

# The Montessori School *of* Raleigh



Parent Curriculum Guide





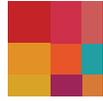
## Mission Statement

The Montessori School of Raleigh is the Triangle's modern embodiment and mindful practice of the time-proven Montessori philosophy, developing agile thinkers, poised communicators, and gracious collaborators—engineers of authentic and fulfilling lives.

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REAL-LIFE *learning* WORKS



The Montessori School *of* Raleigh

## The Montessori School of Raleigh Promise Statement

The Montessori School of Raleigh is the Triangle's modern embodiment and mindful practice of the time-proven Montessori philosophy for toddler through twelfth grade students.

Through self-directed engagement with MSR's embracing culture, inherently interdisciplinary curriculum, and purposefully prepared environments, students construct their own meaning by fully inhabiting the study of their personal fascinations.

Implicitly and explicitly guided toward mastery of evolving social, emotional, and academic lessons by expert teachers, their fellow students, and their own metacognitive reflections, they learn the habits of mind and of practice that lead to deep focus, discernment, understanding, and maturity from their earliest years.

Through this vigorous and encompassing preparation, students develop the bedrock cognitive, executive, and interpersonal skillsets widely recognized as instrumental for success in college and in life—advancing from MSR as agile thinkers, poised communicators, and gracious collaborators, one and all.

But the true hallmark of an MSR education is the manifestation in our graduates of a transformative and future-shaping mindset: an earned and steadfast belief in their inner worth, ability, and consequence; a deep appreciation for community and for the singular gifts of others; and the confidence that comes from knowing themselves as docents of their own learning and engineers of authentic and fulfilling lives.

## Planes of Development

The methodology of a Montessori Education is to follow the child and guide him/her into an experience of self-directed and exciting learning. This ensures motivation, ownership and a desire to continue learning throughout life. The ultimate goal is for him/her to be able to be an active, successful adult. The Montessori Method accomplishes this by following the different stages of a child's development. The stages of growth, which Montessori refers to as the Four Planes of Development, coincide with the sensitive periods, those ages when a child demonstrates an intense focus on acquiring a particular capability or skill. At each plane, she viewed an individual as becoming a completely separate person from that of the previous plane of development. Each level of the curriculum has been specifically formulated around the needs and characteristics of each plane to provide the optimal learning environment. The Planes of Development are as follows:



## First Plane **AGES 0 - 6 (INFANCY)**

<b>NEEDS &amp; SENSITIVITY</b>	<b>CHARACTERISTICS &amp; BEHAVIORS</b>	<b>EDUCATION &amp; CLASSROOM ENVIRONMENT</b>
<ul style="list-style-type: none"> <li>• Language</li> <li>• Needs external order to develop internal order</li> <li>• Attention to details</li> <li>• Development and refinement of senses</li> <li>• Movement and coordination</li> <li>• Grace and courtesy (social skills)</li> </ul>	<ul style="list-style-type: none"> <li>• Interested in spoken language</li> <li>• Absorbs all aspects of language including non-verbal communication</li> <li>• Oral language - vocabulary development</li> <li>• Sense of security and independence through order</li> <li>• Fascinated and attracted to the smallest of objects</li> <li>• Moves from uncoordinated to coordinated controlled movement</li> <li>• Socially observant particularly mannerisms</li> </ul>	<ul style="list-style-type: none"> <li>• Concrete materials</li> <li>• Language cards</li> <li>• Self-correcting materials</li> <li>• Sequential presentations based on reality</li> <li>• Repetition</li> <li>• Practical life</li> <li>• Freedom of choice</li> <li>• Uninterrupted work cycles</li> <li>• Movement through environment</li> <li>• Ground rules, grace and courtesy lessons</li> <li>• Snack and food prep</li> </ul>

## Second Plane **AGES 6 - 12 (CHILDHOOD)**

<b>NEEDS &amp; SENSITIVITY</b>	<b>CHARACTERISTICS &amp; BEHAVIORS</b>	<b>EDUCATION &amp; CLASSROOM ENVIRONMENT</b>
<ul style="list-style-type: none"> <li>• Development of reason</li> <li>• Fact relation (why, when, how)</li> <li>• Express judgments and morality</li> <li>• Cause and Effect/Logic</li> <li>• Community belonging</li> <li>• Constructing a self-image</li> <li>• Conscious of duties and responsibilities</li> <li>• Absolute freedom of choice</li> <li>• Morality</li> <li>• Emotional relationships</li> <li>• Sensitive period for imagination</li> <li>• Craves details</li> <li>• Syntax</li> </ul>	<ul style="list-style-type: none"> <li>• Need to form relationships</li> <li>• Social awareness</li> <li>• Movement from concrete to abstract</li> <li>• Mental independence-moral perspective</li> <li>• Development of reason</li> <li>• Age of serenity, age of rudeness</li> <li>• Develops imagination - can distinguish between fantasy and reality</li> <li>• Physical changes</li> <li>• Needs facts to use as springboard for further study</li> <li>• Prefer group work</li> <li>• Internalization of concepts</li> </ul>	<ul style="list-style-type: none"> <li>• 5 Great Lessons-use of imagination</li> <li>• Needs to go out in the world</li> <li>• Wants independence outside the family and school</li> <li>• Show relationship to world around them</li> <li>• Needs to know what is just/unjust</li> <li>• Materials to grow the intelligence</li> <li>• Simple life-more experience with nature</li> <li>• Wider boundaries</li> <li>• First-hand experiences interacting with culture</li> <li>• Experiment with the laws of association</li> <li>• Draw connections for understanding-finds place</li> </ul>

## Third Plane **AGES 12 - 18 (ADOLESCENCE)**

<b>NEEDS &amp; SENSITIVITY</b>	<b>CHARACTERISTICS &amp; BEHAVIORS</b>	<b>EDUCATION &amp; CLASSROOM ENVIRONMENT</b>
<ul style="list-style-type: none"> <li>• Many physical changes, including increase in hormones</li> <li>• More creative opportunities</li> <li>• Global perspective</li> <li>• Philosophical exploration-production and creation</li> <li>• Interest in history</li> <li>• Self-confidence</li> <li>• Financial independence</li> </ul>	<ul style="list-style-type: none"> <li>• Decrease in intellectual capacity</li> <li>• Very social, concerned about place among peers</li> <li>• Higher concern for humanity and environment</li> <li>• Activist-oriented</li> <li>• Concerned about vocation and contributions to society</li> <li>• Delicate period for health</li> <li>• Resist authority</li> <li>• Abstract love for mankind</li> </ul>	<ul style="list-style-type: none"> <li>• Guided to investigate on their own</li> <li>• Should be allowed to work "on the land"</li> <li>• Cultural education comes through living, direct exposure to what they like</li> <li>• Recognition of contributions to society</li> <li>• Fond of philosophical exploration</li> <li>• More ownership of self-management and setting goals</li> <li>• Project-based learning</li> </ul>

## Fourth Plane **UNIVERSITY OR ADULTHOOD (MATURITY)**

<b>NEEDS &amp; SENSITIVITY</b>	<b>CHARACTERISTICS &amp; BEHAVIORS</b>	<b>EDUCATION &amp; CLASSROOM ENVIRONMENT</b>
<ul style="list-style-type: none"> <li>• Sensitive to inner needs</li> <li>• More mature</li> <li>• Need to overcome possessiveness and materialism</li> <li>• Chooses own actions</li> </ul>	<ul style="list-style-type: none"> <li>• High moral conscience</li> <li>• Dedicated to the good of society</li> <li>• Feels more responsibility for the world and part he plays</li> <li>• Sole decision maker</li> </ul>	<ul style="list-style-type: none"> <li>• Education and culture have no limit</li> <li>• Complete independence</li> <li>• Life-long learning continues</li> </ul>

## Practical Life

Students participate in exercises that instill skills in caring for oneself, for others and for the environment. Activities include many of the tasks that children see as daily routine in their home, along with the exercises that develop character, socialization, a sense of community and introduce purposeful work.

## Toddler

### SKILLS DEVELOPING:

- Large Motor (body awareness and control, running, climbing)
- Fine Motor (fine motor strength, hand grasping)
- Cognitive (self control, regulation, age appropriate concentration, order, following directions)
- Emotional Development (separation, trust, socializing appropriately, expression of emotions, learning to socialize appropriately with others)
- Care of Self and Environment

### SOME LESSONS INCLUDE:

- Physical activities experienced on playground equipment
- Group movement games
- Carrying objects
- Greetings
- Dressing Frames
- Personal Hygiene (brushing hair, dressing/undressing)
- Cutting fruit, cheese
- Setting a table
- Dusting
- Raking/Sweeping
- Pouring
- Washing dishes
- Serving others

## Children's House

Children develop muscular coordination, independence, focus, concentration, and attention to details. These activities lay the foundation for all other future academic work.

### SKILLS DEVELOPING:

- Mutual respect and growth of each child
- Standards that maintain respect of each other and environment
- Development of intrinsic desire to refine skills
- Indirect preparation for writing and reading
- Sense of responsibility
- Cooperation
- Visual and kinesthetic awareness
- Coordination
- Self-help skills
- Civility

### SOME LESSONS INCLUDE:

- Grace and Courtesy (respecting workspace, manners, greetings, rolling/unrolling rug, waiting for a turn)
- Practical Skills (use of tools, sewing, food prep)
- Care of Environment (plant care, dusting, sweeping, table/dish washing, folding)
- Care of Self (hand washing, dressing frames)
- Gross Motor Control (carrying and balance)
- Fine Motor Control (scooping, squeezing, pouring, spooning, tweezing, twisting)



## Lower Elementary

At this age, the purposeful work builds upon the lessons received in previous environments and correlates to their direct relationships with their community and the world. Activities become experiences and exposure that allow them to learn to navigate and respond effectively socially, culturally and academically.

### SKILLS DEVELOPING:

- Manners
- Global Stewardship
- Leadership
- Cooperation
- Independence
- Sense of Responsibility
- Time Management
- Inner discipline
- Social Integration

### SOME ACTIVITIES INCLUDE:

- Community meetings
- Active listening
- Partner work and role play
- Classroom jobs
- Personal hygiene
- Conflict resolution
- Goal setting
- Community service
- Trip planning

## Upper Elementary

At this age, activities develop in children a strong and realistic sense of independence and self-reliance. Activities become experiences and exposure that allow them to learn to navigate and respond effectively socially, culturally and academically.

### SKILLS DEVELOPING:

- Making comparisons
- Forming judgments
- Reasoning
- Sense of responsibility
- Self-Advocacy Skills
- Money management
- Long-term planning
- Cultural awareness
- Non-verbal communication skills
- Increase memory skills
- Visual and kinesthetic communication
- Leadership
- Inner discipline
- Social Integration

### SOME ACTIVITIES INCLUDE:

- Conflict resolution
- Student jobs
- Community meetings
- Community service
- Note-taking skills
- Test-taking skills
- Classroom management
- Nutrition and Personal hygiene
- Cooking
- Orienteering and map reading
- Trip planning

## Middle School

At this age, activities develop in children a strong and realistic sense of independence and self-reliance. Activities become sustainable purposeful work that allows students to have real-world experiences and real-life interactions with others.

### ACTIVITIES INCLUDE:

- Community Service projects
- Greenhouse maintenance
- Gardening
- Intersessions
- Occupations (Land and Livestock, Cycle Shack, photography, baking)
- Small Business Ventures (selling eggs, honey, herbs and veggies)
- Community Meeting
- Jobs
- Noble Work Days
- Trip Planning
- Role modeling & leadership activities



## Sensorial/ Geometry

Young students explore and take in all information through their senses. Sensorial exercises are hands-on materials that provide concrete exploratory experiences that help the student in the preparation for academic works. These experiences allow for students to develop logic and concentration as well as continued independence. The early sensorial exercises lay the groundwork for future geometric studies. Most Sensorial experiences lay the foundation for further academic work in the area of Geometry.

## Toddler

### SKILLS DEVELOPING:

- Sequencing
- Visual Discrimination
- Auditory Discrimination
- Tactile Discrimination
- Eye-Hand Coordination
- Spatial Awareness
- Object Permanence
- Gustatory Discrimination

### SENSORIAL ACTIVITIES INCLUDE:

- Nesting Blocks, Cylinder Blocks, Tower of Cubes
- Puzzles
- Color Box 1
- Rough/Smooth Boards
- Simple sound or no sound
- Smelling jars
- Food-tasting activities
- Object permanence boxes - shape matching

## Children's House

### SKILLS DEVELOPING:

- Exploration
- Reason
- Discrimination
- Discovery
- Observation
- Comparisons
- Decision Making
- Problem Solving
- Large/Small Muscle Control
- Spatial reasoning/awareness

### SENSORIAL ACTIVITIES INCLUDE:

- Size (Pink Tower, Brown Stairs, Red Rods, Knob/Knobless cylinders)
- Form (Geometry Cabinet, geometric solids, Bi/Trinomial Cube, Constructive Triangles)
- Color (primary/secondary colors, shading, gradation, mixing)
- Tactile (Touch Tablets, rough/smooth, fabric, baric tablets)
- Taste/Smell (smelling bottles, tasting activities)
- Sound (Sound Cylinders, Montessori Bells)

### GEOMETRY

- Comparing and sorting objects, shape nomenclature, combining shapes, identifying and creating patterns, angle preparation



## Lower Elementary

### GEOMETRY

- Shape nomenclature, creating patterns, relationships between two figures, 2 and 3 dimensional figures
- Types of and measuring angles
- Shape attributes size

## Upper Elementary

### GEOMETRY

- Translations, slides, reflections, symmetry, tessellations, graphs and coordinate planes
- Polygons
- Similar, congruent, and equivalent shapes
- Apply knowledge about polygons to derive perimeter
- Pi, circumference, and area for circles
- Derive volume from applying knowledge of area
- Pythagorean theorem

## Middle School

### GEOMETRY

Students work on the essentials of geometry, basic angles and terminology, polygons, circles, 3-dimensional shapes, angle relationships, slope, reasoning, constructions, triangles, quadrilaterals, circles, transformations, area, Pythagorean theorem, square roots, distance formula, special right triangles, polyhedrons, volume, similar figures, trigonometry, logic and logical arguments.



## Sensorial and Geometry Outcomes Chart

	Exposed to auditory experiences & learning proper vocabulary	Approach new experiences with curiosity and joy	Shows respect and care for the Montessori Bells and begins to develop an appreciation for the beauty of musical sounds
<b>Sound</b>			
	Exposed to gustatory experiences & learning proper vocabulary	Exposed to olfactory experiences & learning proper vocabulary	Applies sensorial experiences using olfactory and gustatory skills to problem solve
<b>Taste and Smell</b>			
	Exposed to tactile experiences & learning proper vocabulary	Use touch to explore shapes, objects & textures in their environments	Increase in the level of concentration, coordination, order and independence
<b>Tactile</b>			
	Shows heightened awareness of similarities and differences in sensorial experiences	Demonstrates the ability to compare, contrast and discriminate to make decisions	Demonstrates heightened observational skills and applies them to make predictions
<b>Size</b>			
	Identify circle, square, triangle	Can describe objects in the environment using names of shapes	Identifies geometric solids and 2 dimensional shapes
<b>Form</b>			
	Identify primary colors	Identify primary, secondary and gradation of color	Connect the Sensorial lessons to real-life experiences demonstrating the use of descriptive vocabulary
<b>Color</b>			
	Understand the concepts of point, line, surface and solid	Explore the concept of angles and the definitions	Begin to measure angles using a protractor and define shapes by their angles
<b>Lines</b>			

KEY

TODDLER

CHILDREN'S HOUSE

LOWER ELEMENTARY

UPPER ELEMENTARY

REAL-LIFE SKILLS\*

*\*Real-life skills are important and begin at the earliest level and build upon one another. As the child ages up into the next developmental stage the outcomes present differently, ultimately producing the well-rounded student, ready for his/her next step.*



Observe, compare, reason and discriminate through auditory activities

Apply sensorial experiences using auditory skills to problem solve

Observe, compare, reason and discriminate through olfactory and gustatory activities

Use the act of touch in order to lay foundation for future abstract academic work

Understand that academic works use tactile manipulation to help master skills

Demonstrates growing ability to think critically

Compare and contrast attributes of 2 and 3 dimensional shapes

Analyze and compare shapes to make new shapes

Articulate the definitions of congruency, similarity and equivalence

Compose simple shapes to form larger shapes

Students reason with their shapes and attributes

Understand concepts of area and perimeter and can relate to math operations

Understand concepts of volume and can measure surface and relate using operations

Use color in order to associate and recognize patterns

Identify lines and angles by their properties

Graph points on a coordinate plane to solve problems



## Math

Students are introduced to math concepts with hands-on manipulatives and multiple level presentations. The three parallel sequences of counting, operations and memorization are pursued through repetition and exposure to develop the Mathematical Mind. Students participate in one-on-one, small group and large group activities. All lessons Extended Day through Middle School are aligned with National Common Core Math standards.

## Toddler

Children utilize the sensorial activities in the classroom for math preparation. Through tactile exploration students develop the skills of one-to-one correspondence and rote counting 1-10.



## Children's House

### INTRO TO NUMBERS

- One-to-one correspondence, numerical names, matching quantity to symbol, sequencing, writing numbers, odd/even

### LINEAR AND SKIP COUNTING

- Place value, tens, teens, greater than/less than, exposure to multiplication

### THE DECIMAL SYSTEM

- Understanding place value, exchanging, matching, understanding 4 digit numbers, using 0 as a place holder

### OPERATIONS

- Addition, Multiplication, Subtraction, Division
- Math facts: addition

### MEASUREMENT

- Introduction to standard and non-standard units, length, weight, use of a balance scale

### SUPPLEMENTAL MATH: FRACTIONS, TIME, MONEY, GRAPHING

- Introduction to fractions of a whole (whole, half, thirds, fourths)
- Names and symbols for coin and dollar value
- Introduction to the passage of time (month, day, week, year)
- Introduction to the symbols for reading an analog clock (hour, half hour)
- Exposure to different types of graphs, collecting data and making predictions

## Lower Elementary

### **GREAT LESSON: HISTORY OF NUMBERS**

#### **QUANTITY AND NUMBERS**

- Quantities and values to 10, teens, 1-110
- Writing numbers
- Greater than/less than, odd/even
- Formation of numbers to the millions
- Sequencing and order, ordinal positions
- Estimation and rounding

#### **PLACE VALUE**

- Using place value to represent whole numbers and decimals

### **WHOLE NUMBER OPERATIONS AND FACT MEMORIZATION**

#### **MULTIPLES AND FACTORS**

#### **FRACTIONS**

- Fraction concepts (vocabulary, improper/mixed, reading up to tenths place), nomenclature, representation
- Operations with fractions
- Decimal fractions
- Money

#### **SUPPLEMENTAL MATH**

- Time (analog, digital time, hour, half hour, 5 minute intervals, quarter of and quarter after)
- Measurement (Attributes of length, area, weight/mass, capacity and temperature. Introduction to metric measurement.)
- Problem Solving (One step problem solving with all operations. Multi-step problems with addition and subtraction. Word problems with money, time, place value, numeration and estimation)
- Graphing (Grids and graphing picture graph, bar graph, pie graph, Venn diagrams, tables)

## Upper Elementary

Initial presentations may be given with manipulatives and most students should be working at or towards full abstraction without the need of materials for most operational applications.

### **GREAT LESSON: HISTORY OF NUMBERS**

#### **MATH OPERATIONS MULTIPLES**

- Exposure to greatest common factor, lowest common multiple, prime and composite numbers

#### **PROPERTIES**

- Commutative, associative, distributive, divisibility

#### **FRACTIONS AND DECIMALS**

- Equivalent, proper/improper fractions
- Reducing fractions, operations with fractions
- Decimal equivalency, operations with decimals

#### **RATIO AND PERCENT**

- Decimal, fraction, percent forms, proportion

#### **STATISTICS AND PROBABILITY**

- Mean, median, mode, range, frequency, tree diagrams

#### **ALGEBRAIC CONCEPTS**

- Power of numbers, squaring, cubing, bases
- Binomials and trinomials
- Pre-Algebra
- Square roots, integers, negative numbers

#### **MEASUREMENT**

- Non-standard, standard units of measurement
- Conversions, area, volume, mass, weight/force, temperature

## Middle School

Students meet four times a week for 70-75 minutes. All lessons are aligned with National Common Core Math Standards and are a natural progression from the Elementary Montessori math program. Students will follow a math track based on ability.

**Track 1:** Pre-Algebra, Integrated Math I/  
Algebra, Integrated Math II/Geometry  
**Track 2:** 7th grade Math, 8th grade Math,  
Integrated Math I/Algebra

### **7TH GRADE/8TH GRADE MATH**

Students receive instruction on fractions, decimals and percents, comparing and ordering integers, negative integers, rational numbers, negative decimals, mixed numbers, evaluating expressions, one, two, multi-step linear equations, linear inequalities, ratios, rates, measurement, proportions, percents, interest, geometry, statistics and probability, plotting, graphing, factorials and permutations.

### **PRE-ALGEBRA**

Students receive instruction on the tools of algebra, operations with integers, operations with rational numbers, expressions and equations, multi-step equations and inequalities, ratio, proportion and similar figures, percent, linear functions and graphing, powers and nonlinear functions, real numbers and right triangles, distance and angle, surface area and volume, statistics and probability.

### **INTEGRATED I**

Students explore lessons on properties of real numbers, simplifying and evaluating expressions involving integers, exponents and roots, simplifying and graphing algebraic functions, solving simultaneous equations by graphing and evaluation, slope intercept, point-slope, parallel and perpendicular lines, word problems involving uniform motion, coin problems, factoring, radical operations, direct and indirect variations, basic geometry and intro to statistics

### **INTEGRATED II**

Students continue lessons on theorems and postulates, review basic geometry concepts, geometric constructions, properties of lines, rays, segments, angles, triangles, polygons and circles, congruency and similarity, coordinate

# Math Outcomes Chart

Intro to Numbers	Interest in the sensorial experiences that lead to mathematical thinking	Expresses a love for mathematical thinking and is able to problem solve creatively	Understands the relationship between numbers and quantities
Linear Counting	Efficient in the skills of One-to-one correspondence	Efficient in the skills of rote counting	Efficient in the skills of symbol and quantity
Place Value	Demonstrates a solid foundation in place value work with teens and tens numbers using the Montessori materials	Demonstrates a solid foundation in matching 4 digit numbers to correct quantities	Efficient in the skills of composing and decomposing numbers using the Montessori materials
Operations	Can represent a simple number equation using the Montessori materials	Can record a simple number equation represented by Montessori materials Composes addition math facts up to 10 using Montessori materials	Represents and solves problems involving addition and subtraction Represents and solves problems involving multiplication and division
Measurement	Compares and describes measurable attributes of objects	Relates addition and subtraction to length	Measures length indirectly with standard and nonstandard units Measures and estimates lengths in standard units
Fractions and Decimals	Sees objects in his/her world as whole, as well as, parts of a whole	Identifies whole and half	Has been introduced to decimal fractions and understands and reads decimals up to the thousandths place Develops an understanding and recognition of fractions as numbers
Time	Has a solid foundation in the concept of time: seasons, months, days, hours and minutes	Can read, understand and differentiate the analogue and digital clock	Can read time using language of quarter past, quarter to and 5 minute intervals
Money	Understand that money has purpose and value	Recognize all coins and values up to hundred	Apply and extend knowledge of money into their everyday lives and be able to respond accordingly
Graphing	Understand that graphs provide data and help organize information	Apply information to answer questions and make predictions based on data gathered from graphs	Exposure and practice to a interpreting and making a variety of graphs including: bar graphs, picture graphs, tables, Venn Diagrams and pie graphs
Ratio and Percentage	Understand ratio concepts and use ratio reasoning to solve problems	Can recognize and understand proportion through ratio and percents	Can apply ratio and percentage formulas into their everyday lives
Statistics and Probability	Be able to actively represent and interpret data	Graph points on a coordinate plane to solve real world mathematical problems	Develop an understanding of statistical variability
Algebraic Concepts	Apply and extend previous understandings of arithmetic to algebraic expressions	Gain a familiarity with squaring and cubing with bi and trinomials	Apply and extend previous knowledge of rational numbers

*\*Real-life skills are important and begin at the earliest level and build upon one another. As the child ages up into the next developmental stage the outcomes present differently, ultimately producing the well-rounded student, ready for his/her next step.*



Child sees a connection between his world and mathematical experiences in nature and patterns Conserves numbers 1-10 Determines greater than, less than or equal to, using matching and counting strategies with Montessori materials.

Efficient in the skills of ordinal numbers Writes and interprets numerical expressions Writes and interprets numerical expressions to analyze patterns and relationships

Works with equal groups of objects to gain foundation for multiplication Uses place value understanding and properties of operations to perform multi-arithmetic Full understanding of the place value system

Works with equal groups of objects to gain foundations for multiplication Understands the properties of multiplication and the relationship between multiplication and division Can apply the skills of the 4 operations to predict, calculate and solve in a variety of creative ways Uses the four operations with whole numbers fluently in daily exercises and can apply to real life experiences

Can read and write temperature Has had an introduction to metric measurement Understands the attributes of length, area, weight/mass, capacity and temperature Solves problems using measurement and conversions of measurement from larger to smaller Measures volume and applies it to the operations of multiplication and addition

Completes math problems using all 4 operations with fractions Performs operations with decimals to the hundredths Understands fraction equivalence and ordering Understands decimal notation for fractions and be able to compare Uses all 4 operations to manipulate fractions and solve problems

Apply and extend knowledge of time and be able to use it to function independently

Complete word problems use money and make change Can function independently in the real world and understand the concept of money

Can independently utilize charts and graphs to better understand data and gain knowledge Use graphs and charts independently to extend knowledge , answer problems and find solutions

Reason and solve one-variable equations and inequalities Represent and analyze quantitative relationships between independent and dependent variables Compute fluently with multi-digit numbers and find common factors and multiples



## Language

Student lessons increase the students' ability to communicate through reading and writing. Using the 3 modalities of visual, experimental and auditory, Montessori utilizes the curriculum to increase skills and student ability. All lessons Extended Day through Middle School are aligned to National Common Core Standards for Language.

### Toddler

Receptive and expressive language is the focus in Toddler. Students participate in activities that build vocabulary as well as communication skills.

#### **SKILLS DEVELOPING:**

- Expressing feelings & needs
- Speaking in short phrases & sentences
- Learning to connect their world through a variety of experiences

#### **LANGUAGE ACTIVITIES INCLUDE:**

- Guided questions
- Interaction with adults and peers in their environment
- Exposed to a variety of books
- Language cards: vocabulary
- Object/picture matching
- Puzzles
- Stories
- Read-Aloud

### Children's House

Children's House teaches language in order to increase the child's ability to communicate. The processes of reading and writing, the exploration of words and their functions follow skills in spoken language and pre-reading.

#### **RECEPTIVE AND EXPRESSIVE LANGUAGE**

- Enhance spoken language development
- Development of vocabulary
- Communication with group in circle activities
- Listen responsively to stories and songs
- Request, retell and describe stories
- Ask/answer questions
- Training of the ear for sound

#### **PRE-READING SKILLS**

- Developing content, comprehension and self-expression
- Sequencing
- Sound manipulation, classification
- Rhyming and sound segmentation
- Modeling main idea concepts

#### **COMPOSITION/CREATIVE WRITING**

- Small Movable Alphabet to express thoughts and ideas to story format
- Share thoughts and ideas orally and through pictures



## READING

- Auditory discrimination of sounds to words with object boxes, blends
- Association of symbols with sounds of letters via muscular, tactile, visual/auditory senses
- Transition from cursive to print
- Decoding
- Develop sight word vocabulary

## HANDWRITING-CURSIVE

- Association of symbol with sound using the Sandpaper Letters and Movable Alphabet
- Motor/muscular memory of lower/uppercase letter formation
- Development of penmanship skills through Metal Insets and Chalkboard
- Writing name, recognizing the alphabet, writing for purpose and writing mechanics

## GRAMMAR

- Article, Noun, Adjective, Verb
- Alphabetical Order

# Lower Elementary

## GREAT LESSON: HISTORY OF LANGUAGE

### LISTENING AND SPEAKING

- Communicate thoughts and feelings
- Listen and engage effectively
- Listen and speak to gain knowledge
- Speak clearly and appropriately to different audiences through oral presentations

### READING & LITERATURE

- Phonological awareness, letter-sound knowledge for decoding
- Word recognition strategies
- Read with fluency and understanding independently
- Main idea, finding details, cause and effect, making inferences, making predictions, context clues, making connections
- Recognize age-appropriate sight words using the Dolch Sight Word lists
- Read to increase knowledge
- Analyze characteristics of different genres

## RESEARCH, WRITING & HANDWRITING

- Compose original text
- Apply conventions of written language using appropriate mechanics (C.O.P.S and daily editing)
- Evaluate own/peer writing
- Use writing in research using prompts, organizers and other tools
- Demonstrate logical expression
- Demonstrate correct pencil grip
- Understand margins, writing a paragraph
- Cursive writing practice with correct letter formation

## GRAMMAR AND SENTENCE

### ANALYSIS

- Identify the nine parts of speech and their function
- Follow rules for singular and plural nouns
- Classify nouns by qualities
- Identify positive, comparative and superlative adjectives
- Conjugate verbs in past, present and future

## WORD STUDY, SPELLING & MECHANICS

- Exposure to compound words, suffix, prefix, antonyms, synonyms, homophones, homonyms, homographs, contractions, possessives, classification, guide words, dictionary and thesaurus usage
- Exposure to capital letters, periods, question marks, exclamation points, quotes, commas, apostrophes
- Work with greeting and letter writing
- Usage of the word "I"
- Instructional leveled spelling
- Identify spelling errors in written work



## Language (cont.)

### Upper Elementary

#### **GREAT LESSON: HISTORY OF LANGUAGE**

##### **LISTENING AND SPEAKING**

- Listen actively in a variety of settings
- Lead groups of peers in task-oriented group work
- Develop respectful consideration for opinions and feelings
- Take a thoughtful and attentive stance on materials and lessons presented

##### **READING & LITERATURE**

- Apply reading comprehension strategies in different genres
- Build vocabulary and word recognition
- Interpret authors intent and motivation of characters
- Consider different perspectives on historical events, cultures
- Make connections to real life and compare and contrast literature to other forms of media
- Cite textual evidence to support analysis

##### **WRITING**

- Accurate use of writing mechanics and use of the English language
- Creative writing that incorporates various elements of study and genres
- Analyze and critique persuasive positions
- Develop well crafted multi-paragraph essays
- Complete the editing process that includes title pages, table of contents, bibliographies and covers

##### **PARTS OF SPEECH**

- Correctly identify nine parts of speech and their functions
- Apply, discuss and analyze uses for grammar in writing
- Apply rules for verb conjugation

##### **SENTENCE ANALYSIS**

- Understand the concept of a complete complex and compound sentence
- Identify the subject, predicate, direct/indirect objects and their functions
- Identify adverbial modifiers, attributives, appositives, predicate complements, nominatives and prepositional phrases
- Construct and diagram sentences

##### **WORD STUDY/PUNCTUATION**

- Identify and classify words by etymology
- Identify challenging words and use strategies to apply meaning
- Correctly punctuate writing including dialogue
- Proper mechanic usage including proper nouns



## Middle School

While reading, discussing, annotating, and dissecting a text, students embark on authentic, in-class and inquiry-driven projects. Students meet 4 days a week between 55-75 minutes each class.

### LITERATURE

- Exploration through small and whole group activities
- Texts are chosen based on Humanities curriculum
- Integration with Humanities, Math, Science and Community Service

### GOALS OF WRITING

- To develop fluency with the process of writing
- To support the development and use of correct writing mechanics
- To encourage students to see themselves as writers
- Students practice writing: journals, narratives, expository and argumentative essays, poetry, travel writing and more.
- Extensive use of technology for writing during writing workshop which include Google Docs and digital portfolios

### VOCABULARY AND SPELLING: WORD WITHIN WORD PROGRAM

- Greek, Latin and other stems
- Complex analogies
- High-frequency, high-level words

### EXAMPLES OF THEMES OVER THE THREE YEARS

- Innovation
- Social Identity
- Genre Studies
- Propaganda and Evaluating narratives
- Stereotypes
- Media Literacy
- Deepening Community Service

### EXAMPLES OF MAJOR PROJECTS

- Passion Project
- Grammar Tool Kit
- Explorer Mini-Project
- DEEPEN Project
- Personal Legends
- Epic Project
- Finding Your Voice (Monologues)
- High School Architecture Project
- I AM Career Exploration Project



# Language Outcomes Chart

## Receptive and Expressive Language

Expresses needs to teachers and peers with reasonable clarity	Increasing ability to relate school and home experiences to their world	Can communicate with adults and their peers, and demonstrate age appropriate skills	Makes connections through conversation and written information to develop a better understanding of the world
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## Listening and Speaking

Through spoken language, express ideas, collaborate with others, and propose solutions.	Develops a love for the beauty of literature and spoken language	Determines main idea and details of text read aloud and information presented in different media	Use words and phrases acquired from being read to, conversations and responding to texts
	Participates in collaborative conversations with diverse partners in small and large groups	Asks and answers questions about key details from a text presented orally	Can speak clearly, at an understandable pace, about a chosen topic to share facts and details

## Pre-Reading Skills

Shows a love and respect for reading material through the proper care of classroom books	Efficient in the skills of phonemic awareness	Efficient in the skills of rhyming and syllabication	Efficient in the skills of letter/ sound association	Efficient in the skills of sound segmentation
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## Reading and Literature

Efficient in the skills of print awareness and alphabetic principle	Efficient in the skills of reading CVC words fluently	Demonstrate understanding of the organization and basic features of print	Demonstrate understanding of spoken words, syllables and sounds	Gain an appreciation for the importance of reading for pleasure and reading to gain knowledge
		With prompting and support, identify author and illustrator, characters and settings in a story	Know and apply grade level phonics and word analysis skills in decoding	Read with sufficient accuracy and fluency to support comprehension
Efficient in the skills of Pre-Primer sight word recognition				Determine clarity of meaning of unknown words and phrases using grade level strategies

## Reading Comprehension

Understand the difference between a question and statement	Can relate information from the story to their own experiences with support	Can answer simple questions based on the storyline with support	Ask and answer questions with key details in a text with grade appropriate efficiency	Describe how characters in a story respond to major events and challenges
			Retell stories to demonstrate understanding of the central message or lesson	
Comprehend age-appropriate varieties of text	Apply strategies to decode unknown or non-phonetic words using pictures or context clues with support	Retell the story using key details with support		Describe characters, setting and major events in a story

KEY

TODDLER

CHILDREN'S HOUSE

LOWER ELEMENTARY

UPPER ELEMENTARY

REAL-LIFE SKILLS\*

*\*Real-life skills are important and begin at the earliest level and build upon one another. As the child ages up into the next developmental stage the outcomes present differently, ultimately producing the well-rounded student, ready for his/her next step.*



Demonstrates the ability to listen respectfully to others

Engage effectively in a range of collaborative discussions with diverse partners, building on others ideas and expressing their own clearly

Paraphrase portions of a text read aloud or information presented in diverse media formats

Summarize and analyze a written text read aloud or information presented in diverse media formats

Present claims or findings logically and use pertinent descriptions

Delineate a speaker's argument and specific claims, distinguishing whether they are supported or not

Report on a topic or text, tell a story, or recount an experience in an organized manner using appropriate facts and descriptive details to support main ideas or themes

Identify and summarize the reasons and evidence a speaker provides to support particular points

Adapt speech to a variety of contexts and tasks, using formal English when indicated and appropriate

Adds drawings or other visual displays when appropriate to clarify ideas, thoughts and feelings

Infers a text before reading it based on illustrations

Adds audio recordings, multimedia components and visual displays to presentations when appropriate to clarify information

Knows and applies grade level phonics and word analysis skills in decoding words

Refer to parts of a story (chapter, scene, stanza)

With guidance and support from adults, demonstrate understanding of word relationships and nuances

Describe the overall structure of a story: beginning, middle, end

With guidance and support, read poetry and prose with appropriate complexity

Gain an appreciation for literacy as an important tool in order to function as an independent adult

Quote accurately from a text when explaining what a text says explicitly and drawing inferences

Cite textual evidence to support analysis of what the text says

Explain events, procedures, ideas or concepts in a historical, scientific or technical text, explaining what is happening and why

Describe the overall structure of the events, ideas or concepts of a text

Read with sufficient accuracy and fluency to support comprehension

Analyze how a particular sentence, paragraph, chapter or section fits into the overall structure

Compare and contrast the author's presentation of events with that of another

Compare and contrast the overall structure of the events, ideas or concepts of a text

Explain major differences between fiction and nonfiction text

Identify point of view and voice in a story

Compare and contrast characters and events in a story

Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences

Determine two or more main ideas of the text and explain how it is supported by key details; summarize the text

Analyze in detail how a key idea is introduced, illustrated and elaborated in a text

Read and comprehend text, including science, humanities, technical texts and literary nonfiction in the specific grade text complexity if needed

Explain how the author uses reasons and evidence to support particular points of view

Students understand the importance of being able to comprehend fluently in order to function as an adult in our society

Trace and evaluate arguments and specifics claims in a text

Refer to details and examples, quote accurately or cite textual evidence

Compare and contrast a first and second hand account of an event, describing the differences



## Language Outcomes Chart (cont.)



*\*Real-life skills are important and begin at the earliest level and build upon one another. As the child ages up into the next developmental stage the outcomes present differently, ultimately producing the well-rounded student, ready for his/her next step.*



Applies knowledge of grammar to explore and discuss writing style	Identifies adverbial modifiers, attributives, appositives and their functions	Applies rules for verb conjugations
Identifies concepts of sentences and the function of the parts of a sentence	Identifies predicate complements, adjectives, and nominatives and their function	Identifies and uses different clauses appropriately in reading and writing

Demonstrates understanding of the organization and basic features of print	Child acquires an extensive vocabulary through reading and word study	Identifies and classifies words by their etymology	Gathers vocabulary knowledge when considering a word or phrase important to comprehension or expression
Uses grade level capitalization when writing and can recognize errors	Determines or clarifies the meaning of unknown or multiple meaning words and phrases based on level appropriate text using a variety of strategies	Identifies and spells words appropriate to their reading level	Identifies challenging words and uses strategies to explore and apply their meaning

Write legibly with an understanding of proper placement and spacing	Can write name in cursive using a capital letter	Demonstrate appropriate pencil grip, writing stamina and ability to write top to bottom, left to right	Demonstrate understanding of the key features of a paragraph
With prompting and support, capitalize the first word in a sentence and correctly use commas, periods and exclamations	Can copy words and phrases in cursive	Demonstrate command of the conventions of standard English grammar and usage when writing	Demonstrate understanding of a multi-paragraph paper and use of main idea and supporting details within a paragraph

With guidance and support from adults and peers, produce writing in order to collaborate and interact with others	With some guidance from adult support, produce and publish writing using technology	Write opinion pieces and arguments on topics with clear reasons and relevant evidence
Produce clear, coherent writing in which the development and writing, style, and organization are appropriate to task, purpose and audience	Write narratives to develop experiences or events using effective technique, relevant details and a well structured event sequence	

Recall information from experiences or gather information from provided sources to answer a question	With some guidance from adult support produce and publish writing using technology	Conduct research projects to build knowledge, answer questions and refocus inquiry	Write informative texts to examine a topic to convey ideas and information clearly
Use knowledge of language and its conventions when writing, speaking, reading or listening	Produce clear, coherent writing in which the development and writing, style, and organization are appropriate to task, purpose and audience	Gather relevant information from multiple sources, assess credibility and quote or paraphrase the data while avoiding plagiarism	



# Humanities

The curriculum gives students the ability to organize the knowledge being presented to them in a sequential manner that makes sense. All lessons Extended Day through Middle School are aligned with the North Carolina Essential Standards for Social Studies.

## Toddler

Humanities at the Toddler level is taught indirectly through exposure to different cultural activities, songs, books, holidays and seasons.

## Children's House

Impressionistic and exploratory lessons are given whole or small group with follow-up activities done independently or with partner(s). They are meant to spark interest and discovery for further studies.

### **GEOGRAPHY**

Introduces children to the different cultures around the world and how they relate to our own culture, community and world.

- Develop the concept and shape of the earth and the model of the globe
- Learn relative locations and names of the continents and oceans, cardinal directions and simple map skills
- Introduction to the biomes and types of animals that live on different continents
- Introduction to symbols and flags

### **HISTORY**

The development of time integrates with the math curriculum that promotes awareness and understanding on how time relates to the world

- Common vocabulary to explain the passage of time and units of time
- Calendar
- Days of week, months of year
- Seasons

### **CULTURE**

Integrates with Practical Life and provides the children with multi-sensory impressions of the people, lands, and cultures of other nations

- Continent Studies
- Holidays
- Cultural Celebrations



## Lower Elementary

The Cosmic Curriculum incorporates the study of Geological History, Physical Geography, Earth and Natural Sciences. Lessons satisfy students' needs to understand relationships, cause/effect, associations and morality while utilizing the imagination and sparking internal interest.

### THE GREAT LESSONS

The Story of the Universe, The Story of Coming to Life, The Story of Human Beings.

### GEOGRAPHY

Students receive lessons in both political and economic geography.

#### LESSONS INCLUDE:

- Map skills such as identifying and labeling, cardinal directions
- Identifying human characteristics of places, biomes, continents and countries
- Describe where goods are produced and the interdependency of people
- Locate and describe natural resources of countries and states

### HISTORY

Students receive lessons on the concepts and passage of time as well as how it relates to the earth and the different cultures living on it.

#### LESSONS INCLUDE:

- Understanding of past, present and future
- Fundamental needs of humans and their relationships to biomes and cultures
- Origins of holidays and celebrations
- Understanding of historical time
- US History

## Upper Elementary

Students are still in the Intellectual Period for Reason; concerned with the role of society, morality and social interaction. They are still sensitive to the use of the imagination and have matured, resulting in more advanced thinking, research and interest.

### THE GREAT LESSONS

The Story of the Universe, The Story of Coming to Life, The Story of Human Beings

### PHYSICAL/POLITICAL GEOGRAPHY

- Empower child to understand the world in spatial terms
- Enrich knowledge of vocabulary, geographic features
- Enable students to use maps and other representation tools and technology to acquire knowledge
- Enable students to create and use mental maps to organize information about people, places and environments
- Analyze the spatial organization of people, places and environments on the Earth's surface

### HISTORY STUDIES

Presents the rise of mankind in interesting ways, allowing students to use their imagination to stimulate research through inquiry.

- Comprehend development of geologic time
- Understand the existence of modern humans in relation to time
- Development of ancient civilizations (western civilizations and developmental time periods)
- Review of all 5 Great Lessons

### CONTINENT STUDIES/CULTURE

- Identify continents, major countries, geographical features
- Fundamental Needs and biomes
- Research skills and using different sources
- Presentation and writing skills
- NC Studies/History



## Humanities (cont.)

### Middle School

Students meet 3 times a week for 75 minute classes. Students are divided into two mixed age groups and follow a two-year cycle. 9th year students focus on World History within those two cycles.

#### **GEOGRAPHY**

Survival and Adaption-Africa

- Geography of Africa
- Ancient African Kingdoms, Trade
- Slavery and African Diaspora
- Colonialism/Imperialism
- Pan-Africanism
- S.Africa and Apartheid

Independence and Interdependence-

Central/South America and Caribbean

- Geography
- Ancient Civilization (Maya, Aztec, Inca)
- European Exploration
- Colonization
- Independence Movement
- Immigration

Structure- South and Southeast Asia

- Geography
- Ancient India, China, Japan
- Colonial India
- China and Japan through 20th Century
- Independence Movement - India
- Trade, Technologically Advanced Culture

#### **AMERICAN HISTORY**

Foundations and New Beginnings

- Colonial Era
- American Revolution
- Westward Expansion

Transformation

- Slavery
- Civil War
- Reconstruction
- Industrialization

Identity

- Immigration: Past and Current
- Modern 20th Century America

#### **EUROPEAN HISTORY**

Influence

- Geography of Europe
- Ancient Greece
- Roman Empire

Revolution and Change

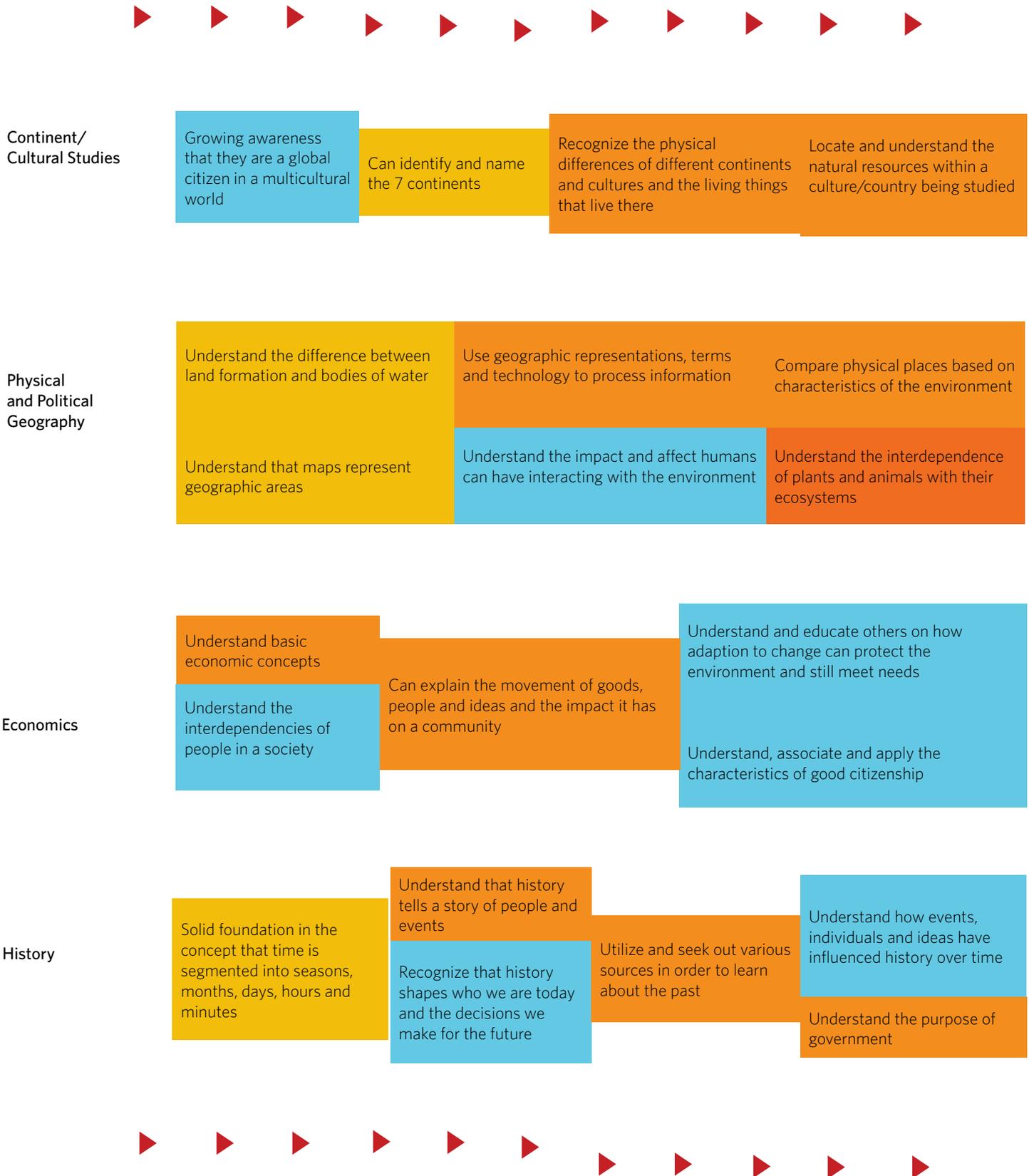
- Middle Ages
- Feudalism
- Renaissance
- Reformation
- Revolutions in Europe: England, France, and others

Power and Balance

- Industrialization
- WW I and WW II
- Post WWII, Communism, The Cold War, 1960's, 1970's, 1980's
- Current European Issues



# Humanities Outcomes Chart



KEY

TODDLER

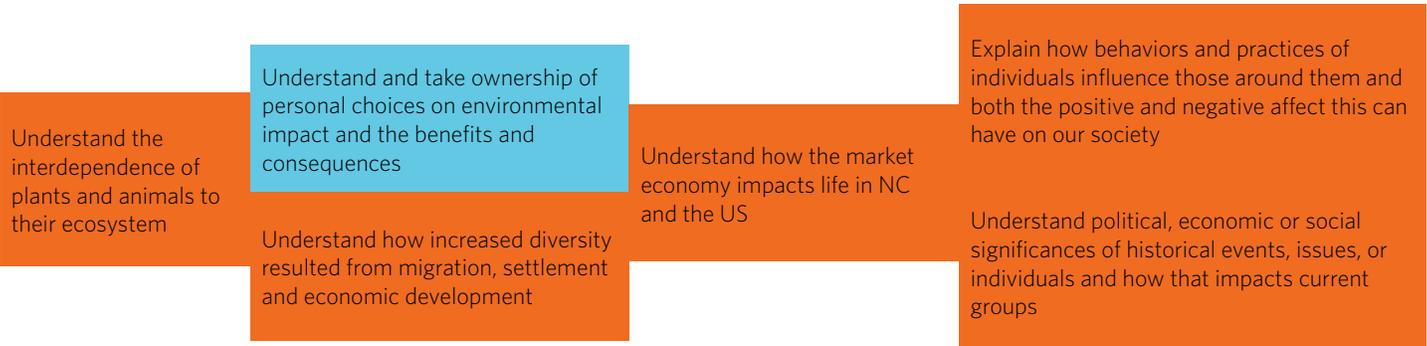
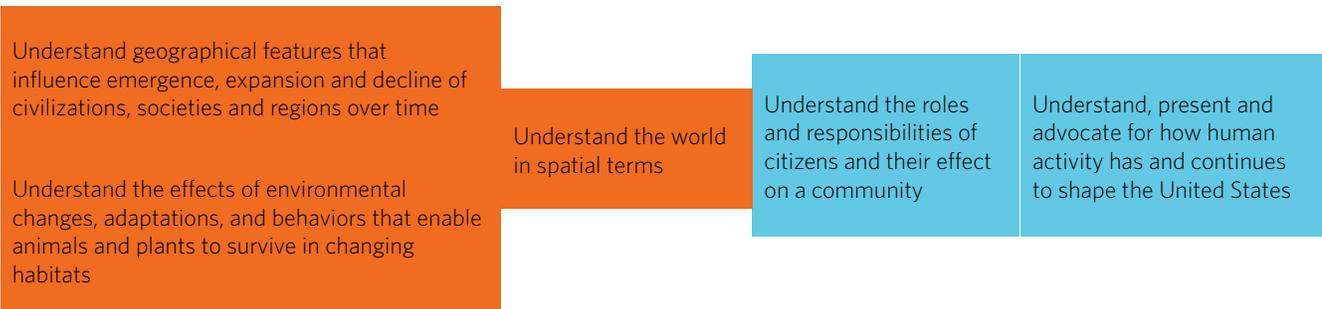
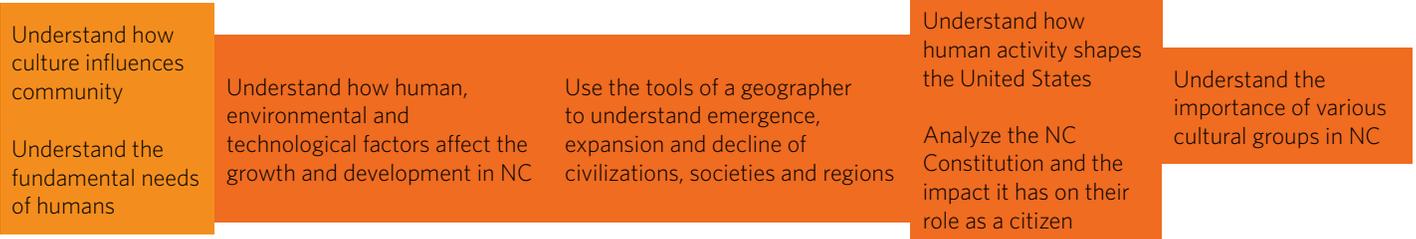
CHILDREN'S HOUSE

LOWER ELEMENTARY

UPPER ELEMENTARY

REAL-LIFE SKILLS\*

*\*Real-life skills are important and begin at the earliest level and build upon one another. As the child ages up into the next developmental stage the outcomes present differently, ultimately producing the well-rounded student, ready for his/her next step.*



## Science

The lessons give students the ability to recognize relationships and understand their role in the world, how we impact and shape what is around us, and the interconnectedness of living systems and nonliving matter. All lessons Extended Day through Middle School are aligned with North Carolina Essential Standards in Science.

### Toddler

Science is taught indirectly as a preparation for further instruction later on. Students are exposed to science through sensorial, language and interdisciplinary activities such as books, songs, movement games and finger plays.

### Children's House

Students participate in concrete exploration of the sciences integrated with Humanities, language, Sensorial and Practical Life.

#### **LIFE SCIENCE**

- Children develop a reverence to the wonder of life, the intricacy and interdependence of all life forms
- Learn to conduct experiments, make observations, and draw conclusions
- Lessons include: living/non-living, seasons, plant/animal, vertebrate/invertebrate, parts of vertebrates, classification of animals, life cycles

#### **PHYSICAL SCIENCE**

- Exposure to and experimentation with physical properties to discover the natural laws of water, air, sound, light, magnets, electricity, heat/friction, simple machines and chemical reactions

#### **EARTH SCIENCE**

- Exposure to and experimentation with the properties of the Earth and the changes to the land, air and water and how it affects our lives as well as the well being of the planet



## Lower Elementary

A part of the Cosmic Curriculum, Science continues to help students acquire the knowledge necessary to promote discovery, research, experimentation and presentation.

### LIFE SCIENCE

- Learn to ask questions about organisms
- Identify types of vertebrates and their characteristics and functions
- Identify and label parts, functions, and types of plants
- Recognize and understand plant processes and growth

### PHYSICAL AND EARTH SCIENCE

- Explore the layers of the Earth and their functioning processes
- Plate tectonics, parts of volcanoes, mountains, rivers
- Land/water forms
- Explore the properties of matter, processes of attraction and gravity
- Rocks and the rock cycle, water and air
- Introduction and exploration of the Scientific Method

## Upper Elementary

Students spend more time focused on the details of the natural world. Lessons are taught by subject and utilize the need for hands-on experiences through scientific exploration of living things. Further classification through research, experiments and validated work in all 4 science areas.

### LIFE SCIENCE

- 6 Kingdom studies
- Identify characteristics of organisms and life cycles, describe common links and connections between organisms and environments
- Develop an understanding of structure, function and reproduction in living systems, populations and ecosystems
- Understand classification as a systematic approach
- Study of the human body systems and functions, how humans modify the physical environment
- Biology, Zoology, Botany, Ecology, Human Body Studies

### EARTH AND SPACE SCIENCE

- Understand the essential overview of the beginning of the universe, development of four fundamental forces, formation of the planets, earth and basic scientific principles
- Develop an appreciation for the scope and breadth of natural inquiry
- Understand the properties and characteristics of earth materials and the structure of the earth system
- Understand the relationship between the earth and the sun
- Understand earth's processes: hydrosphere, lithosphere, atmosphere.
- Formation, components and types of soil
- Weather associations
- Links between ocean zones, ocean life, currents, ocean exploration and geographic features

### PHYSICAL SCIENCE

- Three States of matter
- Motion and forces (atoms, periodic table, chemical bonds, molecules)
- Electricity
- Physics and simple machines
- Chemistry
- Scientific Method, Scientific Process and inquiry

## Middle School

Students have a two-year integrated study of science and a 9th year Biology course. Students meet for science twice a week for 85 minutes. Biology meets 4 times a week for 85 minutes including lab.

### YEAR ONE

- Evolution, Fossils
- Cell structure and function, organelles, multicellular organisms, hierarchical organization, human body, food as energy
- Microbiology, diseases, heredity

### YEAR TWO

- Oceanography, weather, atmosphere
- Forces and motion, energy transfer, simple machines
- Matter, chemical and physical changes, structure of the atom, Periodic Table, law of conservation of mass, yearly field study, yearly research paper

### YEAR THREE- 9TH YEAR BIOLOGY

- The Nature of Life
- Cells
- Genetics
- Evolution
- Microorganisms and plants
- Animals
- Human Body
- Ecology
- Research Paper



# Science Outcomes Chart



## Life Science

Exhibits a beginning appreciation and understanding of the natural world around them	Gains a better understanding of the world through Practical Life, Sensorial, Language, Mathematics and Science	Understands the similarities and differences between: Vertebrates/ Invertebrates, plant/animals, and living/non-living
Demonstrates a reverence for the natural world around them and the intricacy and interdependence of all life forms	Growth in his/her ability to observe, question and predict that will lead to understanding of scientific inquiry	Understands the relationship between behaviors for survival and environmental influences

## Earth Science

Exhibits a beginning awareness and appreciation for the complexity of our solar system, our planet, and the role of a global citizen	Understand the physical properties of Earth and their function	Understand and recognize patterns of weather and the affecting factors	Understands and explains how the motion and position of the sun, Earth and moon affect seasons, tides, phases, eclipses
Recognize and understand the features and patterns of the sun and its systems	Exhibits a strong awareness and appreciation for the complexity of our solar system and the small role humans play in it	Exhibits a beginning awareness and appreciation for how what we do as global citizens affects the world around them	Understands the history and impact of space exploration

## Physical Science

Growth in his/her ability to absorb and process information through the experimentation of physical properties that leads to a better understanding of the natural world	Understand properties of solids, liquids and gases as well as the properties of matter	Through experimentation, processes and absorbs information and present and share knowledge with others	Explain the effects of electromagnetic waves
Understand how forces affect motion: attraction and gravity	Recognize the different parts to the scientific method	Understands, associates and applies knowledge to all areas of science for a better understanding of process and theory	Illustrate and understand the transfer of heat energy



KEY

TODDLER

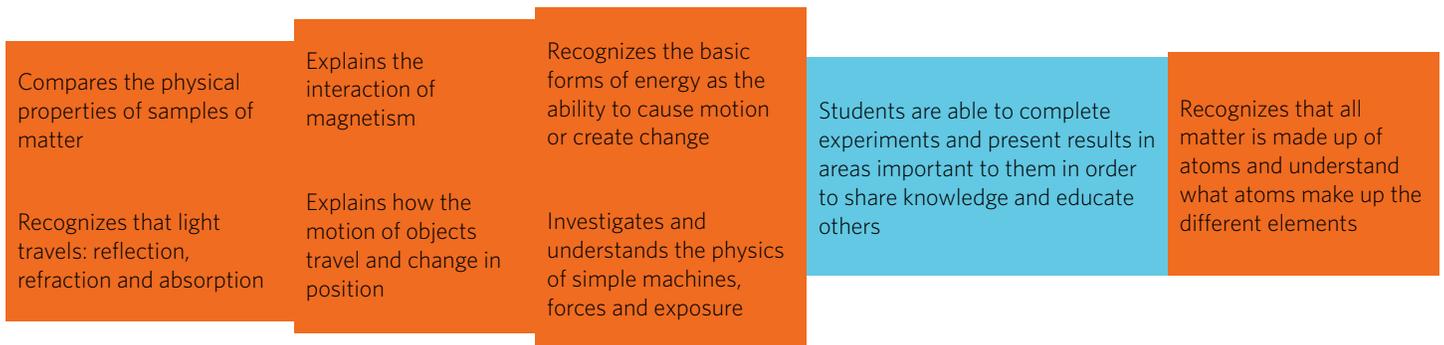
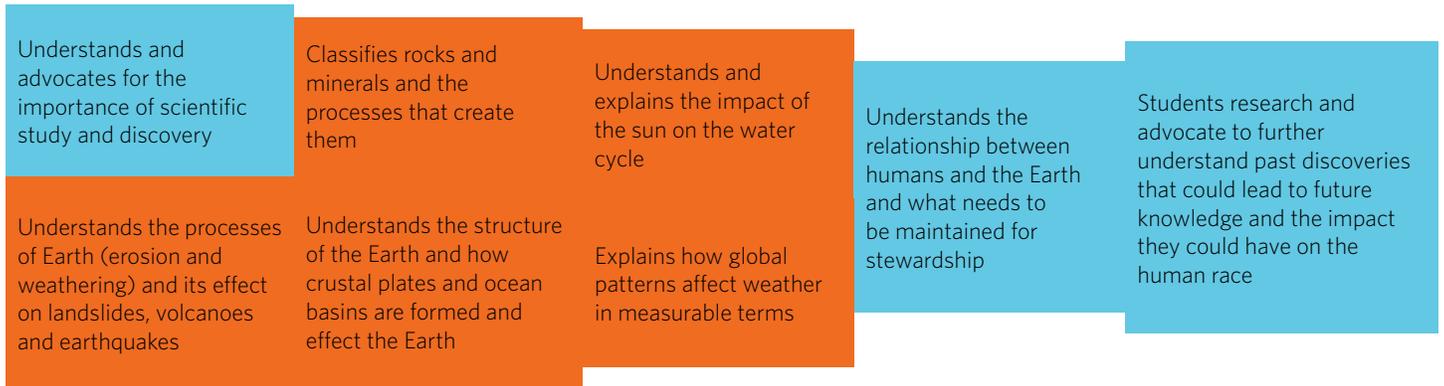
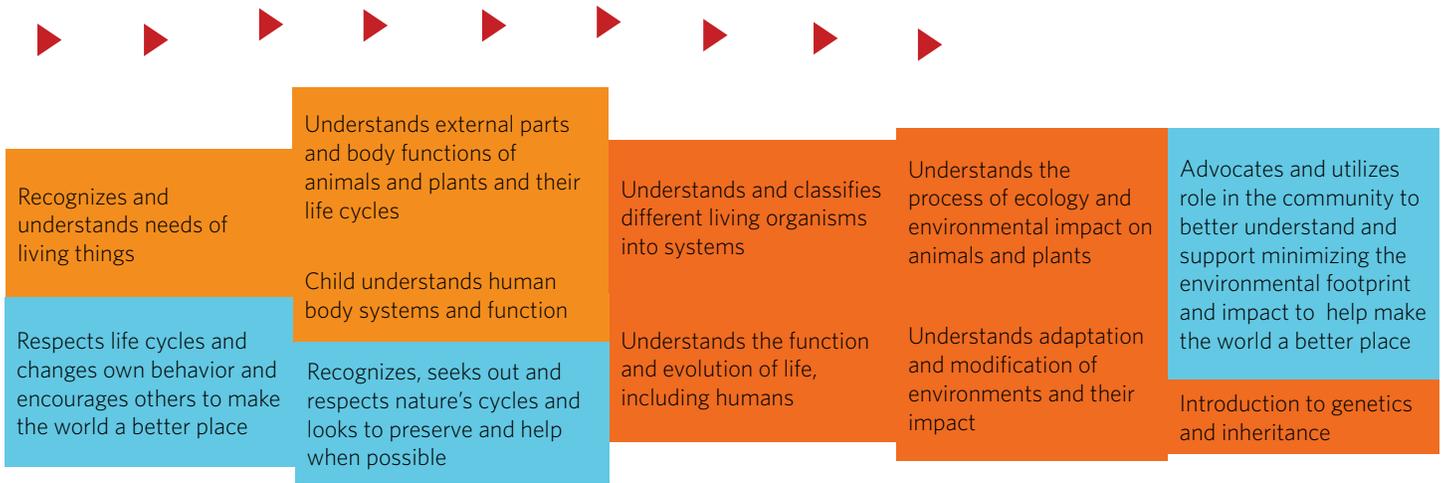
CHILDREN'S HOUSE

LOWER ELEMENTARY

UPPER ELEMENTARY

REAL-LIFE SKILLS\*

\*Real-life skills are important and begin at the earliest level and build upon one another. As the child ages up into the next developmental stage the outcomes present differently, ultimately producing the well-rounded student, ready for his/her next step.



## Media Literacy & Technology

The tools of media literacy and technology provide ways for Elementary and Middle School students to enhance their inquiry based learning through an integrated curriculum. The programs at MSR are integrated in a way that respects the development needs of the students and their planes of learning. All standards are scaffolded to be developmentally appropriate as determined by the careful consideration of current technology skills blended with Montessori pedagogy.

The thinking skills acquired in the education of our students are enmeshed with the literacy skills of: selecting, analyzing, evaluating, using and sharing information necessary for preparing our students for the future. Technology is a tool that can enhance creativity and exploration for students.

All levels are aligned with ISTE(International Society for Technology Educators) and AASL(American Association of School Librarians) standards for best practices as well as the North Carolina Essential Standards.

Core beliefs:  
(As stated by AASL)

- Reading is a window to the world.
- Inquiry provides a framework for learning
- Ethical behavior in use of information must be taught
- Technology skills are crucial for future employment needs.
- Information Literacy skills are crucial skills and include multiple literacies (digital, visual, textual and technological)
- Learning has a social context
- School libraries are essential to the development of learning skills.



## Elementary

In Lower and Upper Elementary, technology and media literacy skills are integrated into the existing projects and activities in the classrooms. The Lower Elementary curriculum is scaffolded with more traditional library skills introduced for first years and moving up to keyboarding skills introduced at the end of second year. Third years are introduced to using specific programs to present and create projects using technology tools. The Upper Elementary curriculum is scaffolded with more emphasis on presentation tools and best practices for collaboration and sharing information. Media Literacy focuses on evaluation of resources, print, online and personal artifacts.

### **ELEMENTARY FOCUS:**

- Creativity and Innovation
- Communication and Collaboration
- Research and Information Fluency
- Critical Thinking, Problem Solving and Decision Making
- Digital Citizenship
- Technology Operations and Concepts

## Middle School

Technology and media literacy skills are integrated into the existing projects and activities in the cohorts and are aligned with AASL 21st Century Learner Standards. The curriculum is scaffolded with an emphasis on media literacy and digital citizenship. Teaching students use technology for creation, collaboration and to be conscientious and knowledgeable consumers of information is a priority in these years. The standards build upon students prior knowledge of presentation tools and resources.

Learners use skills, resources and tools to:

- Inquire, think critically, and gain knowledge
  - Follow an inquiry based process in seeking knowledge in curricular subjects and make real world connections
  - Develop and refine a range of questions
  - Find, evaluate and select appropriate sources to answer questions
  - Evaluate information on the basis of accuracy, validity, and appropriateness
  - Make sense of information gathered from diverse sources by identifying main and supporting ideas, conflicting information, point of view or bias
  - Demonstrate mastery of technology tools for accessing information and pursuing inquiry
- Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge
  - Applying critical thinking skills in order to construct new understandings, draw conclusions
  - Use technology and other information tools to analyze and organize
  - Collaborate with others to exchange ideas, develop new understandings, make decisions and solve problems
  - Use the writing process, media and visual literacy and technology skills to create products that express new understanding
- Share knowledge and participate ethically and productively as members of our society

- Conclude an inquiry based research process by sharing and reflecting
- Use technology and other information tools to organize and display knowledge and understanding in ways that others can view, use and assess
- Connect learning to community issues and use information and technology ethically and responsibly
- Pursue personal and aesthetic growth
  - Read, view, and listen for pleasure and personal growth
  - Read widely and fluently to make connections with self, the world and previous reading
  - Respond to literature and creative expressions of ideas in various formats and genres
  - Seek information for personal learning in a variety of formats and genres
  - Use social networks and information tools to gather and share information
  - User creative and artistic formats to express personal learning



## Spanish

The program is integrated into the classrooms and lessons are given in mixed-age groups as well as by grade level. Emphasis is given to the 5 C's of the National Standards of Foreign Language: Communication, Culture, Conversation, Connections and Comparisons. It is the expectation that the exposure to another language will result in a positive attitude toward learning languages and experiencing other cultures. All standards Upper Elementary through Middle School are aligned with National Common Core Language as well as North Carolina Essential Standards for World Languages.

### Toddler

Spanish is explored once a week for 30 minutes using songs, games, finger plays, stories and short activities to introduce vocabulary.

### Children's House

Children's House students continue to explore Spanish once a week for 30 minutes using songs, games, finger plays, stories and short activities to build on vocabulary and exposure to the language. Extended Day students receive an additional 30 minutes twice a week.

#### LESSONS INCLUDE:

- Greetings/Introductions/Farewells
- Patterns
- Commands
- Colors
- Numbers
- Fruit
- Farm animals
- Parts of the body
- Days of the week
- Months of the year
- Family
- Holidays
- Feelings
- Weather
- Music and culture



## Lower Elementary

Spanish classes are taught in small groups within the classroom, one morning a week for 45 minutes. They also receive an additional 45-minute afternoon class by grade level once a week. Topics build in more detail on the work done in the Children's House classroom and integration of continents and a country study also takes place when aligned.

### LESSONS INCLUDE:

- Greetings and courtesy expressions
- Expressions of feelings
- Commands
- Numbers 0-100
- Colors
- Days of the week
- Months of the year
- Weather
- Parts of the body
- Fundamental needs
- Vowels
- Holidays
- Art and culture
- Simple conversational patterns
- Commands
- Calendar
- Alphabet
- Farm animals
- Seasons

## Upper Elementary

Spanish classes are taught in small groups one morning a week for 45 minutes, an additional morning class and afternoon class once a month and a 45-minute afternoon class by grade level once a week. Lessons build upon the previous exposure in Toddler, Children's House and Lower Elementary. A stronger focus on language acquisition, comprehension, speaking and pronunciation skills are taught through the following lessons:

### LESSONS INCLUDE:

- Grace and courtesy
- Talk about self
- Introductions
- Simple conversations
- Beginning writing
- Expression of 17 feelings
- Adding additional colors
- Write numbers 0-100
- Speak and recognize numbers to 1000
- Calendar and Weather
- Seasons
- Telling time
- Characteristics of people and personality traits
- Classroom vocabulary
- Farm and wild animals
- Expressions for daily use
- Spanish holy holidays
- Questions words

## Middle School

Frequency of language instruction directly impacts language acquisition. 7th and 8th grade students meet four times a week for 55-65 minute sessions and 9th years meet three times a week for 65-minute sessions. Goals and outcomes correspond to those expressed by the American Council on the Teaching of Foreign Languages.

- Communication
- Culture
- Connections
- Comparisons
- Communities

The program acts as a bridge between the Montessori root and traditional academic high school experiences. Objective is to hone language skills and deepen vocabulary to increase the students' ability to communicate. Delivers curriculum requirements for Spanish I and the beginning of Spanish II. Students use the Nassi/Levy Spanish textbook. The program aims to enrich second language understanding and prepare for lifelong learning.

### STUDENTS ALSO EXPLORE:

- How a second language acquisition can directly impact one's ability to serve others
- Cultural traditions and holiday celebrations
- Art
- Music
- Poetry
- Geography and history of Spain, Central and South American countries
- Integration with Humanities



## Music

Integrated within the classroom as well as more formal lessons, music helps increase students' ability to communicate. Proven to enhance intelligence, music plays an important role in the development of the students and provide opportunities for more self-discovery and exploration of interests and strengths. All standards Extended Day through Middle School are aligned to the North Carolina Essential Standards for Music.

### Toddler

Students receive 30 minutes of music once a week as well as additional integrated lessons in the general classroom. Students develop creativity and expression through simple rhythm instruments, songs and movement activities.

#### LESSONS INCLUDE

- Hello song
- Finger plays, chants
- Small/Large movement activities
- First instrument play
- Lullaby/soft song
- Goodbye song
- Activities that expand energy, focus energy
- Dance
- Songs from other cultures

### Children's House

Students receive 30 minutes of music once a week as well as additional integrated lessons in the general classroom. Students develop creativity and expression through simple rhythm instruments, songs and movement activities.

#### LESSONS INCLUDE

- Music from around the world
- Matching pitch
- Introduction to the Montessori Bells
- Identifying patterns, beats and vocal timbres
- Being able to perform
- Songs to teach grace and courtesy
- Recognize and properly use simple rhythm instruments
- Introduce musical sound in the environment
- Move with confidence to express musical ideas



## Lower Elementary

Students receive 45 minutes of instruction once a week by grade level. Additional exposure to music is integrated into the general classroom.

### **STUDENTS RECEIVE LESSONS ON:**

- Rhythm, scale patterns, sharps, flats, notation, pitch, time signatures, composition
- Exposure to music from various cultures and time periods through listening and historical references
- Understanding that music is a form of expression
- Reading and writing musical notation
- Listening and analyzing music
- Understanding how to perform: sing, play instruments, show proper etiquette and provide community service
- Identifying important composers and musicians
- Singing in different languages

## Upper Elementary

Students receive 45 minutes of instruction once a week by grade level. Additional exposure to music is integrated into the general classroom.

### **STUDENTS RECEIVE LESSONS ON:**

- Rhythm, writing major/minor scales, intervals, key signatures, irregular time signatures, bridges, the chain
- Elements of music
- Exposure to music from various cultures and time periods through listening and historical references
- Understanding that music is a form of expression
- Reading and writing musical notation
- Listening and analyzing music.
- Identifying specific music events, Western orchestral instruments and instruments from other cultures
- Identifying basic principles of meter, rhythm and tonality
- Understanding how to perform: sing, play instruments, show proper etiquette and provide community service

## Middle School

Students meet for a general music class once a week for 55 minutes, participate in a performance class of their choice (band/chorus/percussion) once a week for 50 minutes and have additional opportunities for musical Intersections during the year as well.

### **STUDENTS RECEIVE LESSONS ON:**

- Classify music by genre, style, and by historical period/culture
- Aurally and visually identify Western orchestral and non-Western instruments
- Identify principles of meter, rhythm, and tonality
- Use music to explore concepts of civics and economics
- Read all rhythm notes and meters
- All pitches in treble and bass clefs
- Understands all major and minor scales, key signatures and minor modes
- Read and interpret musical compositions
- Introduction to chords and their function through improvisation
- Use simple and complex time signatures
- Notate complex melodic and rhythmic dictations
- Create and notate original compositions
- Create music using technology
- Perform music from a wide variety of styles and genres, keys, rhythms, and meters
- Interpret musical notation, including pitch, rhythm, and expressive elements with technical accuracy
- Interpret and respond to gestures of a conductor indicating tempo, dynamics, phrasing and style
- Evaluate and critique the quality and effectiveness of music
- Perform for community as part of outreach program



## Art

Integrated with the Montessori classroom as well as more formal lessons on technique, art is important to provide students opportunity for self-expression. Students are provided proper guidance in order to have opportunities to discover the world of art, and open another door of exploration to aid in individualized development. Experiences in visual art often have a positive impact on self-esteem, self-discipline and cooperation. All standards Extended Day through Middle School are correlated to the North Carolina Essential Standards for Art.

### Toddler

Students receive 30 minutes of art class once a week in addition to integrated activities within the classroom. Students explore self-expression, creativity and fine-motor skills through activities such as chalk, paint, yarn, papermaking, glue, clay, sponges and other media.

### Children's House

Students receive integrated activities within the classroom during work cycle. Extended Day students receive an additional 60 minutes of Art instruction once a week in the afternoon.

Students practice:

- Self-expression
- Independence
- Coordination
- Creativity
- Fine-motor skills.

Students receive lessons on:

- Lines and shapes
- Color
- Watercolor
- Printmaking
- Weaving
- Sculpture
- Individual artist studies
- Seasonal projects



## Lower Elementary

Build upon previous activities and lessons in Children's House. Art activities are integrated with Humanities and Science studies as well as other general classroom activities. Students have additional opportunities for free Art Studio at different times during the week if their studies, research and interests allow them to integrate art independently.

### ART MAKING

- Students apply elements of art
- Use a variety of techniques and experiment with different tools (drawing, painting, collage, printmaking, fibers, sculpture, mixed media, technology)
- Draw upon life experiences and imagination to create art

### HISTORICAL UNDERSTANDING AND VISUAL CULTURE

- Look at various artists and study how different cultures use art
- Observe visual culture and make connections between art and other subjects, identify the roles of art makers in different cultures and times

### ART CRITICISM AND AESTHETICS

- Use art vocabulary to talk about art
- Form opinions about art

## Upper Elementary

Build upon previous activities, skills, techniques and lessons in Lower Elementary. Art activities are integrated with Humanities, Science and Math studies as well as other general classroom activities. Students have additional opportunities for free Art Studio at different times during the week if their studies, research and interests allow them to integrate art independently.

### ART MAKING

- Students apply elements of art and the principles of design to create more complex compositions
- Build upon a variety of techniques and continue to gain skills with different tools (drawing, painting, collage, printmaking, fibers, sculpture, mixed media, technology)
- Draw upon life experiences and imagination to create art
- Use visual perspective in compositions

### HISTORICAL UNDERSTANDING AND VISUAL CULTURE

- Look at various artists and study how different cultures use art
- Observe visual culture and make connections between art and other subjects, identify the roles of art makers in different cultures and times
- Recognize different art styles and periods

### ART CRITICISM AND AESTHETICS

- Use art vocabulary to talk about art
- Form opinions about art
- Analyze and interpret pieces of art

## Middle School

Students participate in Art for the full year once a week for 55 minutes. Additional intersession and occupation classes are offered as well.

### PERSONAL EXPRESSIONS AND ART MAKING

- Use a variety of media and technique
- Elaborate on an idea of theme
- Plan and organize for unique and original solutions
- Understand and apply the elements of art and the principles of design
- Concept of safety as it relates to art tools and materials

### ART CRITICISM AND AESTHETICS

- Describe, analyze, interpret and judge works of art
- Assess ways art enhances aspects of life
- Generate questions about art
- Communicate interpretations about artworks, supported by what students see
- Evaluate the effectiveness of a work of art in meeting its intended purpose
- Reflect upon and assess the characteristics and merits of students' work and the work of others
- Perceive connections between visual arts and other disciplines

### ART HISTORY

- Demonstrate an understanding that the visual arts have history, purpose, and function in all cultures
- Seek inspiration from other artists
- Understand aesthetic diversity of different cultures
- Investigate art-related ideas, values, and activities within selected cultures
- Develop awareness of art as an avocation and as a profession



## Healthful Living

Healthful Living includes complete wellness and opportunities for movement and physical activity as well as personal, emotional, consumer, and social health. Students have opportunities to develop and improve fine and gross motor skills and coordination as well as learning how to relate to peers, adults and the community. All standards, Extended Day through Middle School, are correlated to the North Carolina Essential Standards for Healthful Living.

### Toddler

Students receive multiple opportunities for movement during the school day including large motor, small motor and coordination activities in our outdoor space, specifically designed for Toddlers.

### Children's House

Students receive multiple opportunities for movement during the school day including large motor, small motor, and coordination activities as well as body awareness in the classroom and various outdoor spaces. Extended Day students receive an additional two PE classes a week that are 45 minutes each. These lessons include Physical and Health education.

#### **PHYSICAL EDUCATION**

- Apply competent motor skills and movement patterns to different physical activities
- Understand concepts, principles, strategies and tactics for movement
- Respectful conduct and promotion of good sportsmanship, responsibility, respect for others and themselves
- Increase communication skills and teamwork
- Activities include: throwing, catching, basketball, parachute, soccer, kickball, matball, strength and conditioning, cooperative indoor/outdoor games, relays

#### **HEALTH EDUCATION**

Mental and emotional health

- Feelings and expressions, stress, personal responsibility

Personal and consumer health

- Personal hygiene, injury prevention, warning signs, labels, how to get help in an emergency

Interpersonal communication and relationships

- Sharing stranger danger, bullying

Nutrition

- Diet

Harmful substances

- Harmful household products, identifying medicine

## Lower Elementary

Students receive multiple opportunities for movement during the school day including large motor, small motor, and coordination activities as well as body awareness in the classroom and various outdoor spaces. Students receive an additional two PE classes a week that are 45 minutes each. These lessons include Physical and Health education.

### PHYSICAL EDUCATION

- Apply competent motor skills and movement patterns to different physical activities
- Understand concepts, principles, strategies and tactics for movement
- Respectful conduct and promotion of good sportsmanship, responsibility, respect for others and themselves

- Increase communication skills and teamwork
- Activities include: football, baseball, basketball, volleyball, parachute, soccer, floorball, matball, lacrosse, handball, kickball, strength and conditioning, cooperative indoor/outdoor games, relays
- Stretching and flexibility

### HEALTH EDUCATION

Mental and emotional health

- Effective communication, expressing emotions, coping with disappointment, classifying stress, influences on behavior, stress management,

Personal and consumer health

- Preventions and methods for spreading germs, symptoms of sickness, how to get well, dental health, safety hazards in the home, fire and burn safety, protection against bodily fluids

Interpersonal communication and relationships

- Respect and personal boundaries, respect of diversity, bullying, appropriate and inappropriate touching, friendships, communicating kindness and respect

Nutrition

- Food guidelines, classifying food sources, healthy food alternatives, meal planning, benefits for physical activity

Harmful substances

- Uses of medicine, harmful effects of inappropriate medicine usage, safe behavior for medicines and household cleaners, reporting harmful substances, strategies and risk reduction behaviors



## Healthful Living (cont.)

### Upper Elementary

Students receive multiple opportunities for movement during the school day continuing to practice body awareness, speed and accuracy in the classroom and in various outdoor spaces. Students receive an additional two PE classes a week that are 45 minutes each. These lessons include Physical and Health education.

#### **PHYSICAL EDUCATION**

- Apply competent motor skills and movement patterns to different physical activities
- Understand concepts, principles, strategies and tactics for movement
- Respectful conduct and promotion of good sportsmanship, responsibility, respect for others and themselves
- Increase communication skills and teamwork
- Activities include: football, baseball, basketball, volleyball, parachute, soccer, floorball, matball, strength and conditioning, cooperative indoor/outdoor games
- Stretching and flexibility

#### **HEALTH EDUCATION**

Mental and emotional health

- Stress management, effective problem solving, depression, goal setting and coping with failures

Personal and consumer health

- Prevention and control of childhood illness, preventions for spreading germs, respiratory and digestive systems, skin care habits, first aid for choking, rest and sleep, dental health, effects of the sun, communicable/chronic diseases, asthma

Interpersonal communication and relationships

- Respect and personal boundaries, empathy, facial expressions, violence prevention, bullying, healthy/unhealthy relationships, stereotyping and discrimination, conflict resolution, friendships, puberty, body shape, responsibilities of parenting, refusal behavior for peer pressure, resources for sexual harassment, signs of abuse

Nutrition

- Cardiovascular health, classifying food sources, obesity prevention, importance of fiber, motivations for eating, benefits for physical activity, healthy weight management

Harmful substances

- Short- and long-term effects of cigarettes and smokeless tobacco, addiction, marketing influences, refusal skills, strategies to avoid second hand smoke, alcohol- short-/long-term effects, internal/external influences, refusal skills

## Middle School

Students focus on team building, self-image, physical and cardiovascular health as well as team sports. They receive two PE classes a week that are 55 minutes each.

### PHYSICAL EDUCATION

- Activities include: football, baseball, wiffleball, tennis, basketball, kickball, volleyball, lacrosse, soccer, hockey, strength and conditioning

### HEALTH EDUCATION

Students participate in seven sessions where instruction is taught on multiple days and activities:

Mental and emotional health

- Healthy relationships, stress management and sleep
- Mental disorders

Personal and consumer health

- Communicable diseases, safety and first aid

Interpersonal communication and relationships

- Puberty/reproductive systems, pregnancy and childbirth
- Relationships with others

Nutrition and physical activity

- Nutrition

Harmful substances

- Tobacco, alcohol awareness, substance abuse and illegal drugs



# Interdisciplinary Outcomes Chart

	▶	▶	▶	▶	▶	▶	▶	▶	▶	▶
Spanish	Exposure to world language through teacher guided conversations, songs and stories	Participate orally in games and activities to build vocabulary, learn expression and increase communication skills		Compare, contrast and differentiate different cultural customs respectfully						
	Exposure to world language and engaging in greetings and simple vocabulary that relates to their everyday world	Develop a respect and appreciation for other cultures and their customs and traditions		Demonstrate an understanding of another language in comparison to their own language						
Art	Exposure to a variety of art materials and tools as a means of exploring art through hands on activities	Exposure to the characteristics of the elements of Art, including lines, shapes, colors, and texture	Create art using a variety of tools, media and processes, safely and appropriately	Classify art into categories, such as landscapes, cityscapes, seascapes, portraits, and still life as well as identify depiction as old or new						
	Exposure to a variety of experiences to foster a level of comfort and confidence with art materials	Growth in their ability to explain personal art in terms of media and process	Growth in their appreciation of Art as an avenue for self expression	Recognize how visual arts are used in customs and traditions of various cultures						
Music	Exposure to music expression and begin to show joy and appreciation for songs and rhythm activities	Exposure to the idea that music is performed in a variety of settings and for a variety of purposes	Apply the elements of music and musical techniques in order to sing and play with accuracy and expression	Show growth in their love and appreciation of music as well as developing confidence in their ability to participate						
	Execute simple rhythms using body, instruments, or voice and echo simple rhythmic patterns that demonstrate a steady beat	Respond to a variety of musical ideas by singing, playing instruments, and/or moving and recognize contrasts in music	Interpret the sound and symbol systems of music	Create music using a variety of sound and notational sources						
Physical Education	Show growth in skilled movement activities that promote the ability to perform a variety of physical activities	Understand the important aspects of healthy living that comes from regular physical activity	Develop an appreciation for team activities that promote social interaction and cooperation							
	Show growth in their understanding of the meaning of words and terms associated with movement	Learn cooperation and team building strategies to work effectively in group settings	Use equipment to illustrate multiple movement concepts and illustrate activities that increase heart rate and make muscles strong							
Health	Show growth in their confidence and ability to communicate effectively with peers and adults	Understand the importance of handling household products and medicines safely	Understand wellness, disease prevention, and recognition of symptoms							
	Understand the importance of personal hygiene	Understand that healthy living comes from consuming a variety of nutritious foods and beverages	Apply strategies involving risk reduction behaviors to protect self and others from the negative effects of alcohol, tobacco, and other drugs							
Technology and Media Studies	Apply existing knowledge to generate new ideas, products or processes	Create original works as a means of personal or group expression	Evaluate and select resources appropriate to tasks							
	Interact, organize and work effectively with peers or with others using different digital environments and media	Communicate information and ideas effectively using a variety of media and formats	Identify and define authentic problems and significant questions for investigation							



*\*Real-life skills are important and begin at the earliest level and build upon one another. As the child ages up into the next developmental stage the outcomes present differently, ultimately producing the well-rounded student, ready for his/her next step.*







