



# WACO MONTESSORI SCHOOL

## Upper Elementary Program Curriculum Scope & Sequence

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\*This document is meant as a guide. Variations and deviations meant for the purpose of individualization for the benefit of the individual or the classroom are to be made as appropriate.

## Upper Elementary Overview

Upper Elementary at Waco Montessori School is a program for students ages 9-12. Encompassing multiple areas of curriculum, the work is accomplished at the individual pace and academic level of each student. According to the Montessori approach to education, students in this age range still need hands-on experience with concrete materials to aid in concept acquisition that leads later to abstraction. Therefore, students in the 9-12 program at Waco Montessori School are encouraged to interact with concrete materials in all areas of study. Students in this age range also demonstrate eagerness to learn and work in an environment that supports them with positive regard and individualized attention to their needs.

The study of the English Language in this program takes many forms. The overall goal of this skill area is to give students the skills required to become strong communicators, both in written and oral forms. This is accomplished through the development of reading skills, exploring language mechanics, learning about English grammar, and practicing the conventions of the English language such as punctuation and capitalization. Novel Studies includes an approach to literature that is student-directed. Students develop the ability to direct their own study of literature. Through teacher structured literature circles, student-led groups explore various novels from different perspectives. These studies emphasize story comprehension, vocabulary, connections to their own lives and experiences, and bringing the stories to life through different methods of illustration. The overarching goal of Novel Studies is for students to develop an appreciation for literature that goes beyond the simple act of reading, but extends itself to sharing the experience of literature with others. The Writing curriculum expands students' writing repertoires through explorations of various approaches to creative writing, poetry writing and expository writing. Students expand their communication skills through their experiences of the creation and editing processes, as well as through participation in the publishing process as a part of the school's annual publication of student poetry. Students also are challenged to think logically through a persuasive writing experience.

Mathematics in Upper Elementary includes multiple topics of study. Students become fluent in all of the operations in whole numbers, decimals and fractions. Students pursue a study of Geometry that takes them through the study of basic figures and basic Geometric concepts. This leads then to exploration of those figures for the purpose of developing area and volume formulas. Additionally, students study data representations and data interpretation, measurement conversions, place value, probability and much more.

Cultural studies in Upper Elementary are also multifaceted. Cultural studies include studies of Geography and History. Geographic knowledge of the world is meant to give students knowledge about the world, as well as a sense of his or her place in the world. Earth science, social studies and the study of continents and countries is included in this strand of curriculum. A student's experience of the History curriculum over the three-year cycle is also meant to give the student a sense of his or her own place in the flow of time. Beginning with prehistory, students study ancient societies, classical civilizations, the Middle Ages and the Renaissance.

The study of science at this level is meant to engage students in exploration of the living and non-living worlds and to promote a positive regard for the study of the sciences. This is accomplished through hands-on activities ranging from classification exercises to working through various applications of the scientific method. Topics of study were developed by teachers through the collection student feedback about particular areas of study they wanted to investigate.

## English Language Studies

The study of the English Language in this program takes many forms. The overall goal of this skill area is to give students the skills required to become strong communicators, both in written and oral forms. This is accomplished through the development of reading skills, exploring language mechanics, learning about English grammar, and practicing the conventions of the English language such as punctuation and capitalization. The overarching goal of a student's experience of the study of a novel is for students to develop an appreciation for literature that goes beyond the simple act of reading, but extends itself to sharing the experience of literature with others. Additionally, the writing curriculum expands students' writing repertoires through explorations of various approaches to creative writing, poetry writing, and expository writing.

Area of Study & Examples of Materials used	Objectives
<b>Listening and Speaking</b> <ul style="list-style-type: none"> <li>• Class Meeting</li> <li>• Presentations</li> <li>• Lessons</li> <li>• Literature Circles</li> </ul>	<ul style="list-style-type: none"> <li>• Listens actively in a variety of settings</li> <li>• Organizes and prepares adequately for presentation of material</li> <li>• Leads groups of peers in a task-oriented group towards set objective</li> <li>• Develops respectful consideration for the opinions and feelings of others</li> <li>• Takes a thoughtful, attentive stance toward all material taught in lessons and other presentations</li> </ul>
<b>Writing</b> <ul style="list-style-type: none"> <li>• Daily Oral Language</li> <li>• Grammar Cards</li> <li>• Grammar</li> <li>• Writing groups</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates accurate use of writing mechanics and usage in the English language</li> <li>• Analyzes uses for nouns, adjectives, adverbs, pronouns, and prepositions</li> <li>• Applies rules for creating regular and irregular verb conjugations as well as other uses for various verb forms</li> <li>• Constructs and diagrams sentences according to specific patterns such as simple, compound, and complex</li> <li>• Identifies main clause and subordinating clause</li> <li>• Creates original works of poetry based on given patterns</li> <li>• Generates works of creative writing that incorporate various elements of study</li> <li>• Analyzes and critiques persuasive positions through writing</li> </ul>
<b>Reading</b> <ul style="list-style-type: none"> <li>• SRA</li> <li>• Specific Skill</li> <li>• A.R.</li> <li>• Literature Circles</li> </ul>	<ul style="list-style-type: none"> <li>• Applies various strategies for comprehension of passages at appropriate level of difficulty in a variety of genres</li> <li>• Applies various strategies for gaining vocabulary and for word recognition in multiple contexts</li> <li>• Demonstrates skill with reference aids such as guide words, table of contents and alphabetizing</li> <li>• Identifies and applies literary devices such as alliteration and metaphor                             <ul style="list-style-type: none"> <li>▪ Summarizes and analyzes main events, story elements and themes from novels</li> <li>▪ Defends opinions and inferences using textual evidence</li> <li>▪ Interprets author's intent and motivations of characters</li> <li>▪ Considers different perspectives on historical events, cultures and situations presented in novel</li> <li>▪ Explores themes of novels through artistic expression and connecting novel themes to real life situations</li> </ul> </li> <li>• Compares and contrasts literature to other forms of media</li> </ul>

## Mathematics Studies

Mathematics in Upper Elementary includes multiple topics of study including mathematical operations, place value representations, geometry, statistics and problem solving approaches. Students become fluent in all of the operations in whole numbers, decimals and fractions. Students pursue a study of Geometry that takes them through a study of plane figures that leads into the exploration and development of area and volume formulas. Additionally, students study data representations and interpretation, measurement conversions, place value, probability and much more.

Area of Study & Examples of Materials used	Standards & Objectives
<b>Math Operations</b> <ul style="list-style-type: none"> <li>• Test Tubes (whole number division)</li> <li>• Decimal Checkerboard (decimal multiplication)</li> </ul>	<ul style="list-style-type: none"> <li>• Represents quantities accurately using place values to millions and millionths in varying formats</li> <li>• Accurately performs all whole number and decimal operations</li> <li>• Identifies and applies strategies for solving math story problems of all operations</li> <li>• Solves problems using proportions</li> <li>• Converts numbers from fractions to decimals and percents</li> <li>• Rounds to various whole and decimal place values</li> </ul>
<b>Problem Solving</b> <ul style="list-style-type: none"> <li>• Word Problem task cards</li> <li>• Math SRA</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies differing strategies for solving word problems</li> <li>• Applies appropriate strategies to solve word problems</li> <li>• Uses estimation to solve word problems and check accuracy of answers</li> <li>• Applies algebraic reasoning to solve problems</li> <li>• Uses number patterns to solve word problems</li> </ul>
<b>Fractions</b> <ul style="list-style-type: none"> <li>• Fraction pieces</li> <li>• Fraction division skittles</li> </ul>	<ul style="list-style-type: none"> <li>• Accurately performs all fraction operations</li> <li>• Comprehends strategies for reducing fractions and forming fraction equivalencies</li> <li>• Accurately performs all fraction operations with mixed numbers</li> </ul>
<b>Specific Skills</b> <ul style="list-style-type: none"> <li>• Math SRA</li> <li>• Motivation Math Book</li> <li>• Saxon Math</li> </ul>	<ul style="list-style-type: none"> <li>• Understands data interpretation techniques for graphs, charts and statistical representations</li> <li>• Identifies and applies conversions for time, standard and metric measurements</li> <li>• Comprehends strategies for solving probability problems</li> <li>• Demonstrates proficiency in using number lines to represent quantities</li> </ul>
<b>Geometry</b> <ul style="list-style-type: none"> <li>• Triangle Box</li> <li>• Geometric Cabinet</li> <li>• Equivalence Cabinet</li> <li>• Geometric Solids</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies prefixes that indicate concepts about quantity and number of sides of a polygon</li> <li>• Understands Geometric concepts of similarity, congruence, equivalence</li> <li>• Interprets movements of figures on coordinate plane</li> <li>• Applies knowledge about polygons to derive perimeter</li> <li>• Applies knowledge of equivalence to derive area formulas for polygons</li> <li>• Applies knowledge of circles and equivalence to derive pi, circumference, and area formula for circles</li> <li>• Applies knowledge of area formulas to derive volume formulas</li> <li>• Understands Pythagorean theorem</li> </ul>

## Cultural Studies

Cultural studies in Upper Elementary are also multifaceted. Cultural studies include studies of Geography and History. Geographic knowledge of the world is meant to give students knowledge about the world, as well as a sense of his or her place in the world. Earth science, social studies and the study of continents and countries is included in this strand of curriculum. A student's experience of the History curriculum over the three-year cycle is also meant to give the student a sense of his or her own place in the sequence of time. Beginning with prehistory, students study ancient societies, classical civilizations, the Middle Ages and the Renaissance.

Area of Study & Examples of Materials used	Standards & Objectives
<b>Earth Science</b> <ul style="list-style-type: none"> <li>● Plate Tectonics</li> <li>● Solar System &amp; Weather</li> <li>● Oceanography</li> </ul>	<ul style="list-style-type: none"> <li>● Comprehend layers and movements of the Earth's crust</li> <li>● Understand Earth processes of mountain building, volcanoes, earthquakes, tsunamis</li> <li>● Identify Earth as part of a larger system of planets</li> <li>● Associate weather phenomena with movements of pressure and moisture within layers of the atmosphere</li> <li>● Comprehend links between ocean zones and forms of ocean life</li> <li>● Identify different oceans, ocean currents, geographic features of oceans and technology associated with ocean exploration</li> </ul>
<b>Continent Study</b> <ul style="list-style-type: none"> <li>● Asia/Oceania</li> <li>● Africa/Europe</li> <li>● North/South America</li> </ul>	<ul style="list-style-type: none"> <li>● Identifies continents</li> <li>● Names significant physical features on continent of study</li> <li>● Differentiates between physical geography and political geography</li> <li>● Identifies some major countries on continent of study</li> <li>● Researches one country in detail: understands its physical geography, culture, flora and fauna, history</li> <li>● Hones research skills</li> <li>● Uses different kinds of source materials effectively</li> <li>● Refines expository writing skills</li> <li>● Expands ability to present research in an engaging fashion</li> </ul>
<b>History Study</b> <ul style="list-style-type: none"> <li>● Early Life</li> <li>● Timeline of humans</li> <li>● Cradles of Civilizations</li> <li>● Classical Civilizations</li> <li>● Middle Ages</li> <li>● Renaissance</li> </ul>	<ul style="list-style-type: none"> <li>● Comprehends development of flora and fauna over the course of geologic time</li> <li>● Understands the existence of modern humans in the scheme of development of geologic time</li> <li>● Traces the development of civilizations over time</li> <li>● Identifies major time periods in the development of Western Civilization</li> <li>● Associates particular developments with their corresponding time period</li> <li>● Hones research skills</li> <li>● Uses different kinds of source materials</li> <li>● Refines expository writing skills</li> <li>● Expands ability to present research in an engaging fashion</li> </ul>

## Science

The study of science at this level is meant to engage students in exploration of the living and non-living worlds and to promote a positive regard for the study of the sciences. This is accomplished through hands-on activities ranging from classification exercises to working through various applications of the scientific method of investigation. Topics of study were developed through student feedback about particular areas of study they desired.

Area of Study & Examples of Materials used	Standards & Objectives
Story of the Universe	<ul style="list-style-type: none"> <li>• Maintains some mental framework about the development of scientific fields of study as they pertain to the development of the universe</li> </ul>
Study of Five Kingdoms of Life	<ul style="list-style-type: none"> <li>• Names each of the five kingdoms</li> <li>• Differentiates between living and non-living things</li> <li>• Identifies common links between all living things</li> <li>• Understands features of each category that led to the Five Kingdoms groupings</li> <li>• Applies classification techniques</li> <li>• Names Linnaean classification hierarchy</li> <li>• Identifies defining features of each of the phyla studied</li> <li>• Classifies life functions according to given schema</li> </ul>
Physical Science	<ul style="list-style-type: none"> <li>• Names kinds and parts of waves</li> <li>• Comprehends light and sound as waves</li> <li>• Understands theory behind flight</li> <li>• Applies concepts of energy, electricity and conservation</li> <li>• Comprehends influence of heat, pressure, density, and volume on each other</li> <li>• Demonstrates knowledge of origin of Chemistry, periodic table and basic structure of atoms and forms of chemical bonds</li> </ul>
Study of Plants	<ul style="list-style-type: none"> <li>• Classifies plant functions according to given schema</li> <li>• Predicts outcomes associated with modifying a plant life function</li> <li>• Demonstrates use of scientific method through hypothesis testing</li> <li>• Examines plant products and their nutritive values</li> <li>• Understands the value of plants as part of a larger system</li> <li>• Identifies various sources of nutrition and their corresponding molecular structures</li> <li>• Applies knowledge about beneficial enzymes through cheese-making experience</li> </ul>