



Curriculum Guide

2009-2010

Mission Statement

Vista Academy at Open Window School nurtures and challenges students of high intellectual ability and inspires them to new levels of academic excellence, creativity, and personal accomplishment for participation in a diverse and changing world.

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CURRICULUM OVERVIEW

The curriculum at Vista Academy reflects our commitment to serving gifted adolescents. The school philosophy is echoed in our curriculum and is applied in small classes that accommodate different learning styles. Thinking skills, problem solving and higher order thinking are emphasized. The base curriculum is generally about one year above grade level, with individualization for students who require additional support or additional challenge.

Our goal is to develop confident, original thinkers who demonstrate understanding by applying and using skills in relevant ways. A variety of instructional approaches and experiences allow for active learning. We promote independence, positive socialization, and exploration, as well as a sense of personal pride and accountability.

Vista teachers are responsible for developing and modifying the curriculum to match the changing needs and interests of the students. There exists a range of skill levels within each class. Teachers implement the curriculum in a nurturing environment designed to allow for challenge and risk-taking at all levels.

RAISING FLOORS, ELIMINATING CEILINGS

Vista's core curriculum takes a rigorous and innovative approach to mathematics, language arts, science, social studies and Spanish. The development of yearly themes and essential questions shape and focus our program, providing students with a cohesive and relevant middle school experience.

Vista Academy's academic program is strong in all areas, with special emphasis in math and science, where students will be given unique opportunities to dig deeper and explore further. Textbooks explain, but they do not create. Math and science courses need to be structured in such a way as to allow students to think like mathematicians and scientists. At Vista, students will discover that mathematical and scientific concepts grow out of everyday experiences and concerns we share.

In addition to the core curriculum, we offer physical education, the arts, and leadership opportunities both on and off campus, allowing students to work with other professionals in relevant settings. Vista Academy guides students to develop the knowledge, attitudes and skills they need to participate responsibly in an increasingly interrelated world. They benefit from project-based learning and cross-disciplinary activities, promoting skill application, collaboration, and decision-making.

Our students are deep thinkers and motivated learners, and they set high standards for themselves. Vista Academy fosters scholarship and citizenship, preparing its graduates for success in high school and beyond.

A PROGRAM DESIGNED FOR GIFTED ADOLESCENTS

All middle school students are in a period of rapid transition. They are developing meaningful relationships, a personal and social values system, a healthy self-esteem and identity, and increasing independence from their families. All adolescents at this age need role models, supportive adults, and appropriate intellectual stimulation to ensure growth. Yet gifted adolescents have unique needs which go beyond these characteristics.

Early adolescence should not be defined only as a time of turmoil; it can also be a period of tremendous resilience, productivity, cognitive growth, generosity, and increased involvement in school and community. To this end, students need choices in school projects and activities, and they need opportunities to discover and hone their own learning styles.

Gifted adolescents are often significantly more advanced than their peers in one or more academic areas, and have a greater capacity for deductive thinking. These students tend to have increased sensitivity to people and events, are more deeply introspective, and often display a higher sense of justice and fair play. Their actions and ideas are often influenced by heightened self-criticism, sensitivity, and intensity. Understanding these characteristics can help guide gifted students toward self-actualizing behaviors and emotional growth. They need to develop relationships with people who take them seriously and have similar awareness.

Their sophisticated abilities to conceptualize, seek alternatives, explore diverse relationships, make connections, and find creative ways of self-expression should serve them well come adulthood, but during adolescence, these same qualities may create, rather than solve, some unique problems.

Based on what we know about the unique characteristics of gifted adolescents, Vista developed an integrated curriculum where students demonstrate meaningful applications of the knowledge they are acquiring. We believe that students should be investigating the questions that they themselves are asking about the world and their place in it. They need to be solving problems, making connections, asking questions, and taking risks. These characteristics are at the heart of Vista's curricular philosophy.

Our experienced faculty and staff are trained in best practices to maximize the boundless potential of this unique student population. Our small class size, commitment to differentiated instruction, and curricular philosophy of "raising floors" and "eliminating ceilings" help us recognize, understand, and nurture the advanced abilities of the gifted adolescent.

GRADE LEVEL THEMES

Curricular disciplines are integrated and often taught via a common theme. Integrating instruction across the disciplines attaches relevance to students' learning, encourages associative thinking, solidifies concepts, and may be the springboard to higher-level applications. Vista Academy has developed year-long themes at each grade level. They are as follows:

SIXTH GRADE – ADAPTATION

Our sixth grade theme of adaptation spans all areas of the Vista experience. Students will study the adaptability of early civilizations in the ancient world, as well as the fascinating features of the Puget Sound. Sixth graders may debate Gilgamesh's ability to adapt to his superhuman role in language arts, followed by students looking at a complex math problem from a new perspective.

Much like middle school itself, adaptability is a dynamic process in which the behavior and physiological mechanisms of an individual continually change to adjust to variations in living conditions. With a curriculum built around the theme of adaptation, Vista students make interdisciplinary connections which require examining topics from multiple perspectives.

SEVENTH GRADE – CULTIVATION

Cultivation is defined as socialization through training and education. It is also used to describe the promotion or improvement of the growth of something by labor and attention. As Vista students "work the soil" both figuratively and literally, our seventh graders are juggling the increased academic demands with intensified physical, social, and emotional needs.

Vista's seventh graders will study the emergence of Washington as a state, investigate Europe's renaissance and reformation, embark on various literary journeys, and explore the diverse garden of life in science through an examination of cell biology, genetics, chemistry, and oceanography.

EIGHTH GRADE – RESPONSIBILITY

The culmination of the Vista experience centers on the theme of responsibility. Students continue to hone their leadership skills and community stewardship. Science emphasizes one's relationship with the environment, and much of the Humanities program focuses on students' culminating research project. Oral presentations and debates are frequent components of the eighth grade experience.

Vista graduates carry with them the responsibility to be academic and social leaders in their school and local communities.

CORE SUBJECTS - OVERVIEW

MATH

Our advanced math program begins with a strong foundational study of pre-algebra, where students work with, among other things, linear functions, inequalities, polynomials, statistics, and quadratic equations. Mathematics is a process of thinking that involves building and applying abstract, logically connected networks of ideas. These ideas often arise from the need to solve problems in science, technology, and everyday life, ranging from how to model certain aspects of a complex scientific problem to how to balance a checkbook.

As students move through Vista's program, their mathematics experience will focus on connecting their work with numbers and operations to more symbolic work with equations and expressions. Regardless of the mathematical concept, Vista students are counting, visualizing, comparing, estimating, measuring, modeling, reasoning, connecting, representing, using tools, and becoming mathematicians. We strive to produce independent thinkers who can analyze problems, select appropriate tools to solve them, and achieve conceptual understanding of the mathematics behind the algorithms through a real-world context.

Our challenging and accelerated math program includes both constructivist (learning that is initiated and directed by the student) and algorithmic (step-by-step) approaches. Students enjoy rich experiences with a variety of mathematical content. Students are introduced to important areas of mathematics, such as graph theory, probability, and transformational and Euclidean Geometry early in the middle school years so that they can see and explore the vast terrain of mathematics. The algebra strand is organized around functions, which are the cornerstone of calculus, and the structure of the real numbers, which brings coherence to the exploration of algebraic ideas.

This preparation puts Vista graduates on track for high school Advanced Placement (AP) courses like Calculus and Statistics, as well as International Baccalaureate (IB) course work.

SCIENCE

Our inquiry-based approach to science refers to the diverse ways in which scientists study the natural world and propose explanations based on the evidence derived from their work. Research confirms that students learn best in an environment where they can make discoveries and actively construct their own understanding of science concepts.

Vista students participate in frequent science labs, engaging in inquiry-based experiences that include both “hands-on” and “minds-on” activities. They develop knowledge and understanding of scientific ideas, as well as a comprehension of how scientists study the natural world. Our students learn best in an environment in which they can make discoveries and actively construct their own understanding of new science concepts. Such research, along with classroom practice, has led to the development of a learning cycle to support teaching and learning through inquiry. The elements of this cycle include -

- Students and teachers **focusing** on the ideas students already have about a topic and developing new goals for learning through brainstorming and discussion
- Students engaging in hands-on **explorations** of objects, organisms, and science phenomena
- Students **reflecting on** and analyzing their observations and data, reviewing their original ideas related to the phenomena investigated, and developing new explanations for what they have observed
- Students **applying** their recently developed understanding of science concepts to new situations

Vista’s science program allows students to enhance their content knowledge through authentic inquiry and, from this experience, better help them design and develop their own scientific investigations. Students are able to critically analyze the data they gather, and engage in thoughtful scientific discourse around the data and their interpretation. They benefit from a variety of off-campus experiences and on-campus residencies, interacting with scientists and researchers in a range of fields.

Vista graduates will enter high school well prepared for honors biology and chemistry, paving the way for Advanced Placement coursework in Biology, Chemistry, and Physics.

HUMANITIES

The Vista Academy humanities program integrates direct instruction in reading, writing, and communication with social studies, mathematics, the arts, the sciences and history. Our program develops the advanced skills in academic literacy necessary for success in high school. We understand that middle school students are establishing ideas about their learning that will be with them for the rest of their lives. They are seeking both concrete and abstract experiences. Vista students benefit from hands-on activities, group projects, inquiry processes and dynamic ways of learning. Vista's humanities classes build a bridge between the big ideas of society and the critical thinking fitting today's multi-cultural world.

LANGUAGE ARTS - READING, WRITING AND COMMUNICATION

Throughout their Vista Academy experience, students continue to develop the advanced skills of fluent readers. Literature circles, book groups and whole class discussions of novels support topics being explored in other disciplines. They are aware of the author's craft and of their responsibility as readers. Using evidence from the text, students discuss, reflect and respond to a wide variety of literary genres and informational text. Oral and written responses require students to analyze, synthesize and evaluate information from multiple sources to deepen understanding of the content.

Students experience extensive instruction and practice in various forms of writing (expository, persuasive, essays, poems, short stories, reports, research papers, etc.) and language mechanics as they apply the 6 Traits of effective writing. Building vocabulary, critical listening, and editing skills are integral parts of the program. Students will have opportunities to publish and present their work and participate in authentic writing experiences like the creation of a student newspaper.

Speaking and listening skills are taught across the curriculum through the presentation of projects, working with experts in the community, and a range of off-campus experiences and on-campus residencies.

Upon completion of Vista's language arts program, students will be ready for advanced high school coursework, including honors and Advanced Placement Literature and Composition, as well as AP English.

SOCIAL STUDIES

The major themes in social studies that Vista Academy students explore include comprehensive instruction in history, geography, civics, government, and economics, beginning from the cradle of civilization up through United States

Industrialism. Students will also investigate Washington State History more deeply in 7th grade. Our social studies program features short simulations, interactive classroom activities, visual discoveries, global studies, current event discussions, and experiential exercises. Historical conversations and dialogue often center on primary sources and documents as students learn to think, question, and analyze like historians.

Students at this age are developmentally ready to dramatically deepen their understanding of the world and its peoples. They are equipped to sharpen their skills of description and analysis, comprehend the rights and responsibilities of citizens in a culturally diverse democracy, and contribute to the common good. Throughout the curriculum, a study of global problems and sustainability helps students understand the complexity of issues like population, poverty, consumption, and the environment.

Social studies education is critically important in middle school because historical understanding is a foundation for wisdom; geographic understanding promotes social and environmental intelligence; economic understanding supports wise decision-making in the distribution of scarce resources; and civic knowledge is the cornerstone of an effective democracy.

Students leave Vista Academy well prepared for opportunities to take Advanced Placement courses in World History, U.S. History, and American and Comparative Government.

SPANISH

Building on the scope and sequence of our elementary Spanish program, Vista students continue to develop their conversational skills, with a special emphasis on communication, vocabulary acquisition, and grammatical structure. Students gain some proficiency in Spanish writing, reading, speaking, and listening.

Videos and a variety of hands-on projects increase exposure to the culture and lifestyles of different Spanish speaking countries. The program emphasizes Five C's of Communication, Cultures, Connections, Comparisons, and Communities.

Vista graduates should be able to enter high school taking Level 2 Spanish at minimum, with opportunities to gain greater proficiency through more advanced coursework.

BEYOND THE CORE SUBJECTS

In addition to the core academic areas of math, science, language arts, social studies, and Spanish, Vista Academy is pleased to offer the following:

PHYSICAL EDUCATION

Physical Education offers skill development that can be applied to both individual and team sports. Students become physically educated as they develop leadership, cooperation, teamwork, honesty, and self-control. Students are introduced to basic fitness components like muscular strength and cardiovascular endurance. They participate in a variety of sports, competitive and non-competitive games, and recreational activities. PE is held three days a week for up to 60 minutes each session.

HEALTH/LIFE SKILLS

Our health program emphasizes skills for life and healthy choices. The program addresses such issues as physical development, promotion of sexual health, prevention of disease, interpersonal relationships, body image, and gender roles. Other topics include drug and alcohol education, nutrition, and positive peer relationships.

Life Skills emphasizes the importance of organization, time management, conflict resolution, goal setting, study skills, and test-taking skills.

LIBRARY/INFORMATION LITERACY

At the middle school level, the library serves as an important resource for students. The content of library lessons will focus primarily on research skills, but may also include book talks, read alouds, and storytelling. Vista's block scheduling allows for flexibility in terms of students' visits to the library. We can adjust the frequency and duration of their visits to accommodate students' changing needs.

TECHNOLOGY

Each Vista student receives a laptop for their use at school. The laptops facilitate the learning process and serve as an important tool for organization, research, and communication. At Vista, we build technology education into the curriculum, as well as use technology to promote learning, so that all students become well informed about the nature, powers, and limitations of technology.

We strive to instill in students the responsibility of understanding how technology works, including its alternatives, benefits, and risks. These important lessons are developed as students accept the responsibility of new technologies around them. Technology is integrated into all facets of the Vista Academy experience, and is featured as part of a rotating technology block.

SERVICE LEARNING

Active participation in organized service is an important component of the Vista experience. Students foster civic responsibility while serving the needs of our school and community. Recent service learning opportunities included local park restoration and water quality testing. Vista students also have opportunities to participate in service learning outside of school through the Positive Impact Project.

ADVISORY PROGRAM

Advisory groups, led by a faculty member, meet twice a week to discuss issues pertinent to middle school students. The program fosters student-teacher relationships and provides a healthy social exchange and peer recognition in a safe and trusting environment. Topics range from reviewing organizational strategies and personal goal setting to addressing self-esteem, empathy, and conflict resolution issues.

PARTNERSHIPS/RESIDENCIES

The Vista experience expands far beyond the physical boundaries of the campus. Vista's off campus experiences take students to unique destinations like research labs and environmental field studies. Residencies with leading organizations like the Washington State Arts Commission allow professionals to share their talent with our students over the course of multiple sessions, often resulting in a culminating product or performance.

HALLMARK EVENTS

In addition to our extensive partnership offerings, each grade level participates in an extended overnight trip, focusing on environmental education and stewardship. The eighth grade international experience also includes a home-stay and service component.

6th grade – 5 day trip to Olympic Park Institute

7th grade – 5 day trip sailing in the San Juan Islands

8th grade – 10 day trip to Costa Rica



SIXTH GRADE – ADAPTATION

Due to the nature of our differentiated curriculum, the descriptions for each subject should be viewed as the baseline of what will be covered. The accelerated nature of our program and belief in raising the curricular floor and eliminating the ceiling means that our curriculum is ever changing to best meet the needs of our students.

MATH

Sixth graders build a solid foundation of pre-algebra skills, incorporating the use of variables, probability, and statistics as they discover how mathematical ideas and concepts fit into a larger context.

Students are given a variety of problems to investigate, organized around key concepts. They are responsible for representing, analyzing, and generalizing a range of patterns with tables, graphs, words, and symbolic rules, and use graphs to analyze the nature of changes in quantities in linear relationships.

Sixth graders analyze the characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships. They use visualization, spatial reasoning, and geometric modeling to solve problems.

Students work with factors, fractions, and exponents, as well as ratios, proportions, and percents. Students also investigate algebraic expressions and integers, and solve equations and inequalities.

SCIENCE – DEVELOPMENT OF THE NATURAL WORLD

In sixth grade, Vista student scientists embark on a hands-on journey to uncover the secrets of the fascinating natural world of Western Washington. They explore the tectonic forces creating our mountain ranges and then study how life has adapted to survive in such diverse settings as the marine waters of Puget Sound and above the tree line on our highest mountains. They study the physics principles that create our unique weather on Cougar Mountain and how

planetary motion affects our seasons and tides. By the end of sixth grade, students gain an understanding of scientific principles interacting to create our natural world, laying the foundation for our seventh grade study of the cultivation of the area.

HUMANITIES - *THE ANCIENT WORLD*

LANGUAGE ARTS

Reading, literature, writing, grammar, and vocabulary are all components of a successful language arts program. Students read books and short stories from a variety of genres, including mythologies, legends, biographies, plays, and poetry.

Sixth graders are responsible for working with a variety of writing types, including expository, persuasive, poetry, narratives, multi-paragraph essays, and research related work.

Students study vocabulary and etymology through exploration of Greek and Latin roots, and also participate in a formal differentiated vocabulary program.

SOCIAL STUDIES

Vista students investigate World History from the rise of civilization and early humans to the River Civilizations of Mesopotamia, Egypt, and Kush. Students also examine life in Ancient China, Egypt, India, Greece and Rome.

In addition, our social studies program emphasizes global issues and sustainability education for our ever changing and complex world.

SPANISH

In the Spanish 1A course, students start with basic conversation and the exchange of information. Vocabulary acquisition centers on school, likes/dislikes, home, family, and activities. Grammar investigates the verbs “ser” and “estar” (to be) as well as regular ending conjugations (-ar, -er, -ir.)

Additionally, students research and present on five Spanish speaking regions: Spain, Puerto Rico, Texas, Costa Rica, Chile.

For more detailed information on the sixth grade curriculum, please turn to the curriculum map section beginning on page 42.



SEVENTH GRADE – *CULTIVATION*

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MATH

This course provides students with a thorough investigation of algebraic and geometric concepts, including linear and quadratic equations, inequalities, and polynomials. They grow in their understanding of patterns, relations, and functions. Students represent and analyze mathematical situations and structures using algebraic symbols, developing a conceptual understanding of different uses of variables.

Students create and critique inductive and deductive arguments concerning geometric ideas and relationships, such as congruence, similarity, and the Pythagorean relationship, and understand relationships among the angles, side lengths, perimeters, areas, and volumes of similar objects. Further, seventh graders apply transformations and use symmetry to analyze mathematical situations.

SCIENCE - *THE DIVERSE GARDEN OF LIFE*

In seventh grade, Vista student scientists explore biochemical properties that explain chemical reactions, cell biology, genetics, and multi-cellular life. The journey spans both time and space as they begin with the creation of elements inside distant stars and culminate with studying genetics during the cultivation of planning our own Vista Academy Garden.

Seventh graders also participate in a mini-unit based on the book Brain Rules. Students learn and employ the 12 Brain Rules by understanding how the brain really works, and how to get the most out of it.

Students conclude the year examining the impact of water pollution on marine and freshwater life, providing a bridge to our eighth grade exploration of the responsibility of humans as stewards of our environment.

HUMANITIES - *THE MEDIEVAL WORLD*

LANGUAGE ARTS

Students immerse themselves in relevant readings from medieval times, and also participate in a novel series exploring utopian/anti-utopian societies. In addition to this increasingly sophisticated reading, students are exposed to more rigorous writing experiences, including expository and creative essays, autobiographies, and the composition of a research paper.

SOCIAL STUDIES

Seventh grade continues the study of World History and Geography by focusing on the Islamic Civilization (600-1600), Europe (600-1600), African Kingdoms, Meso America and Japan.

Students will also take an in-depth look at Washington State History and Geography, exploring the emergence of Washington as a state, the state's experience during the Great Depression, World War II and post World War II, along with a study of contemporary Washington State.

Our conversation on global sustainability continues as Vista students discuss population trends, migration, and meeting essential human needs.

SPANISH

In this intermediate level course, students practice their Spanish skills with increasing confidence and proficiency. Students are able to talk about meals and food, take an order, and make polite requests. They learn how to give instructions, offer help, and provide advice. Further, students are able to talk about their daily routine, and the importance of staying fit and healthy.

The study of grammar also ramps up in intensity, with students practicing form verbs with reflexive pronouns, infinitives with conjugated verbs and prepositions, and stem changing verbs. Students also form negative informal commands, and use direct objects and reflexive pronouns with informal commands.

The students continue their cultural study, researching and presenting on five more Spanish speaking regions: Mexico, Argentina, Florida, the Dominican Republic, and Peru.

For more detailed information on the seventh grade curriculum, please turn to the curriculum map section beginning on page 42.



EIGHTH GRADE – *RESPONSIBILITY*

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MATH

In this high school level course, students build on the comprehensive coursework in sixth and seventh grade to apply algebraic and geometric principles at an advanced and sophisticated level. Vista student mathematicians specify locations and describe spatial relationships using coordinate geometry and other representational systems to examine special geometric shapes, such as regular polygons or those with pairs of parallel or perpendicular sides. Students understand and represent translations, reflections, rotations, and dilations of objects in the plane by using sketches, coordinates, vectors, function notation, and matrices.

Eighth graders understand linear systems and matrices, and demonstrate confidence with polynomials, radical functions, and rational exponents.

For students ready for greater challenge, Vista offers an advanced class, which introduces students to trigonometry. Students apply a variety of trigonometric identities, such as Pythagorean, sum and difference, and triangle (Laws of sines, cosines, and tangents). Further, students will approximate and interpret rates of change from graphical and numerical data.

SCIENCE - HUMANS, TECHNOLOGY, AND THE ENVIRONMENT

In eighth grade, Vista student scientists explore the complicated relationship between humans, technology and the environment. Students begin by studying how the human body functions in health and disease and then compare humans with other complex organisms. Students explore the human desire to explain natural forces and how this knowledge led to technological advances. Vista students study Newton's Three Laws of Motion through rollercoasters, rockets, and bridges, and investigate electricity and magnetism through circuits and LEGO Mindstorms engineering projects. Students complete their experience by studying urban planning, sustainable fishing, and forestry, and the possible restoration of an area wetland.

HUMANITIES - THE UNITED STATES THROUGH INDUSTRIALISM

LANGUAGE ARTS

Eighth grade language arts incorporate and build upon the reading, literature, writing, grammar, and vocabulary from previous grades. Students read a variety of classic and contemporary American literature, such as *To Kill a Mockingbird*, *Huckleberry Finn* and *Of Mice and Men*.

The language arts program culminates with the creation of a research project, where students apply their writing and research skills to compose and present a formal document.

SOCIAL STUDIES

Eighth grade explores United States History and Government beginning with the founding, structure, rights and responsibilities of government. Students explore differing political systems and foreign policy especially as it relates to the American Revolution, Constitution and the New Nation. They study expansion and reform in America, the Civil War and Reconstruction, Industrialization, Immigration and Urbanization.

Our conversation on global sustainability continues as Vista students discuss their responsibility as global citizens, and provide possible sustainable solutions in areas like food, water, and energy.

SPANISH

This advanced class is conducted almost entirely in Spanish. Vocabulary and conversation focus on topics like occupations, shopping, sports, chores, music, and

games. A study of reflexive pronouns, idioms, past participles, negative expressions, possessive pronouns, and commands (formal and irregular formal) assures that students have a solid grammar foundation to carry them into high school Spanish.

The cultural study explores the geography and history of significant cities like Cuzco, Santo Domingo, Mexico City, and San Jose.

For more detailed information on the eighth grade curriculum, please turn to the curriculum map section beginning on page 42.

Math

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Course	Pre-Algebra	Pre-Algebra/Algebra	Algebra/Geometry
Units of Study	Algebraic expressions and integers Rational numbers Real numbers and the coordinate plane Factors and exponents Factions, decimals and percents Rate, ratio and proportion Slope intercept equations Linear functions and graphing Single variable equations and inequalities Polygons, quadrilaterals, and solving angle equations Measurement (circumference and area of the circle, three-dimensional objects)	Linear functions and graphing Spatial thinking Data analysis and probability Systems of equations and inequalities Pythagorean theorem Exponents and exponential functions Polynomials and factoring Quadratic equations and functions Radical expressions	Linear equations and systems Quadratic functions Polynomial functions Radical functions and equations Exponential and logarithmic functions Rational exponents Binomial distribution Normal distribution Probability and statistics Translations, reflections, rotations, and dilations Trigonometry (Application of a variety of trigonometric identities, such as Pythagorean, sum and difference, and triangle)
Essential Questions	How are patterns represented, analyzed, and generalized? How do you find the factors of a number? How do you apply the strategy of solving a simpler problem to solving a more complex problem? How do you compare and order fractions and decimals? How do you write fractions as decimals and decimals as fractions? How do you solve equations involving fractions and mixed numbers? How do you find powers of products and quotients? How do you simplify rational numbers by using exponent rules? How do you convert percents to simplified fractions? How do you solve proportions/use proportions to solve real world problems? How do you find and use the percent of increase and decrease in real-world settings? How do you find the circumference and area of a circle? How do you find the angle measures and area of polygon?	How are functions identified and contrasted? What are the relationships among the angles, side lengths, perimeters, areas, and volumes of similar objects? What are the basic concepts of probability and how are they applied? How do you graph and write inequalities? How do you construct graphs and tables to represent real world relationships? How do you graph and solve equations with one or two variables? How can you find the slope of a line and use slope-intercept form, standard form, and point-slope form in graphing a linear equation? How do I evaluate and simplify variable expressions using the Distributive Property? How do you use the Distributive Property to multiply binomials? What is the Pythagorean Theorem and when could you use it? What is the quadratic formula and when could you use it?	Describe some properties of an exponential function with regard to its algebraic, tabular and graphical representation. Demonstrate facility in symbolic manipulation of polynomial and rational expressions by rearranging and collecting terms; factoring; identifying and canceling common factors in rational expressions; and applying the properties of positive integer exponents. How is coordinate geometry used to represent and examine the properties of geometric shapes? How do you draw geometric objects with specified properties, such as side lengths or angle measures? Describe the sizes, positions, and orientations of shapes under informal transformations such as flips, turns, slides, and scaling. How are mathematical models used to represent and understand quantitative relationships? How do you analyze and interpret one and two variable functions? How and in what ways do you use symbolic algebra to represent and explain mathematical relationships? What are the equivalent forms of expressions, equations, inequalities, and relations? How are trigonometric functions calculated? How do you identify unknown angle measurements and side length of triangles using trigonometric ratios? What is the golden ratio and how is it determined?
Resources	Prentice Hall Mathematics The Art of Problem Solving Teacher Created Materials	Prentice Hall Mathematics The Art of Problem Solving Teacher Created Materials	Prentice Hall Mathematics The Art of Problem Solving Teacher Created Materials

Science

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	6 th grade – <i>Development of the Natural World</i>	7 th grade – <i>The Diverse Garden of Life</i>	8 th grade – <i>Humans, Technology, and the Environment</i>
Units of Study	<p><i>Puget Sound Geology</i></p> <ul style="list-style-type: none"> - plate tectonics - mountain range formation and earthquakes - rock cycle - minerals/soil types <p><i>Climatic Zones and Adaptations</i></p> <ul style="list-style-type: none"> - lowland/subalpine/alpine ecosystems -oxygen concentration -requirements for life -plant adaptations <p><i>Puget Sound Weather</i></p> <ul style="list-style-type: none"> - air pressure/density - cloud types - convergence zone - rain shadow <p><i>Planetary Motion</i></p> <ul style="list-style-type: none"> - seasons and tides - planetary motion - projectiles 	<p>Solar System Formation</p> <ul style="list-style-type: none"> - Big Bang - history of stars and planets - formation of elements <p>Atomic Theory/Chemical Reactions</p> <ul style="list-style-type: none"> - the atom - the periodic table - elements, molecules, and compounds - chemical reactions <p>Cell Biology/Genetics</p> <ul style="list-style-type: none"> - origin of life - bacteria, animal, and plant cells - genetics and evolution - the Vista Garden <p>Oceanography/Marine and Freshwater Life</p> <ul style="list-style-type: none"> - salinity and ocean currents - unicellular/multicellular life - water pollution/stream monitoring - salmon and marine mammals 	<p>The Human Body/Comparative Animal Anatomy</p> <ul style="list-style-type: none"> - organ systems - health, disease, and medical treatment - comparative anatomy - genetics <p>Newtonian Forces</p> <ul style="list-style-type: none"> - Newton’s 3 Laws of Motion - rollercoasters and rockets - towers and bridges <p>Electricity/Magnetism/Machines</p> <ul style="list-style-type: none"> - electric charge and field - current, resistance, circuits - magnets and magnetic field -LEGO Mindstorms <p>Technology and the Environment</p> <ul style="list-style-type: none"> - urban planning - fisheries - forestry - Vista Wetland Restoration
Essential Questions	<p>How do plate tectonics explain the formation of mountains in the Puget Sound?</p> <p>How are plants specifically adapted to thrive in their climatic zone?</p> <p>How do differences in air pressure create weather systems?</p> <p>Why is it colder in the Northern Hemisphere when the Earth is actually closer to the sun?</p>	<p>What is the difference between a physical change and a chemical change?</p> <p>How does the periodic table of elements show patterns in the properties of elements?</p> <p>From a biological perspective, why is a cell alive, but a virus is not?</p> <p>How does the theory of evolution explain fossils and modern living organisms?</p> <p>How do toxic pollutants affect marine and freshwater life?</p>	<p>How do the organ systems of humans perform the essential functions?</p> <p>How does the theory of evolution explain comparative anatomical structures between species?</p> <p>How do Newton’s Three Laws of Motion explain the movement of objects (billiard balls, automobiles, the Moon, etc.)</p> <p>Why do electrons want to move through a circuit?</p> <p>How are humans attempting to be stewards of the environment in Western Washington?</p>
Resources	<p>JASON</p> <p>Science and Technology Concepts (STC) for Middle Schools</p> <p>Prentice Hall Science Explorer</p> <p>Teacher created materials</p> <p>Numerous guest speakers, off-campus excursions, and environmental field studies</p>	<p>JASON</p> <p>Science and Technology Concepts (STC) for Middle Schools</p> <p>Prentice Hall Science Explorer</p> <p>Teacher created materials</p> <p>Numerous guest speakers, off-campus excursions, and environmental field studies</p>	<p>JASON</p> <p>Science and Technology Concepts (STC) for Middle Schools</p> <p>Prentice Hall Science Explorer</p> <p>Teacher created materials</p> <p>Numerous guest speakers, off-campus excursions, and environmental field studies</p>

Language Arts

Due to the nature of our differentiated curriculum, the descriptions for each subject should be viewed as the baseline of what will be covered. The accelerated nature of our program and belief in raising the curricular floor and eliminating the ceiling means that our curriculum is ever changing to best meet the needs of our students. **For math, students are placed in mixed grade-level groups, therefore grade levels have not been assigned in this map**

	6 th grade – <i>The Ancient World</i>	7 th grade – <i>The Medieval World</i>	8 th grade – <i>The United States through Industrialism</i>
Vocabulary	Vocabulary Workshop Series <i>Sadlier</i> Latin and Greek roots (etymology)	Vocabulary Workshop Series <i>Sadlier</i> Latin and Greek roots (etymology)	Vocabulary Workshop Series <i>Sadlier</i> Latin and Greek roots (etymology)
Reading	Stories from Junior Great Books Series 6 Readings may include: <i>The Giver</i> <i>The Outsiders</i> <i>Pushcart War</i> <i>Golden Compass</i> <i>The Epic of Gilgamesh</i> <i>Aesop's Fables</i>	Stories from Junior Great Books Series 7 Readings may include: <i>Fahrenheit 451</i> <i>Animal Farm</i> <i>Watership Down</i> <i>I Heard the Owl Call my Name</i> <i>Nisei Daughter</i> <i>The Rubaiyat</i>	Stories from Junior Great Books Series 8 Readings may include: <i>To Kill a Mockingbird</i> <i>The Adventures of Tom Sawyer</i> <i>Of Mice and Men</i> <i>Romeo and Juliet</i>
Writing	Genres include - This I Believe Essays, expository, persuasive, poetry, narratives, the epic poem, multi-paragraph essays (memoirs, reviews, compare and contrast), descriptions, business letters, biographies, and short research report Students publish a class poetry collection Writing conventions (mechanics, grammar, spelling), including editing, revising, and rewriting instruction	Genres include - Expository, creative, and persuasive writing, speeches, responses to literature plays, autobiographies, journal entries Full research paper Writing conventions (mechanics, grammar, spelling), including editing, revising, and rewriting instruction	Genres include - Expository, creative, and persuasive writing, short story, nonfiction, poetry, drama, responses to literature, personal narratives, oral histories Research project Writing conventions (mechanics, grammar, spelling), including editing, revising, and rewriting instruction
Essential Questions	What are the elements of effective writing? What are the differences between paraphrasing and plagiarism? How do you properly cite sources? What is the format of a formal business letter? What is Shared Inquiry? What are interpretive questions and how to you create them? How do you use a word in a contextually appropriate way? What are some strategies to apply when you encounter an unfamiliar word? How does a strong and varied vocabulary improve both your reading and writing?		What does it mean to persuade? How does one persuade through their words? How does an elevated vocabulary help me communicate? How does vocabulary study enhance my reading skills? How does the author reveal the theme and continue to support an idea throughout a short story? How can I best organize my thoughts and put them on paper? What is the best word choice for my idea? Am I expressing myself clearly and concisely? What constitutes a research paper?
Resources	Junior Great Books Series, 6 +1 Traits of Writing, Write Source Teacher Created Materials	Junior Great Books Series, 6 +1 Traits of Writing, Write Source Teacher Created Materials	Junior Great Books Series, 6 +1 Traits of Writing, Write Source Teacher Created Materials
Other components	Oral presentations	Oral presentations, including memorizing and performing poetry and dramatic dialogue and debate	Oral presentations and debate Practice interview skills

Social Studies

Due to the nature of our differentiated curriculum, the descriptions for each subject should be viewed as the baseline of what will be covered. The accelerated nature of our program and belief in raising the curricular floor and eliminating the ceiling means that our curriculum is ever changing to best meet the needs of our students. **For math, students are placed in mixed grade-level groups, therefore grade levels have not been assigned in this map**

	6th grade – The Ancient World	7th grade – The Medieval World; Washington State History and Geography	8th grade – United States History, Government, and Civics
Units of Study	<p>World History/The Ancient World</p> <ul style="list-style-type: none"> - Early Humans and the Rise of Civilization - River Civilizations (Mesopotamia, Egypt, Kush) - Ancient India - Ancient China - Ancient Greece - Ancient Rome <p>World Geography</p> <ul style="list-style-type: none"> - cartography - spatial patterns and regions, - interactions among people, environment and culture 	<p>The Medieval World and Beyond</p> <ul style="list-style-type: none"> - Islamic Civilizations - Europe - African Kingdoms, - Meso America, - Japan - Imperial China - Civilizations of the Americas - Europe’s Renaissance and Reformation <p>Washington State History and Geography</p> <ul style="list-style-type: none"> - Emergence of Washington State - The Great Depression and World War II - Post World War II - Contemporary Washington State 	<p>United States History and Civics</p> <ul style="list-style-type: none"> - Founding a Government - Structure of a Government - Rights and Responsibilities - Differing Political Systems and Foreign Policy - Revolution, Constitution, and New Nation - Expansion and Reform - Civil War and Reconstruction - Industrialization, Immigration, and Urbanization
Essential Questions	<p>What makes us human?</p> <p>What does it mean to be civilized?</p> <p>What is the best set of rules for people to live by?</p> <p>How did early humans live and establish civilizations?</p> <p>What were the major characteristics of Ancient India, China, Greece, and Rome?</p> <p>Why do geographers create and use regions as organizing concepts?</p> <p>What impact do elements of the physical environment, such as major bodies of water and mountains, have on countries and regions?</p> <p>How do maps reflect changes over time?</p>	<p>Describe whether imperial China was really more advanced than feudal Japan and Europe.</p> <p>How did contact with non-African civilizations help or hurt the kingdoms and empires of sub-Saharan Africa?</p> <p>What changes in European life led to the birth of the Renaissance?</p> <p>What was the Age of Exploration?</p> <p>What are Washington’s major industries and issues of social and economic concern?</p>	<p>Can people be trusted to govern themselves?</p> <p>Was manifest destiny just?</p> <p>In what ways did the Civil War create a more perfect union?</p> <p>Is immigration a benefit or a detriment to the United States? Explain.</p> <p>How and in what ways were the 1920s “roaring” and the 1930s “depressing”?</p>
Resources	<p><i>History Alive – The Ancient World</i></p> <p><i>Facing the Future: People and the Planet</i></p> <p><i>Current Events</i></p> <p>Teacher Created Materials</p>	<p><i>History Alive – The Medieval World and Beyond</i></p> <p><i>Facing the Future: People and the Planet</i></p> <p><i>The Washington Adventure</i></p> <p>Teacher Created Materials</p>	<p><i>History Alive – The United States through Industrialism</i></p> <p><i>Facing the Future: People and the Planet</i></p> <p><i>Current Events</i></p> <p>Teacher Created Materials</p>

6th Grade

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Course	Science - Development of the Natural World	Language Arts - The Ancient World	Social Studies - The Ancient World
Units of Study	<p>Puget Sound Geology</p> <ul style="list-style-type: none"> - plate tectonics - mountain range formation and earthquakes - rock cycle - minerals/soil types <p>Climatic Zones and Adaptations</p> <ul style="list-style-type: none"> - lowland/subalpine/alpine ecosystems -oxygen concentration -requirements for life -plant adaptations <p>Puget Sound Weather</p> <ul style="list-style-type: none"> - air pressure/density - cloud types - convergence zone - rain shadow <p>Planetary Motion</p> <ul style="list-style-type: none"> - seasons and tides - planetary motion - projectiles 	<p>Vocabulary Workshop Series <i>Sadlier</i></p> <p>Latin and Greek roots (etymology)</p> <p>Stories from Junior Great Books Series 6</p> <p>Students read at least 4 novels during the course of the year, and may include:</p> <p><i>The Giver</i></p> <p><i>The Outsiders</i></p> <p><i>Watership Down</i></p> <p><i>Pushcart War</i></p> <p><i>Golden Compass</i></p> <p><i>The Epic of Gilgamesh</i></p> <p><i>Aesop's Fables</i></p> <p>Writing Genres Include:</p> <p>Expository, persuasive, poetry, narratives, the epic poem, multi-paragraph essays (memoirs, reviews, compare and contrast), descriptions, business letters, biographies, and short research report</p> <p>Students publish a class poetry collection</p> <p>Writing conventions (mechanics, grammar, spelling), including editing, revising, and rewriting instruction</p>	<p>World History/The Ancient World</p> <ul style="list-style-type: none"> - Early Humans and the Rise of Civilization - River Civilizations (Mesopotamia, Egypt, Kush) - Ancient India - Ancient China - Ancient Greece - Ancient Rome <p>World Geography</p> <ul style="list-style-type: none"> - cartography - spatial patterns and regions, - interactions among people, environment and culture
Essential Questions	<p>How do plate tectonics explain the formation of mountains in the Puget Sound?</p> <p>How are plants specifically adapted to thrive in their climatic zone?</p> <p>How do differences in air pressure create weather systems?</p> <p>Why is it colder in the Northern Hemisphere when the Earth is actually closer to the sun?</p>	<p>Please refer to Language Arts Curriculum map</p>	<p>What makes us human?</p> <p>What does it mean to be civilized?</p> <p>What is the best set of rules for people to live by?</p> <p>How did early humans live and establish civilizations?</p> <p>What were the major characteristics of Ancient India, China, Greece, and Rome?</p> <p>Why do geographers create and use regions as organizing concepts?</p> <p>What impact do elements of the physical environment, such as major bodies of water and mountains, have on countries and regions?</p> <p>How do maps reflect changes over time?</p>
Resources	<p>JASON, Science and Technology Concepts (STC) for Middle Schools</p> <p>Prentice Hall Science Explorer</p> <p>Teacher created materials</p> <p>Numerous guest speakers, off-campus excursions, and environmental field studies</p>	<p>Junior Great Books Series,</p> <p>6 +1 Traits of Writing,</p> <p>Write Source</p> <p>Teacher Created Materials</p>	<p><i>History Alive – The Ancient World</i></p> <p><i>Facing the Future: People and the Planet</i></p> <p><i>Current Events</i></p> <p>Teacher Created Materials</p>
Other components		<p>Oral presentations</p>	

7th Grade

Due to the nature of our differentiated curriculum, the descriptions for each subject should be viewed as the baseline of what will be covered. The accelerated nature of our program and belief in raising the curricular floor and eliminating the ceiling means that our curriculum is ever changing to best meet the needs of our students. **For math, students are placed in mixed grade-level groups, therefore grade levels have not been assigned in this map**

Course	Science - <i>The Diverse Garden of Life</i>	Language Arts - <i>The Medieval World</i>	Social Studies - <i>The Medieval World; Washington State History and Geography</i>
Units of Study	<p>Solar System Formation</p> <ul style="list-style-type: none"> - Big Bang - history of stars and planets - formation of elements <p>Atomic Theory/Chemical Reactions</p> <ul style="list-style-type: none"> - the atom - the periodic table - elements, molecules, and compounds - chemical reactions <p>Cell Biology/Genetics</p> <ul style="list-style-type: none"> - origin of life - bacteria, animal, and plant cells - genetics and evolution - the Vista Garden <p>Oceanography/Marine and Freshwater Life</p> <ul style="list-style-type: none"> - salinity and ocean currents - unicellular/multicellular life - water pollution/stream monitoring - salmon and marine mammals 	<p>Vocabulary Workshop Series <i>Sadlier</i></p> <p>Latin and Greek roots (etymology)</p> <p>Stories from Junior Great Books Series 7</p> <p>Readings may include –</p> <p><i>Fahrenheit 451</i></p> <p><i>Animal Farm</i></p> <p><i>I Heard the Owl Call my Name</i></p> <p><i>The Rubaiyat</i></p> <p>Writing Genres Include:</p> <p>Expository, creative, and persuasive writing, speeches, responses to literature plays, autobiographies, journal entries</p> <p>Full research paper</p> <p>Writing conventions (mechanics, grammar, spelling), including editing, revising, and rewriting instruction</p>	<p><i>The Medieval World and Beyond</i></p> <ul style="list-style-type: none"> - Islamic Civilizations - Europe - African Kingdoms, - Meso America, - Japan - Imperial China - Civilizations of the Americas - Europe’s Renaissance and Reformation <p><i>Washington State History and Geography</i></p> <ul style="list-style-type: none"> - Emergence of Washington State - The Great Depression and World War II - Post World War II - Contemporary Washington State
Essential Questions	<p>What is the difference between a physical change and a chemical change?</p> <p>How does the periodic table of elements show patterns in the properties of elements?</p> <p>From a biological perspective, why is a cell alive, but a virus is not?</p> <p>How does the theory of evolution explain fossils and modern living organisms?</p> <p>How do toxic pollutants affect marine and freshwater life?</p>	<p>Please refer to Language Arts Curriculum map</p>	<p>Describe whether imperial China was really more advanced than feudal Japan and Europe. How did contact with non-African civilizations help or hurt the kingdoms and empires of sub-Saharan Africa?</p> <p>What changes in European life led to the birth of the Renaissance?</p> <p>What was the Age of Exploration?</p> <p>What are Washington’s major industries and issues of social and economic concern?</p>
Resources	<p>JASON</p> <p>Science and Technology Concepts (STC) for Middle Schools</p> <p>Prentice Hall Science Explorer</p> <p>Teacher created materials</p> <p>Numerous guest speakers, off-campus excursions, and environmental field studies</p>	<p>Junior Great Books Series,</p> <p>6 +1 Traits of Writing,</p> <p>Write Source</p> <p>Teacher Created Materials</p>	<p><i>History Alive – The Medieval World and Beyond</i></p> <p><i>Facing the Future: People and the Planet</i></p> <p><i>The Washington Adventure</i></p> <p>Teacher Created Materials</p>
Other components		<p>Oral presentations, including memorizing and performing poetry and dramatic dialogue and debate</p>	

8th Grade

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Course	Science - <i>Humans, Technology, and the Environment</i>	Language Arts - <i>The United States through Industrialism</i>	Social Studies - <i>United States History, Government, and Civics</i>
Units of Study	<p>The Human Body/Comparative Animal Anatomy</p> <ul style="list-style-type: none"> - organ systems - health, disease, and medical treatment - comparative anatomy - genetics <p>Newtonian Forces</p> <ul style="list-style-type: none"> - Newton's 3 Laws of Motion - rollercoasters and rockets - towers and bridges <p>Electricity/Magnetism/Machines</p> <ul style="list-style-type: none"> - electric charge and field - current, resistance, circuits - magnets and magnetic field -LEGO Mindstorms <p>Technology and the Environment</p> <ul style="list-style-type: none"> - urban planning - fisheries - forestry - Vista Wetland Restoration 	<p>Vocabulary Workshop Series <i>Sadlier</i></p> <p>Latin and Greek roots (etymology)</p> <p>Stories from Junior Great Books Series 8</p> <p>Readings may include –</p> <p><i>To Kill a Mockingbird</i></p> <p><i>The Adventures of Tom Sawyer</i></p> <p><i>Of Mice and Men</i></p> <p><i>Romeo and Juliet</i></p> <p>Writing Genres Include:</p> <p>Expository, creative, and persuasive writing, short story, nonfiction, poetry, drama, responses to literature, personal narratives, oral histories</p> <p>Research project</p> <p>Writing conventions (mechanics, grammar, spelling), including editing, revising, and rewriting instruction</p>	<p><i>United States History and Civics</i></p> <ul style="list-style-type: none"> - Founding a Government - Structure of a Government - Rights and Responsibilities - Differing Political Systems and Foreign Policy - Revolution, Constitution, and New Nation - Expansion and Reform - Civil War and Reconstruction - Industrialization, Immigration, and Urbanization
Essential Questions	<p>How do the organ systems of humans perform the essential functions?</p> <p>How does the theory of evolution explain comparative anatomical structures between species?</p> <p>How do Newton's Three Laws of Motion explain the movement of objects (billiard balls, automobiles, the Moon, etc.)</p> <p>Why do electrons want to move through a circuit?</p> <p>How are humans attempting to be stewards of the environment in Western Washington?</p>	<p>Please refer to Language Arts Curriculum map</p>	<p>Can people be trusted to govern themselves?</p> <p>Was manifest destiny just?</p> <p>In what ways did the Civil War create a more perfect union?</p> <p>Is immigration a benefit or a detriment to the United States? Explain.</p> <p>How and in what ways were the 1920s "roaring" and the 1930s "depressing"?</p>
Resources	<p>JASON</p> <p>Science and Technology Concepts (STC) for Middle Schools</p> <p>Prentice Hall Science Explorer</p> <p>Teacher created materials</p> <p>Numerous guest speakers, off-campus excursions, and environmental field studies</p>	<p>Junior Great Books Series,</p> <p>6 +1 Traits of Writing,</p> <p>Write Source</p> <p>Teacher Created Materials</p>	<p><i>History Alive – The United States through Industrialism</i></p> <p><i>Facing the Future: People and the Planet</i></p> <p><i>Current Events</i></p> <p>Teacher Created Materials</p>
Other components		<p>Oral presentations and debate</p> <p>Practice interview skills</p>	

