

Toddler

Math	Science	Language Arts	Cultural Studies	World Language—Spanish	Art	Library	Practical Life	Sensorial	Physical Education	Movement & Music
One-to-one correspondence Oral counting Sorting Matching Introduction to quantity	Care of the environment Care of plants and pets Color mixing Water activities Magnets Planting/Sprouting	Development of oral language skills Vocabulary enrichment Listening skills: songs, poetry, nursery rhymes, books, finger plays Development of fine motor skills Phonemic awareness	Introduction to animals of the continents Celebrations: holidays and birthdays Awareness of natural environment, habitats, seasons, plant and animal study	Greetings Introduction to songs Naming objects and places Identification of foods, animals, colors, numbers	Use of materials: paint, water colors, crayons, chalk & chalkboard Correct use of scissors Paper tearing Gluing Playdough Large easel paint	Develop a love of stories and books Rhymes and finger plays Poetry	Hand-eye coordination: pouring, spooning, scooping, tweezing Grace and courtesy: please and thank you; introductions and shaking hands; taking turns; interrupting; sneezing and wiping nose; coughing; manners while eating; etc. Care of environment: rolling mats and returning work to shelf, cleaning up spills, watering plants, crumb brushing, polishing, etc. Care of self: toileting, hand-washing, hanging up coat, dressing frames	Discrimination of color, size, shape Development and refinement of the five senses Development of organizational skills Classification Sequence	Exploration of spatial concepts Balance activities Laterality Directionality Hand-eye coordination Hand-foot coordination Analyze locomotor skills and practice basic elements Practice bouncing, throwing, striking Cardiovascular activities Developmental gymnastics Health: introduction to body systems	Introduction to instruments and their names Songs Movement and rhythm Steady beat Movement and balance: tumbling mats, parachute, scarves Hand-eye and hand-foot coordination: use of balls, hoops, bean bags

Primary

One-to-one correspondence Numeral identification Association of quantity and symbol Linear counting and skip counting Odd and even Teens Tens Numbers 1-100, oral and written Introduction to the decimal system Introduction to place value and zero as a place holder Introduction to operations using Montessori materials Coin identification Introduction to time Simple word problems	Botany: introduction to the study of plants-classification, structure, physiology etc. Care of plants Living and non-living Zoology: introduction to the study of animals-classification, structure, physiology etc. Basic introduction to physical science: magnets, sink and float, solids, liquids, gases, and sound Basic introduction to the solar system Basic introduction to geology: land, air, water Introduction to parts of the human body	Development and enrichment of oral language and listening skills, songs, poems, rhymes Directionality: north, south, east and west Names of days, months, seasons Land and water formations with definitions Names of the continents Puzzle maps: labeling of individual countries and continents Handwriting: cursive letter formation Creative writing Grammar: Introduction to parts of speech	Introduction to the globe Earth’s revolution around the sun Directionality: north, south, east and west Names of days, months, seasons Land and water formations with definitions Names of the continents Puzzle maps: labeling of individual countries and continents Introduction to flag nomenclature Celebrations of world cultures and traditions Personal information, telephone number, address Introduction to research: use of books and reference materials Historical holidays	Listening and pronunciation: songs, games and finger plays Greetings and introductions Vocabulary: colors, numbers, fruits and vegetables, animals, parts of the body Spanish conversational skills	Drawing, cutting, and sewing Use of clay and other art media Collage Color mixing Introduction to artists and genres, appreciation for works of art and artists	Demonstrate care of books Recognize roles of author and illustrator Experience a variety of literature Comprehend and retell familiar stories	Fine motor skills: pouring, spooning, scooping, tweezing, folding and polishing Care of self: food preparation, dressing frames, hand washing, toileting etc. Grace and courtesy lessons: please and thank you, introductions and shaking hands, interrupting, sharing, cooperating, taking turns, manners and conflict resolution Care of the environment Development of small muscles: grasp, twist, roll, fasten, unfasten, squeeze Gross motor skills: walking on the line, balance and movement	Development and refinement of the five senses Development of descriptive language Organizational skills, order, sequence Discrimination skills, match, sort, classify Concentration Fine motor skills Shapes and patterns Identification of geometric solids: cube, sphere, cylinder, pyramid, cone, prism Identification and reproduction of a circle, square, triangle and rectangle	Exploration of rhythm instruments Introduction to various instruments of the orchestra Rhythmic and melodic concepts Games, dances, rhymes and class demonstrations Movement: fine and gross motor skills, games Hand-eye and hand-foot coordination Rhythm, balance, direction, space Practice bouncing, throwing and striking	Introduction to instruments and their names Songs Movement and rhythm Steady beat Movement and balance: tumbling mats, parachute, scarves Hand-eye and hand-foot coordination: use of balls, hoops, bean bags
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Lower Elementary

Concept of zero as a place holder Association of quantities and numerals to 1,000,000 Four operations with regrouping Long multiplication with two-, three- and four-digit multiplier Division with two- and three-digit divisor Fractions: concept, equivalence, improper fractions, operations Exploration of multiples, factors, least common multiple, greatest common factor Memorization of math facts Rounding numbers Problem solving using the four operations Money: names, values, making change Understanding and reading time	Measurement: length, weight, volume, temperature Roman numerals Ordinal numbers Graphs: bar, line Greater than, less than, equal to Introduction to powers of numbers Estimation Geometry studies: nomenclature for geometric shapes, study of polygons, quadrilaterals, triangles, irregular figures Nomenclature of lines, circles Introduction to angles: concept, measurement, and operation Introduction to area, perimeter Explore concepts of similarity, congruence, equivalence	Solar system: formation of the universe Zoology: scientific classification of animals, animal kingdom, native and world animal identification, Study of oterbrates and invertebrates, food chain Basic needs: herbivore, carnivore, omnivore Botany: study of the plant kingdom, parts of a plant, scientific classification of plants, basic needs of plants Botany experiments Independent research of plants and animals Geology: introduction to minerals, formation of rocks, fossils Weather: work of wind and water Sun and Earth: rotation, revolution Seasons Study of magnetism Study of the elements Earth science: composition of the earth, parts and formation of mountains, parts and formation of rivers	Concept of time: calendar, months, seasons, clock Child’s own personal timeline Study of history: concept of B.C. and A.D. Fundamental needs of man Timeline of humans Cosmic view of humans in the universe U.S. History: presidents, Native Americans, colonial times Pre-History: creation myths, big bang theory, formation of the earth- atmosphere, hydrosphere Weathering: erosion Geography: mapping skills, reading maps, longitude and latitude Study of land formations Major land and water features of the world Study of geographical areas, continents, countries, states, capitals Study of flags: identification of flags of various countries Climates and environments: biomes Introduction to economic geography History of writing History of math	Spanish alphabet, emphasis on vowel sounds Greetings and expressions Vocabulary: names of common objects, people, family, foods, colors, numbers, etc. Simple reading Writing numbers Ordinal numbers Definite article Gender exercises Singular and plural Agreement of number and gender exercises Days of the week Months of the year Seasons Telling time Verbs: to be, to have, to like	Use of tools: sponges, brushes, charcoal, clay Use of a variety of media Weaving Drawing, painting, collage, modeling and carving Construction Printmaking Crafts: puppets, ceramics, masks, jewelry, murals Elements of design Art history and appreciation of artists Curriculum integration: projects related to classroom studies	Familiarity with a variety of prominent authors and illustrators Awareness of story elements including character, plot, setting, conflict, solution, and author’s purpose Identify and locate fiction titles in alphabetical order Locate non-fiction books in numerical order Introduce simple research projects using a variety of sources Technology Essentials Use sequential steps for simple research Introduce and use print and electronic resources Understand general computer operation Introduce and use word processing, databases, spreadsheets, and graphics Understand and use a variety of multimedia programs to present projects Understand the application of Internet safety standards for personal and educational use.	Effective & 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	Exploration of spatial concepts Balance activities Laterality Directionality Hand-eye coordination Hand-foot coordination Analyze locomotor skills and practice basic elements Practice bouncing, throwing, striking Cardiovascular activities Developmental gymnastics Health: introduction to body systems	Rhythmic concepts Melodic concepts Movement Instruments Vocal exercises and singing Music appreciation	Introduction to instruments and their names Songs Movement and rhythm Steady beat Movement and balance: tumbling mats, parachute, scarves Hand-eye and hand-foot coordination: use of balls, hoops, bean bags
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Upper Elementary

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 numbers 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	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	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	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	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	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	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	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	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	Introduction to instruments and their names Songs Movement and rhythm Steady beat Movement and balance: tumbling mats, parachute, scarves Hand-eye and hand-foot coordination: use of balls, hoops, bean bags
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Middle School

Pre-Algebra <ul style="list-style-type: none">Interpret graphsOrder of operationsVariables and expressions, equations and solutionsVariables in formulasProblem solving plan (word problems)Integer operations, propertiesCoordinate planeSolving equations & inequalities, simple and multi-stepFactors, fractions, exponentsRational number operationsRatio, proportion, percentSimple probabilityAngles and triangles - classificationIntroduction to functions & linear graphing Algebra I <ul style="list-style-type: none">If-then statementsScatter plots, functions, graphing calculator activitiesSolve equations with variables on both sidesRewrite equations and formulasGraph linear, including direct variation, equationsLinear equations in slope-intercept and point-slope formsLinear equations of parallel and perpendicular linesData line of best fit; linear regression with calculator	<ul style="list-style-type: none">Solve and graph linear inequalities, simple, compound, and in two variablesSolve systems of equations & inequalitiesExponents and exponential functionsPolynomials: perform operations, factor, recognize special patternsSolve and graph quadratic equations & functionsSquare roots & radical expressions: simplify & solveIntroduction to matrices Geometry <ul style="list-style-type: none">Constructing & judging validity of logical argumentsInvestigating relationships between anglesPerforming transformationsProving geometric theoremsConstructing and justifying congruent line segmentsEvaluating lengths of sides & sizes of angles of trianglesDetermining congruence and similarityProving the Pythagorean theoremInvestigating trigonometric ratiosVerifying characteristics of quadrilateralsSolving problems involving angles of polygonsUsing angles, arcs, chords, tangents, radiiFinding arc lengths & areas of sectors in circlesComparing ratiosUsing volume formulasModeling real world problems	Life Sciences <i>Human Biology</i> <ul style="list-style-type: none">Skeletal systemMuscular systemCirculatory systemDigestive systemNervous systemImmune system <i>Genetics</i> <ul style="list-style-type: none">Cell organellesCell cycle (Mitosis and Meiosis)InheritanceMendelian geneticsAdvanced geneticsGenetic diseases <i>Forensic Science</i> <ul style="list-style-type: none">Evidence collection, preservation, and examinationCase studiesQuestioned document analysisExpert witness procedure <i>Environmental Science</i> <ul style="list-style-type: none">Population studiesLocal farm studiesGlobal environmental issues	Physical Sciences <i>Chemistry</i> <ul style="list-style-type: none">Acids and basesAtoms and bondingChemical reactionsBalancing chemical reaction equationsIntroduction to the periodic table <i>Energy and Forces</i> <ul style="list-style-type: none">The nature of forcesNewton’s lawsAir pressureBernoulli’s principleRenewable and nonrenewable energy sourcesMechanism behind energy sources <i>Earth Science</i> <ul style="list-style-type: none">Natural disastersRocks and mineralsWeb of lifeBiomesFood chainsWeather and climateStellar nucleosynthesis	Writing: poetry, short stories, memoirs, citizen profiles, opinion-editorials, research papers, book reviews Reading: Books are self-selected with teacher guidance/approval. Class novels Spelling: refinement of personal spelling list Vocabulary: weekly vocabulary based on Latin and/or Greek roots Poetry: daily poetry reading & follow up discussion on elements/style Grammar: Parts of speech, sentence analysis, punctuation, phrases, clauses	Increase and refine ability to communicate in Spanish Language structure: increase/enhance knowledge of grammar promoting correct strategies/patterns of communication Writing: simple letters, brief synopses, paragraphs/ summaries Reading: read/comprehend simple texts, paraphrase/ express opinions Oral communication: complete authentic tasks/projects communicating in Spanish, handle social situations/daily tasks Vocabulary: common communications, expressing time/wishes, likes/ dislikes, personality traits, use of correct tense etc. Cultural studies	Development of the hand: pottery, sculpture, study of forms Elements of design: relationships in line, shape, color, value, texture, space Discipline and technique: drawing from recall, observation, outdoor sketching, figure drawing, grid enlargement process, perspective Painting: color theory, color mixing, texture, pattern, geometric shapes, space, shapes in environment Collage: fabric, paper, mixed media, collage painting and printing Modeling and carving: clay, plaster Construction: paper mache, mobiles Printmaking: string block printing, foam block printing, mono-prints, texture rubbings Crafts: ceramics, weaving, fabrics History: artists, art periods, cultural awareness Curriculum integration	Further exploration of literary genres Refine information literacy skills; research skills Locate, evaluate and synthesize a broad range of print/digital sources for assignments and research projects Follow approved copyright guidelines and bibliographic formats Synthesize information to develop final product Evaluate research process using a provided rubric Technology Essentials Understand, use, and apply print/electronic resources to acquire information Select search strategies to acquire information in print/electronic sources Understand how to store, share, retrieve information on network Understand application of Internet safety standards for personal, educational, future professional use Develop knowledge, understanding and skills from different disciplines to design and create solutions to problems using the design cycle 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 Appreciate past, present and emerging design within cultural, political, social, historical and environmental contexts	Effective & responsible communication Problem-solving skills/strategies Organization/time management Independent/collaborative work Personal responsibility Community and corporate responsibility Micro-economy Financial literacy Public speaking Care of environment	Combination of skills for team and individual sports: (soccer, basketball, volleyball, field hockey and football) Rules of individual/team sports Offensive and defensive strategies in structured games Physical and mental health and well-being Cooperative and competitive activities Cardiovascular skills: training and conditioning Eye-hand coordination skills Locomotor and gymnastic skills Age appropriate Family Life education Review of all information on body systems	Reads songs in simple meter Notates rhythmic patterns using known elements Demonstrates ability of call and response with the drum Participates in drum circle activities, emphasizing various beats of specific world cultures Appreciates music history Displays increased skill in percussion instruments Interrelates music with other disciplines	Introduction to instruments and their names Songs Movement and rhythm Steady beat Movement and balance: tumbling mats, parachute, scarves Hand-eye and hand-foot coordination: use of balls, hoops, bean bags
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Unique Aspects of Montessori

Freedom Within Limits

The Montessori classroom balances freedom with responsibility.

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.

The Prepared Environment

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

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.

Multi-age Classrooms

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

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.



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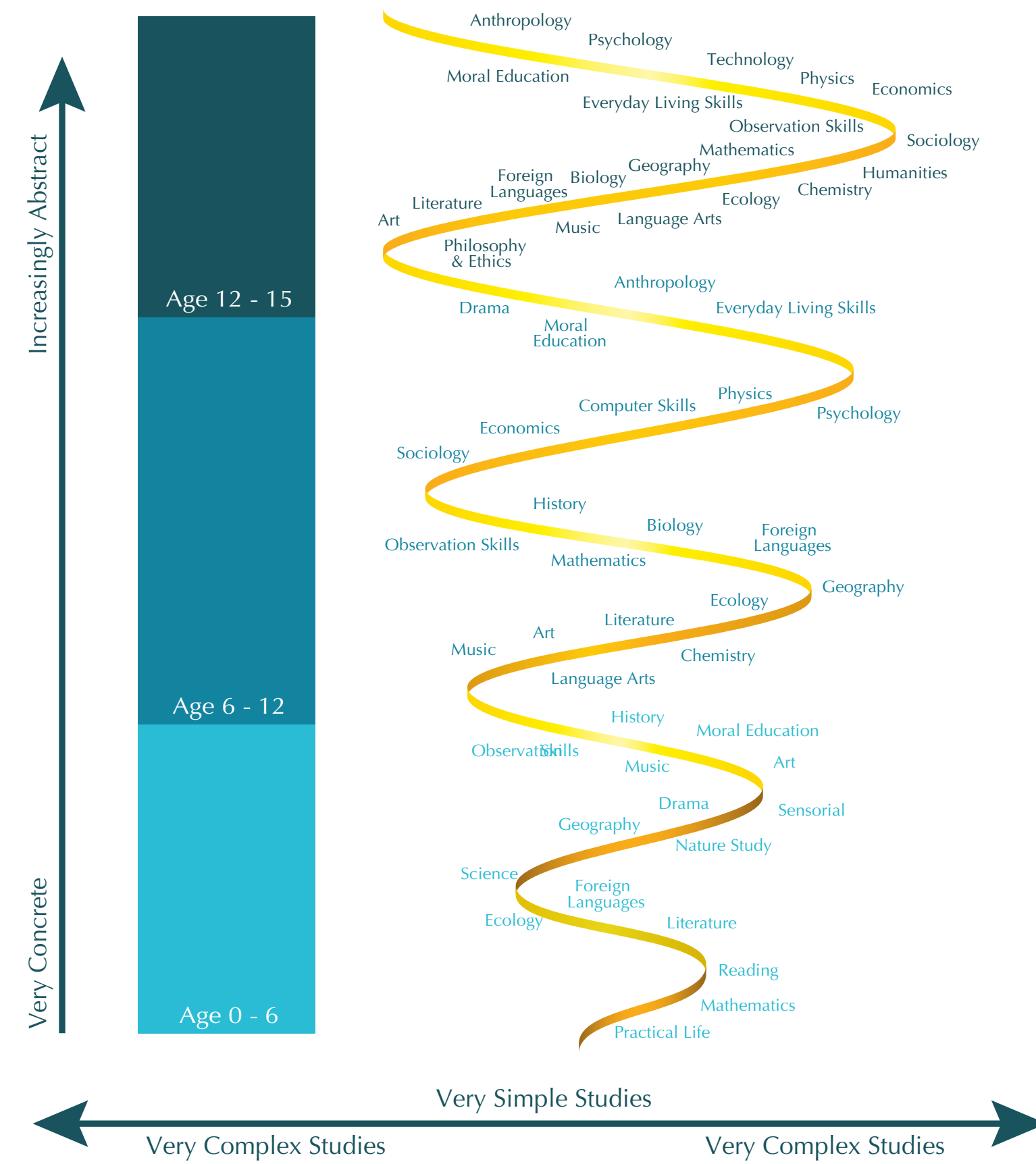
Curriculum Map

Developed by Dr. Maria Montessori,

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

Montessori education is based on nurturing and cultivating the child's natural desire to learn by:

- Creating student-centered learning environments
- Providing hands-on concrete experiences
- Encouraging exploration and problem solving
- Supporting the development of the whole child
- Fostering intrinsic motivation
- Offering multi-aged groupings and social settings
- Focusing on cooperation, collaboration, and mutual respect
- Promoting "freedom within limits"
- Promoting independence, leadership, and responsibility



Spiral Curriculum

The Montessori curriculum can be thought of as a spiral. The curriculum is organized in ever-widening circles of overlapping subjects rather than a traditional model where subjects are compartmentalized. Lessons are introduced simply and with concrete materials at the earliest years and reintroduced several times during the elementary and middle school years in an increasingly complex and abstract manner.

Literature, history, the arts, social issues, civics, economics, science, mathematics and technology all complement one another in the Montessori curriculum because they are integrated and overlap. One subject "spills over" and meshes with another subject in a natural way around a specific theme or topic.

Spiral Curriculum in Action

When elementary Montessori students study Africa, for example, they look at the physical geography, climate, ecology, natural resources, food, shelter, transportation, traditional cultures, customs and language. They might read African folk tales, study African civilizations and endangered species, create African masks and musical instruments, build traditional huts using simple mathematical measurements, learn some words in Swahili, and prepare African meals. This broad cultural approach characterizes the Montessori curriculum at all levels. At the same time, individual skills (such as phonics, multiplication tables, spelling, research techniques, punctuation, etc.) are being developed on an individualized basis or in small groups.

