

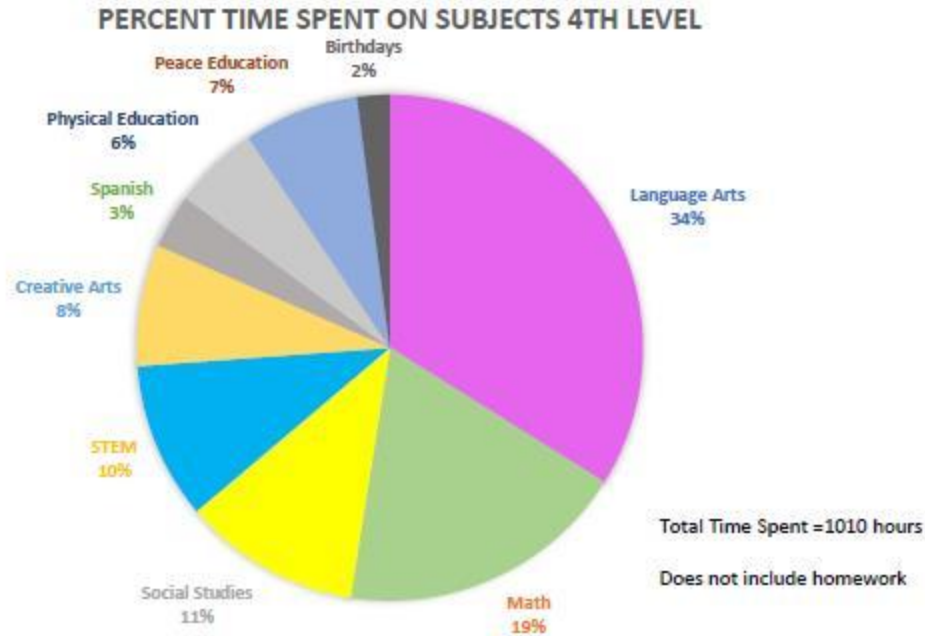
Upper Elementary

The Upper Elementary Program for levels 1 – 5 builds on the content of the Lower Elementary global curriculum, expanding students' awareness of their place in the world's history.



The essentials of the 6–9 curriculum form the core of the 9–11 study. The Upper Elementary classroom provides a true community in which students meet not only superior academic standards, but are also part of an environment where they develop a strong sense of “being” and become independent, self confident and self disciplined individuals. Time management, organization, and setting reasonable, responsible goals are a priority at this level. It is a time when children cross the bridge between using hands–on, manipulative materials and the abstract understanding of concepts. Work

on group projects, use of community resources (such as libraries and museums) and an expansion in field studies become important new elements in our Upper Elementary curriculum. Our students move through the major curricular themes from concrete presentations towards greater depth, detail, and abstract understanding. With mixed age groupings, our children engage in individualized and small group instruction and cooperative learning opportunities. As well, these groupings provide the opportunity for the older students to act as role models for the younger students and function as a form of review for the older students. In keeping with the Montessori philosophy, an integrated approach to learning is offered. The core curriculum for our upper elementary students consists of the following areas of learning:



- Language
- Mathematics / Geometry
- Science
- Social and Cultural Studies (Geography and History)
- Social Responsibilities

Language

At Country Montessori School, language is seen as the thread that runs through every aspect of

our integrated Montessori curriculum. The Language Arts curriculum in Upper Elementary emphasizes language as an art of communication. Over the three year cycle, students become proficient readers, writers, speakers, editors, authors, critics and poets. They learn and practice specific skills in grammar, punctuation, sentence structure, syntax, and expression in a range of contexts including small and large group lessons, independent work, writing prompts, journal writing, research projects, oral presentations, portfolio reflections and literature analysis. Through a variety of literary forms, including biographies, short stories, novels, poems, essays, editorials, news articles and their own autobiographies, our students observe and analyze models of effective communication. Literature circles are fundamental components of our Language Arts program. Students engage in in-depth analysis of texts, assuming the role of writer, critic or main characters, often acting out individual character roles as a group. Several literature circles are in progress at any given time

to meet the needs of the range of learners in our Upper Elementary class.

Our students are exposed to primary sources in science and history and secondary sources across the entire curriculum. All of these texts provide opportunities to apply skills in Language Arts, including comprehension, fluency, inferential reasoning, identifying cause and effect, author's purpose, making predictions, analyzing characters and identifying themes. All sources help build vocabulary and enhance the understanding of parts of speech, word formation and sentence and paragraph structure.

Mathematics

Our Upper Elementary math curriculum emphasizes the relationship of math to everyday life using critical thinking skills and problem solving techniques. Students' need for manipulative materials decreases as they learn to internalize abstract concepts. The three year math cycle builds a foundation of skills and concepts that the students will use in their future studies of

algebra, geometry, statistics and trigonometry. Our students are assessed independently on their mathematical skills and are guided through an individualized mathematics program where they work extensively with the following concepts, skills and applications, adding layers of complexity as they master each level.

Fractions

- review of common multiples and factors
- fractions and equivalents; comparing and ordering fractions
- addition and subtraction with like/unlike denominators
- multiplication and division with simple fractions and mixed numbers

Decimals

- decimal place value; ordering and comparing decimals

- addition, subtraction, multiplication, and division

Ratio, proportion and probability:

- equivalence; rate; ratios to solve proportions

Percent:

- estimating percent
- relationship between percents, fractions and decimals
- calculating percents (three forms)
- discounts, interests, commissions, and taxes

Integers:

- absolute zero
- operations with positive and negative numbers
- comparing and ordering integers
- order of operations

Graphing, statistics and data analysis

- coordinate planes
- writing equations; evaluating expressions
- collecting, organizing and interpreting data; range, mean, mode, & median

Exponents

- squaring & cubing
- radicals; simplifying; four operations
- square root & cube root

Measurement: imperial system/metric system

Linear, weight, capacity, temperature, & time

Geometry

Another major area of focus in our math curriculum is plane geometry. Building on the foundation from Lower Elementary, our Upper Elementary geometry program includes a more intensive exploration of angles, their relationship to each other, how to measure them, how to construct them, and how they relate to geometric shapes. Through Montessori exercises, our students discover formulas and explore strategies for working with concepts of congruency, similarity, and equivalency and apply these concepts to identifying the relationship of various geometric figures and determining area for advanced polygons.

Our solid geometry curriculum provides the students with the opportunity to secure mastery of properties of three dimensional straight line and curved figures. Using Montessori materials, they explore methods to determine surface area and volume arriving at theorems and formulas which can be applied to solving problems.

Science

The Upper Elementary science curriculum is designed to familiarize our students with some of the fundamental principles of scientific investigation, to strengthen their powers of observation and critical thinking, and to explore some of the basic concepts within the fields of earth science, physical science and life science. Students participate in demonstrations, conduct experiments, research and present, write, speak, diagram, and draw to spark interest in and gain age-appropriate understanding of a broad array of science topics including but not limited to:

- Mechanics (forces, Newton's laws of motion, simple machines, properties of waves)
- Earth Science (solar system and the seasons, rock cycle, water cycle)
- Physical Science (states of matter, changes in state, heat transfer)

- Chemistry (atomic structure, periodic table of elements, properties of elements and molecules, chemical reactions)
- Electricity & Magnetism (interrelationship between electric current and magnetism, properties and uses of circuits, properties and uses of magnets)
- Energy (various types, transformation in form, conservation of)
- Life Science (fundamental needs, systems of the body, health & safety)

Biology

Zoology and botany are joined to become the study of biology. Older students are introduced to the broader and more inclusive Five Kingdoms (prokaryotes, protists, fungi, animal and plant), and do a variety of written researches, projects and experiments for each of the kingdoms. They

study cells, cell structure and function in depth. They design their own cell models. They also look at plant tissues and their functions. Non-flowering plants and their methods of reproduction are presented at this level. Students also study human anatomy and look at comparative functions of animals systems. Nomenclatures, charts, research cards, books and other resources and materials aid in the presentation of these subjects and the independent research and experiments that follow.

Science studies also include an introduction to chemistry and the Periodic Table. Students perform a variety of chemistry experiments. We believe that providing a strong foundation in the sciences will provide the child with a sense of his or her place in the natural order.

Social and Cultural Studies

(Geography and History)

The Upper Elementary curriculum for social and cultural studies includes the disciplines of geography and history. Our geography curriculum is designed to show how the physical configurations of the earth contribute to history. It includes a study of physical geography, political geography and economic geography. Students learn, compare and contrast the themes of geography that impact societies' growth and development, including location, place, interactions of people and environments, movements and regions. Our students expand on their knowledge of political boundaries, map skills, cultures, communities and basic human needs.

Our Upper Elementary history curriculum carries forth from the Lower Elementary foundation of the Time-line of Life to focus on the Coming of Humans and the ensuing rise of civilizations,

including our own. Our history themes are presented in three year cycles, allowing students to build a foundation of knowledge for historic comparison and contrast.

- Year one: Time-line of Humans
- Year two: Ancient Civilizations
- Year three: History of the United States
(beginning with the migration of Native Americans)
- History Of California
Our goal is to enable students to see history as a discipline that has meaning in their lives and to understand their own place in history.

Social Responsibilities and Life Skills

Children at the Upper Elementary age demonstrate an intense desire to develop strong connections with their peers. They take increasing responsibility for their own conduct in personal relationships as well as in caring for the environment. The 9 – 11 years are a time when the child is developing and establishing a sense of justice and moral reasoning. As a member of our classroom community, our students play an active role in decision making and conflict resolution. Questions of right and wrong are considered as a group in their daily community meetings which serve as arenas to express issues and feelings. These discussions also allow rules and procedures to be developed in order to recognize and respect others. These class meetings encourage co-operative effort and allow the students the opportunity to acknowledge one another, expressing gratitude for their support and friendships.

Through all this work, our Upper elementary students develop strong interpersonal skills. They come to understand who they are and why and

how they are valuable beings. They construct themselves as individuals and contributing members of the human race.

