6-9 yrs Overview of the Montessori curriculum

Language

- Students will construct, examine and extend the meaning of various kinds of text.
- Students will organize and evaluate information to communicate with others.
- Students will use literary knowledge to connect self to society and culture.
- Students will use written and oral communication appropriate for various purposes and audiences.
- Children in 6-9 classes will work towards the following according to developmental stages:
- Use appropriate decoding and word recognition strategies:
- Use a combination of effective, efficient word recognition strategies to comprehend printed text (e.g., context clues, word parts, phonics, analogy).
- Read a variety of texts and genres fluently (orally) as appropriate to the child.
- Use context and picture clues.
- Develop an increasingly extensive vocabulary to construct meaning while reading and enrich writing:
- Categorize words and phrases to develop concepts.
- Use dictionaries, glossaries and thesauruses to confirm meaning and word choices while reading and writing.
- Use synonyms, antonyms, homonyms and homographs to construct meaning while reading and enrich writing.
- Assimilate information from prior knowledge and experiences to understand various genres:
- Set purpose(s) for reading, listening, or viewing.
- Make and revise predictions. Use appropriate strategies to assist comprehension (e.g., reread, adjust rate of reading, seek meaning of unknown vocabulary).
- Develop an understanding of the literary elements used in creating stories:
- Identify character, setting (time and place), main idea, and plot.
- Identify and begin to interpret figurative language and literary devices (e.g., similes, metaphors, personification, point of view).
- Identify author's purpose.
- Respond to text in a variety of ways (speaking, writing, art):

- Make and revise predictions as needed.
- Retell stories in oral and written form.
- Restate informative texts including important details.
- Organize the important points of text using summaries, outlines, or other graphic organizers.
- Compare information within and between texts.
- Discriminate between fact and opinion.
- Draw conclusions and determine cause/effect.
- Follow oral and written directions.
- Relate content of text to real-life situations.
- Offer a personal response to texts.
- Apply information from printed, electronic and oral texts to complete authentic tasks (projects).
- Use divergent thinking.
- Evaluate how electronic, print, and cinematic messages affect them.
- Recognize the underlying purposes of media messages (e.g., profit, humanitarianism, support of artistry).
- Use a variety of resources (print, audio-visual, technology) to gather and evaluate information to share with others:
- Connect and synthesize information from different sources.
- Formulate, express, and support opinions.
- Respond to open-ended questions to analyse and evaluate texts (e.g., author's purpose, character analysis).
- Differentiate between literal and non-literal meaning.
- Evaluate texts and media presentations for bias and misinformation.
- Acknowledge the possibility of a variety of interpretations of the same text.
- Compare information within and between texts.

Written and Oral Communication

- Children in 6-9 classes will work toward the following according to developmental stages:
- Written Communication
- Writing expressive, informative, and persuasive texts.
- Writing that reflects appropriate organization, development of ideas, use of voice and tone, word choice, and transitions.
- Begin to write with a sense of audience.
- Uses the prewriting, drafting, revising, and editing components of the writing process.
- Apply appropriate grammatical structures to writing.
- Use complete sentences, varied in length and structure.

- Use correct subject-verb agreement and noun-pronoun agreement.
- Begin to use compound and complex sentences.
- Apply appropriate mechanics of writing, such as:
- Recognize words that are misspelled and refer to resources for correction.
- Move from writing using invented spelling to writing using an increasing percentage of conventional spelling.
- Capitalize beginning words of sentences, proper nouns, "I", and titles.
- Begin to use commas, apostrophes, and quotation marks.

Oral Communication

- Use oral languages for different purposes (inform, persuade, and express self).
- Share related ideas on a topic in a sequential order (including beginning, middle, and end) appropriate for the audience.
- Include necessary details.
- Paraphrase information shared orally by others.
- Speak clearly and audibly using expression/appropriate tone.
- Use audio/visual aids when appropriate.
- Respond to feed-back and answer questions.

Mathematics

- Solve problems.
- Communicate mathematically.
- Reason mathematically.
- Make mathematical connections.
- Students will develop number sense, use operations for computation with understanding, explain relationships between numbers, and develop concepts of place value using concrete materials. In a 6-9 classroom, students will work towards:
- Connecting representations of whole numbers (e.g., concrete materials, drawings or pictures, mathematical symbols).
- Building and reading whole numbers to one million using groups of 1's, 10's, 100's, 1,000's and 10,000's.
- Counting on, counting back, and counting by multiples.
- Demonstrating an understanding of order relations for whole numbers.
- Using addition, subtraction, multiplication and division on whole numbers with understanding.
- Demonstrate commutative and associative properties of addition.
- Study inverse relationships of addition and subtraction.

- Connect repeated addition with multiplication and repeated subtraction with division.
- Understand and use division and multiplication as inverse operations.
- Demonstrating expanded notation to one million.
- Showing whole/part relationships.
- Identifying equal parts of a whole and equal parts of a set using halves, thirds, fourths, sixths, eighths, and tenths.
- Adding, subtracting, and multiplying like fractions.
- Studying the concepts of improper fractions, mixed numbers and decimals.
- Studying equivalency of improper fractions and mixed numbers, like and unlike fractions.
- Recognizing and defining mathematical terms for addend, sum, subtrahend, minuend, difference, multiplicand, multiplier, divisor, dividend, quotient, numerator and denominator.
- Solving word problems in addition, subtraction, multiplication and division.
- Studying prime and composite numbers.
- Students will develop an understanding of Estimation, Measurement, and Computation. In a 6-9 classroom, students will work toward:
- Selecting the most appropriate standard unit and use it to estimate, measure, and compare length, height, width, distance around and capacity.
- Estimating and measuring the perimeter of rectangles using non-standards units.
- Selecting an appropriate non-standard unit and use it to cover, count, and compare the area of shapes.
- Selecting an appropriate non-standard unit and use it to count/fill and compare volume/capacity.
- Estimating, measuring and comparing mass/weight and volume using standard units of measure.
- Measuring time using standard units (e.g., minutes, hours, days, weeks, years).
- Reading and recording temperature to the nearest degree.
- Identifying all coins; make coin amounts up to $1; add and subtract any amount of dollars and cents.
- Determining the change due from a purchase.
- Writing decimal notation when representing money.
- Knowing and using addition, subtraction, multiplication and division fact families.
- Developing, using, and explaining strategies:
- To add and subtract single-digit and multi-digit whole numbers
- To multiply whole numbers with at least one single-digit factor
- To divide whole numbers using single-digit divisors

- Selecting appropriate methods of calculation from among mental math, paper and pencil, calculators, or computers.
- Making estimates before measuring, counting, and computing.
- Rounding whole numbers and values of money to the nearest ten, hundred, and dollar as an estimation strategy.
- Students will develop an understanding of basic algebraic concepts. In a 6-9 classroom, students will work towards:
- Representing and using operations with symbols.
- Using symbols as representations of unknown quantities
- Solving open sentences such as __ + 3 = 11, using informal methods and explain the solution.
- Finding the distance between 2 points on a number line.
- Students will develop spatial sense and understanding of geometry. In a 6-9 classroom, students will work toward:
- Naming and sorting solid and plane figures using several attributes.
- Verifying symmetrical shapes by drawing lines of symmetry.
- Identifying an example of flip, slide, and turn.
- Understanding the concept of angles and gain skill in measurement and addition of angles.
- Recognizing and defining obtuse, acute, whole, straight and right angles.
- Identifying angles formed when 2 straight lines are cut by a transversal.
- Identifying angles formed when 2 parallel lines are cut by a transversal.
- Identifying, constructing, and defining regular and irregular polygons through decagon, trapezoid, parallelogram and quadrilateral.
- Identifying, constructing and defining triangles by sides (isosceles, equilateral and scalene) and angles (acute, obtuse, and right).
- Exploring concepts of point, line, surface and solids.
- Constructing and defining lines (horizontal, vertical, diagonal, convergent, divergent, parallel, perpendicular).
- Understanding and calculating perimeter and area of quadrilaterals.
- Identifying nomenclature for the families of rectangle, circle, quadrilateral, polygon and curvilinear shapes.
- Students will develop an understanding of patterns. In a 6-9 classroom, students will work towards:
- Creating patterns using number relationships
- Sorting numbers into different classes (e.g., evens, odds, multiples, actors).
- Students will develop a beginning understanding of statistics and probability. In a 6-9 classroom students will work towards:
- Collecting data by observing, measuring, surveying, and counting.
- Demonstrating a variety of techniques for representing and organizing data (e.g., tallies, pictographs, bar graphs).

- Using various methods to interpret data (e.g., liking for patterns and relationships, drawing conclusions, answering the stated question or related questions generated by students).
- Using probability experiments to find the likelihood of the outcomes of a simple chance event.

Cultural Studies

- Using Montessori's Five Great Lessons as a framework, the Cultural curriculum seeks to develop in the child a sense of the connectedness of things, to understand that:
- We all share the sacredness of life
- We all belong to groups and institutions
- We all place ourselves in time and space
- We are an inseparable part of nature
- We are all engaged in producing and consuming
- We all seek to live with purpose

The Cultural Curriculum seeks to infuse in children a curiosity about the world around us that will encourage them to ask questions, observe systematically, collect and analyse data, conduct experiments and communicate this information with others in a variety of ways.

Over the course of the 6-9 programs, children will develop an understanding of their relationship and place in the development of the universe; how the earth has changed over time through physical, chemical and geological processes.

Astronomy

- Formation of the Universe - Creation Myths, Big Bang Theory
- Formation of the Galaxies and Stars
- Formation of the Solar System
- Our Sun and Planets

Formation of the Earth

- Earth Science
- Layers of the Earth
- The Earth's Interior
- Earthquakes and Volcanoes
- Plate Tectonics

- Oceans of the World
- Layers of the Atmosphere
- Three Types of Rocks; Mineral Study
- The Earth's Movements - Day and night, changing seasons

Physics

- Centrifugal force
- Forces of Gravity
- Magnetism
- Basic laws of physics

Chemistry

- Three states of matter
- Mixtures and solutions

Students in the 6-9 classroom will gain a basic understanding of the development of life on earth. They will explore how living organisms, through time, met their needs for survival, responded to changes in their surroundings and contributed to the development of other living organisms.

- Geologic time - earth's preparation for life, the first living things
- Study of the Paleozoic, Mesozoic and Cenozoic Eras - dominant life forms

Early Man

Students in the 6-9 classroom will discover and develop a respect for the beauty and wonder of nature. They will develop an understanding of how plants, animals and humans relate to the natural environment and how, through science, we learn how nature works.

- Living/Non-living
- The Five Kingdoms of Living Things
- Vertebrates/Invertebrates
- Identify the parts and functions of plants and animals

Role of plants and animals in the food chain and the balance of life on our planet

Students in the 6-9 classroom will develop an understanding of the similarities and differences of cultures across the world; that people interact with the natural

world in distinct ways that produce cultural uniqueness; that people, places and environments are interrelated; that life involves producing and consuming.

- Fundamental Human Needs of People
- Continent Studies
- Advanced land and water forms
- Flag study
- Puzzle maps, pin maps
- Mapping skills - cardinal and intermediate directions, compass rose, hemispheres, imaginary lines of demarcation, climate zones
- Care of the precious resources of our earth