matter, force and motion, electricity and magnetism

Independent science research projects

LANGUAGE ARTS

Word Study: prefixes, suffixes, compound words, word families, roots, etymology

Grammar: parts of speech, types of nouns, types of adjectives, types of verbs/ tenses

Sentence analysis: diagramming, compound sentences, complex sentences, types of phrases

Writing mechanics: sentence and paragraph structure, punctuation, editing

Speaking and listening skills: drama, poetry, discussions, oral presentations, debate

Cursive handwriting

Spelling: spelling rules, dictation

Guided exploration and practice in writing stories, poems, essays, reports

Literature: oral reading, book reports, comprehension, critical analysis

Research skills: identifying and selecting appropriate resources, synthesizing information from different sources, note-taking, bibliography

CULTURAL STUDIES

Independent Research On All of the Following Topics:

Ancient Civilizations Studies

Egypt, China, Greece, Rome

Mayan, Aztec, Incan

Middle Ages

Native Americans

European explorers

U.S. History

Colonial America, Declaration of Independence, Revolutionary War era, American Constitution

Civil War

Westward Expansion and

migration patterns in U.S.

Virginia history

American citizenship: presidents, levels and branches of government

Geographic Studies: map reading, latitude, longitude and compasses

Names and locations of countries, flags, waterways, physical features

Economic geography: trade, trade routes, navigation, natural resources, production, consumption, plant, animal, mineral resources

Physical geography: advanced study of geographical features, mountain ranges, river systems, ocean currents, precipitation and temperature

Advanced study of the work of sun, earth, air, water

Cultural geography: independent study of people of different geographical regions, regions of the United States

WORLD LANGUAGE —SPANISH

Language structure: recognizing tenses, grammatical forms, agreement of gender/ number, possession, sentence structure

Reading: read and comprehend simple texts

Writing: spelling, pronunciation, writing short paragraphs

Oral Communication: initiate/respond to greetings, ask/answer

questions, preferences, expressions, dialogues

Vocabulary: communications, requesting/expressing wishes, question words, locations, likes/dislikes, personality traits

Cultural studies

ART

Development of the hand: pottery, sculpture

Elements of design: line, shape, color, value, texture

Discipline and technique: drawing from recall,

observation, outdoor sketching, figure drawing

Painting: texture, pattern, geometric shapes, space, shapes

Collage: fabric, paper, mixed media, collage painting and printing

Modeling and carving: clay, plaster, paper

Construction: structures, mobiles

Printmaking: press prints, stencil, rubbings, mono-printing, foam block

Crafts: puppets, ceramics, fabrics

History: artists, art periods

Curriculum integration: projects related to classroom studies

LIBRARY

Identify and compare various current and classical literary genres

Use of online catalog to locate books

Use a variety of selected and approved print and digital sources to access information

Understand how to evaluate, record and use information in assigned print and digital sources

Understand the concept and implication of plagiarism, copyright and the importance of citing sources

Technology Essentials:

Understand the application of Internet safety standards for personal and educational use.

Recognize the responsibilities of Digital Citizenship

Use and apply technology effectively as a means to access, process and communicate information, model and create solutions, and to solve problems

Develop an appreciation of the impact of design innovations for life, global society and environments

PRACTICAL LIFE

Effective and responsible communication

Problem-solving skills/ strategies

Organization/time management

Independent/collaborative work

Personal responsibility

Care of the environment

Care of the materials

Care of self

Care of others

Field trip skills

Money management

Safety and transportation rules

Physical Education

Development of soccer, basketball, volleyball and football skills

Running, jumping, hopping, leaping, skipping

Balancing, dodging, turning, swinging, rolling, landing, stopping

Throwing, catching, kicking, trapping, dribbling, striking, volleying

Practice offensive and defensive strategies in structured games

Cooperative and competitive activities

Health related components

Cardiovascular skills

Strengthening of core body muscles, gymnastic skills

Eye-hand coordination skills

MOVEMENT & MUSIC

Rhythmic concepts: developing increased skill, reads songs in simple meter, notation

Melodic concepts; use of Orff instruments, sings familiar songs, rounds, canons, counter melodies, partner songs

Instruments

Appreciation of guest artists

Appreciation of cultural diversity in music

Musical literacy

Pitch discrimination