

# The Rubicon Academy

## History and Geography

"We should take advantage of children's natural curiosity and begin early to broaden their horizons by introducing them to a broad range of knowledge about other people, places, and times. In starting at an early age to teach children about history and geography, we can foster the beginnings of understanding about the world beyond children's immediate surroundings, and about varied people and ways of life. We can also begin to develop children's sense of our nation's past and its significance." -

E.D. Hirsch, Author of *Cultural Literacy*

Here is a **brief summary** of the History and Geography curriculum for 5th through 8th Grade.

- **Fifth Grade/Sixth Grade**

In fifth grade students examine the roots of democracy in the Greek *polis* and Athenian assembly. They learn about the "Golden Age" and the wisdom of Socrates, Plato, and Aristotle. Children continue their study of ancient Rome and begin learning about the Enlightenment, the French Revolution, and Romanticism. Students study the great changes brought about by the Industrial Revolution and are introduced to major figures in Latin American independence. In fifth grade, students learn about America. They study how America was changed by industrialization and urbanization during the "Gilded Age." They learn about the growth of reform movements, and explore the troubling decisions and compromises faced by America as a world power.

- **Seventh Grade**

Seventh graders will examine America becoming a world power, World War I 1914-1918, geography of western and central Europe, The Russian Revolution, America from the twenties to the New Deal, World War II, and the geography of The United States.

- **Eighth Grade**

Eighth graders will study the decline of European Colonialism, the creation of The People's Republic of China, the Cold War, the Civil Rights Movement, the Vietnam War and the rise of social activism, the Middle East and oil politics, the end of the Cold War and the expansion of democracy and its continuing challenges, Civics – the Constitution-Principles and Structure of American Democracy, and the geography of Canada and Mexico.

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## Language Arts

In the primary grades, Pre-K through third grade, an emphasis is placed on teaching children to read. As Elizabeth McPike of the American Federation of Teachers has put it:

If a child in a modern society like ours does not learn to read, he doesn't make it in life. If he doesn't learn to read well enough to comprehend what he is reading, if he doesn't learn to read effortlessly enough to render reading pleasurable, if he doesn't learn to read fluently enough to read broadly and reflectively across all content areas, his chances for a fulfilling life, by whatever measure- academic success, financial success, the ability to find interesting work, personal autonomy, self-esteem – are practically nil.

Here is a **brief summary** of the main topics in the Language Arts program for 5th through 8th Grade.

- **Fifth Grade/Sixth Grade**

Children are reading longer works such as essays, plays, novels, and biographies. They give short talks and speeches and recite poems and passages of drama. They learn more about research skills, persuasive essays, and writing a research paper. They learn about epics and structure in poetry. Students read poetry, literature about ancient Greece, Shakespeare, and classic mythology.

- **Seventh Grade**

Seventh graders will study writing, grammar, and usage, spelling, vocabulary, poetry, fiction, non-fiction, short stories, novels, essays, speeches, autobiography, drama, and Latin foreign phrases commonly used in English. Authors examined: O' Henry, Guy de Maupassant, James Thurber, Edgar Allan Poe, Jack London, Mark Twain, George Orwell, Franklin Roosevelt, Anne Frank, and Edmond Rostand.

- **Eighth Grade**

Seventh graders will study writing, grammar, and usage, spelling, vocabulary, poetry, fiction, non-fiction, short stories, novels, essays, speeches, and French foreign phrases commonly used in English. Authors examined: Anton Chekov, Nathaniel Hawthorne, Leo Tolstoy, Fyodor Dostoyevsky, Stephan Crane, George Orwell, Pearl S. Buck, John Kennedy, Martin Luther King Jr., E.B. White, Rachel Carson, Maya Angelou, and Shakespeare.

# The Rubicon Academy

## Mathematics

"Learning math is in some ways like learning to read. Both are mostly unnatural activities; they require the brain and mind to do things they are not designed by nature to do. Because almost all math knowledge is unnatural knowledge, it is not something that children discover; rather it is something that must be taught." –

E.D. Hirsch, Author of **Cultural Literacy**

Here is a **brief summary** of the mathematics curriculum for 5th through 8th Grade.

- **Fifth Grade/Sixth Grade**

Fifth graders learn to use exponents and continue work with ratio and percent. They continue further work with fractions and decimals and apply computation skills in problem solving. Students solve problems requiring conversion of units. In geometry they learn about parallel and perpendicular, congruent to, and similar to. They construct different kinds of triangles, and practice finding the area and perimeter of plane figures. Students solve problems involving application of the formulas for finding the circumference of a circle and using 3.14 as *pi*. Fifth graders express probability of a given event as a fraction or a ratio. Given a set of data they find the mean, median, range, and mode. They graph simple functions and solve problems involving the use of a coordinate plane.

- **Seventh Grade**

Seventh graders explore geometry: three-dimensional objects, symmetry, angle pairs, triangles, and area. The students work with whole numbers, fractions, and decimals, and algebraic equations. Students manipulate data using coordinate planes, proportions, statistics, and probability.

Some seventh graders will proceed to algebra from the sixth grade.

- **Eighth Grade**

Eighth graders work with geometry and the projection of a line segment onto the coordinate axes, perpendiculars and problems of the shortest distance, properties of triangles, and spheres. They work with numbers in calculations with rational numbers, integer exponents, equations and expressions, numeric comparisons and inequalities (algebra). Students organize and present linear data using linear applications and proportionality, and its applications to percentages. Some eighth graders will proceed to geometry if they completed algebra as a seventh grader.

"The Enlightened Child of Today is the Hero of Tomorrow"

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## Music

"Clearly, the best way to appreciate music is not just to read about it, but to hear it, sing it, and play it. The goal is to help children enjoy music, express themselves musically, and gain a basic understanding of musical form."

-E.D. Hirsch, Author of *Cultural Literacy*

Here is a **brief summary** of the Music curriculum for 5th through 8th Grade.

- **Fifth Grade/Sixth Grade**

Students reinforce musical skills learned in earlier grades and also learn Italian terms used to describe tempo (grave, largo, adagio, andante, moderato, allegro, presto) and dynamics from pp (pianissimo) to ff (fortissimo). They learn to recognize the introduction and coda in musical selections. They learn more about chords and musical notation. Students explore nonwestern music and instruments. They also synthesize much of their previous exposure to musical works into a chronological overview of Western musical history from the Baroque to the Romantic. Students are introduced to works by Beethoven, Brahms, Chopin, and Schumann.

- **Seventh Grade**

Seventh graders review orchestra and families of instruments and vocal ranges: soprano, mezzo-soprano, alto, tenor, baritone, and bass. Students will recognize introduction, interlude, and coda in musical selections. They will recognize theme and variation, identify chords, octaves, and musical notation and terms. Students study the Romantic composers and their works: Brahms, Berlioz, Liszt, and Wagner; Music and National identity: Dvorak, Grieg, and Tchaikovsky.

In seventh grade students will examine American musical traditions such as Blues and Jazz.

- **Eighth Grade**

Eighth graders review orchestra and families of instruments and vocal ranges: soprano, mezzo-soprano, alto, tenor, baritone, and bass. Students will recognize introduction, interlude, and coda in musical selections. They will recognize theme and variation, identify chords, octaves, and musical notation and terms. Young people become familiar with non-western music: scales, instruments, and works from various lands, i.e. 12-tone scale, sitar from India, Caribbean steel drums, Japanese Koto. Eighth graders will continue learning about classical music: Nationalists, Sibelius, Bartok, Rodrigo, Copland and Moderns, Debussy, and Stravinsky. Students will study vocal music from both opera and American musical theater.

# The Rubicon Academy

## Science

"To understand the world of plants and animals, or seasons and weather, or physical forces like magnetism, a child needs firsthand experiences with many opportunities to observe, experiment, and get her hands dirty. Children gain knowledge about the world around them from observation and experience. But while experience counts for much, book learning is also important, for it helps bring coherence and order to a child's scientific knowledge." –

E.D. Hirsch, Author of *Cultural Literacy*

Here is a **brief summary** of the science curriculum for 5th through 8th Grade.

- **Fifth Grade/Sixth Grade**

Students explore different forms of energy and their relationship to each other. They learn in more depth about light, the electromagnetic spectrum, and about sound. Students are introduced to topics in genetics: DNA, the inheritance of traits, and researchers in genetics. Children continue their focus on the systems of the human body, diseases, and the lives and achievements of scientists.

- **Seventh Grade**

In seventh grade students will work with atomic structure, early theories of matter, and the start of modern chemistry. They will continue with chemical bonds (Ionic, Metallic, Covalent) and reactions. Students will venture into cell division and genetics, as well as genetics and evolution. They will learn about weather versus climate, the composition of the atmosphere, effects of solar energy, weather and the water cycle, fronts and storms. They will become familiar with scientists such as Darwin, Lavoisier, Meitner, and Mendeleev.

- **Eighth Grade**

Eighth graders work with several concepts of electricity: basic terms and concepts, electricity as the flow of electrons, static electricity, flowing electricity, magnetism and electricity, electromagnetic radiation and light, the electromagnetic spectrum, refraction and reflection. Students will explore sound waves: general properties, longitudinal and compression waves, frequency, and amplitude. They will become familiar with the chemistry of food, human nutrition and respiration, animal respiration, photosynthesis, and human health. They will examine plate tectonics, earthquakes, and volcanoes. Scientists to become knowledgeable about are: Hodgkin, Maxwell, Steinmetz, and Wegener.

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## Visual Arts

"Much of the study of art in the early grades should take the form of doing. In addition, children should understand art not only as doing, but also as seeing, in particular, informed and active seeing, so that the artistic concepts and works the children learn about may develop their understanding and enhance their own creative endeavors. By looking closely at art, and talking with children about it, they develop a love of art and a habit of thoughtful, active enjoyment."

-E.D. Hirsch, Author of **Cultural Literacy**

Here is a **brief summary** of the Visual Arts curriculum for 5th through 8th Grade.

- **Fifth Grade/Sixth Grade**

Students are introduced to the idea of "art history," of classifying western art by periods and schools, with major characteristics of each period and school, as well as illustrative works. Students are introduced to the development of photography as an art form, and in connection with their study of American history, learn about the use of photography as social criticism.

- **Seventh Grade**

Seventh graders will study art history: periods and schools, impressionism, (Monet, Renoir, Degas, Cassatt) post-impressionism, (Cezanne, Seurat, van Gogh, Gauguin, Toulouse-Lautrec) expressionism, (Matisse, Munch, Chagall, Picasso), and abstraction, (Duchamp, Kandinsky, Klee, Mondrian, Dali). Students will examine modern American painting. (Hopper, Wyeth, O'Keefe, Wood, Rivera, and Rockwell).

- **Eighth Grade**

Eighth graders will study art history: periods and schools, painting since World War II, (Pollack, Kooning, Rothko, Frankenthaler, Warhol, Lichtenstein, Bearden, Lawrence), photography, (Steichen, Lange, Bourke-White, Adams, Cartier-Bresson), 20<sup>th</sup> century sculpture, (Rodin, Brancusi, Picasso, Moore, Calder, Nevelson, Oldenburg, Lin), architecture since the Industrial Revolution, metal structures, (Crystal Palace, Eiffel Tower), first skyscrapers, (Wainwright building, Chrysler Building, Empire State Building), International Style, Frank Lloyd Wright.

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