

Woodinville Montessori Secondary Course Catalog

The Montessori Culture of Learning

Woodinville Montessori High School is a college preparatory program based on Montessori pedagogy and current research into the needs of adolescents. The secondary community is designed to help students develop strong partnerships and deep relationships with their teachers and each other. Collaborative, positive and supportive interactions are the norm in this community.

Using questions as a tool, students collect ideas and information to understand concepts. Teachers are “guides on the side” encouraging students to formulate these questions and construct their learning. This approach is built on a concept of students’ development as a continuum, so opportunities for revision, improvement, choice, and working towards mastery are integral to the program. Critical analytical thinking as well as active and creative work is emphasized through Socratic discussions and experiential learning.

The goal is that young adults graduate from our program with a sense of their purpose in life, a strong moral compass and experience in transforming ideals into action. They have an understanding of the complexities and connections that govern positive interactions in a global society and their responsibility to protect the environment. They know how to take charge of their learning, have strong work ethics and habits, and are leaders ready for their next step, college, or otherwise.

Middle School Course Requirements

The 7th and 8th grade curriculum is designed as a two-year program organized around cycle themes such as independence, balance, force and power. All students are enrolled in courses in science, social studies, language arts, student business, Pacific Northwest studies, health, physical education, and a variety of electives. All students also participate in community meetings, jobs to maintain our physical environment, advisory, community service and Immersion week activities.

Subject	WMS Requirements	Cycle A	Cycle B
Language Arts	4 semesters		
Social Studies	4 semesters, one of them Washington State History	Connections: Age of Enlightenment Identity: Immigration Systems: American Civil War Interdependence: Cold War through Vietnam War	Force and Power: Revolutions, Human Rights Structure: Types of Governments, US Constitution Balance- Imbalance World War I –II Washington State History
Math	4 semesters	Pre-algebra, Algebra, Geometry	Pre-algebra, Algebra, Geometry
World Language	4 semesters continuous study of Spanish or Japanese	Spanish MS, 1A and B Japanese 1A	Spanish 1A and B Japanese 1B
Science	4 semesters	Connections: Environmental Science Identity: Classification Systems: Biodiversity Interdependence: Self Studies	Force and Power: Motion and Energy Structure: Matter Balance- Electricity Change Washington State Physical and Life Science
Mental and Physical Health and Fitness	4 semesters	Personal World FLASH, PE	Personal World FLASH, PE
Student Business	4 semesters	Pizza, Kids Night Out	Pizza, Kids Night Out
Electives Technology Fine Arts	4 semesters 2 in arts and 2 in technology	Options vary, Technology – Programming, robotics, Fine Arts – Drawing, Painting, Photography, Drama	Options vary, Technology – programming, robotics, Fine Arts – Drawing, Painting, Photography, Drama, Video production, etc.

Students are eligible to receive high school credit for any high school-level course taken prior to 9th grade in math, Spanish, Japanese and Washington State History. Parents must request this credit from the program director by completing a form. Credits may be

added at any time following the student's successful completion of the course and prior to their departure from WMHS.

High School Course Requirements

Students earn high school credits in coursework that meets or exceeds Washington State graduation requirements, with flexibility for students to pursue individual projects of interest, stretch themselves with Honors classes, and receive support in challenge areas. The intent is to build a foundation in the humanities, mathematics, and sciences that enables students to discern and prepare for the college or career experience of their choice, while helping them develop a high level of independence, self-discipline, social problem-solving, and responsibility for their own learning. The program is oriented toward fostering a global perspective, diving deeply into knowledge, and applying learning to real-world situations.

Subject	WMS Requirements	WMS Credits	Washington State Requirements
English	8 semesters (through 12 th grade)	4	4
Social Studies	8 semesters (through 12 th grade)	4	3
World Language	4 semesters continuous study of Spanish or Japanese language <u>or</u> Equivalent of Level II proficiency in other world language <i>*6 semesters recommended (through 12th grade)</i>	2 <i>3 credits recommended</i>	2
Mathematics	Mathematics 8 semesters	4	3
Science	6 semesters (through 12 th grade) <i>*8 semesters highly recommended</i>	3 4	2
Health and Fitness	4 semesters total	2	2
Fine Arts	2 semesters through 12 th grade	1	1
Occupational Ed. or Career Concentration	4 semesters total	2	1
Electives	8 semesters through 12 th grade	4	4
Minimum Credits		25	22
Additional non-credit graduation requirements described at the end of course catalog			

Middle School Courses

Middle School English

Language Arts includes the study of vocabulary, literature, grammar and mechanics, and writing. Literature selections are integrated with science and humanities themes. Vocabulary is presented across the curriculum and is formally approached through the Sadlier-Oxford Vocabulary Workshop. Literature includes the study of literary elements and the reading of all genres and forms.

Students engage in formal and informal writing of various types, such as poetry, stories, essays, and speeches. They engage in both verbal and online discussions and various other activities, and publish their work. Students practice a variety of communication skills, such as acknowledging others, active listening, providing meaningful and specific peer feedback, and group decision-making.

Middle School Science

Life Sciences (Year A)

The life science curriculum includes the study of **Connections** (Environmental Science), **Identity** (Classification), **Systems** (Biodiversity), and **Interdependence** (Cell Studies). The focus is on laboratory investigations that allow a personal connection with the subject matter. Students engage in individual and group work, participate in dissections, create written and visual works reflective of their understanding, take theme tests, and learn how to write

effective lab reports.

Physical Science (Year B)

The physical science curriculum includes the study of **Forces & Power** (Motion and Energy), **Structure** (Matter), and **Change** (Chemistry). The focus is on hands-on investigations and developing a personal understanding of the material. Students do individual and group work, create written and visual works reflective of their understanding, take theme tests, and maintain a year-long laboratory notebook.

Middle School Social Studies

These courses integrate history, geography, civics, culture and matters of leadership, ethics, economics and human rights. The approach emphasizes depth over breadth. Students do personal and group work, including writing, discussions and intentional use of highly relevant and worthy web resources. They develop projects, give presentations, create portfolios, and/or take summative and evaluative tests.

Year A

Focuses on the following themes and topics/eras: **Connections** (the Age of Enlightenment); **Identity** (immigration); **Systems** (the American Civil War in the context of critical systemic problems—social, moral, ideological, ethical, and political); and **Interdependence** (the Cold War through the Vietnam War).

Year B

Themes and topics are **Force & Power** (revolutions, human rights); **Structure** (types of governments, the U.S. Constitution); and **Balance-Imbalance** (the era encompassing World War I through World War II).

Pacific Northwest/Washington State Studies (Year B)

This course explores the Pacific Northwest: living world, geology, geography, history of Native Peoples, and waves of migration to the region. The curriculum uses various thematic

lenses: **Force and Power** (geophysical features of the land; the first peoples); **Structure** (European Settlement); **Change** (transforming movements of the 19th and 20th centuries); and **Balance** (the current sociopolitical and ecological state of the state and region; challenges and possibilities).

Mental Health

Personal World

Personal World embraces the psychosocial, emotional and physical well-being of early adolescents, and accomplishes several purposes. One is to provide information about the transition from childhood to adolescence and the journey to adulthood. Another is to provide connections between generations to help young people make the journey safely. Students explore topics such as belonging, friendship, brain development, mindset (growth versus fixed), stress management, mindfulness, self-esteem, peer pressure, substance education (drugs, alcohol, tobacco), health and pathways of disease, sexuality, nutrition, balanced living, and peace education

(personal, community, national and international).

An array of materials, experiences, and lessons may be used and vary year to year including: The Seven Habits of Highly Effective Teens by Stephen Covey; The Heroic Journey, based on the work of Joseph Campbell; and the 7th-8th-grade level of the Family Life and Sexual Health curriculum (FLASH) developed by the King County Department of Public Health.

Mathematics

Students are assigned to math classes based on ability. Placement is determined by a combination of prior experience, teacher recommendations, grades and assessments. Algebra class and above receive high school credit.

Math 7

This class is designed to strengthen basic skills and fundamental concepts. It is offered on an as-needed basis and customized to meet students' needs.

Pre-Algebra I

Pre-Algebra is designed to provide grounding in fractions, decimals, percents, problem-solving, and writing and solving basic equations. This course uses McDougal Littell's textbook, Mathematical Connections, supplemented by additional materials and activities.

Algebra I (1 credit)

Algebra I is offered for students who have successfully completed a Pre-Algebra course or its equivalent. It provides a solid foundation in solving and graphing linear equations and inequalities, factoring, and solving quadratic equations. This course uses the 2012 edition of Glencoe's textbook Algebra 1.

Geometry (1 credit)

Geometry is intended for students who have successfully completed Algebra I. This math course uses the 2012 edition of Glencoe's textbook Geometry as the basis for studying lines, angles, triangles, circles, area, formal proofs, and constructions.

Algebra II /Trigonometry (1 credit)

Algebra II is offered for students who have successfully completed Geometry. Topics covered include inequalities, linear and quadratic equations, polynomials, exponential and logarithmic functions, and the unit circle.

Pre-Calculus (1 credit)

Pre-Calculus is offered for students who have successfully completed Algebra 2/Trigonometry. The course begins with a study of mathematical modeling that uses complex, multi-step problems to improve students' expertise in critical thinking and analysis. We then more fully explore several branches of mathematics in preparation for calculus, including in-depth trigonometry, analytic geometry, sequences, and determination of limits.

Calculus AB (1 credit)

Calculus AB is offered for students who have successfully completed Pre-calculus. This math course uses Ron Larson's textbook, Calculus of a Single Variable (10th ed./AP), to study limits, continuity, the derivative as a rate of change, the integral as a cumulative sum, and the relationship between integration and differentiation as expressed by the Fundamental Theorem of Calculus. Emphasis is on conceptual understanding of topics via a multi-representational approach, competency in calculations, and applications of calculus.

Calculus BC (1 credit)

Calculus BC is offered for students who have successfully completed Calculus AB. We continue our use of Ron Larson's textbook, Calculus of a Single Variable (10th ed./AP), to study additional integration techniques, infinite series, parametric equations, polar coordinates, and vectors. Students are immersed in both theoretical and real-world applications of these mathematics. Throughout the year, students complete weekly cumulative

review assignments to maintain and sharpen their skills in the methods and applications of Calculus.

Statistics (1 credit)

Statistics covers two semesters: the first semester consists of Foundational Statistics, while the second semester consists of Advanced Statistics. Foundational Statistics investigates how mean, median, mode, range and the basics of data analysis developed in Algebra may be applied to understand bell curve, deviation, and normal distribution. Particular attention is paid to graphic representations of data and

evaluating those representations utilized in contemporary media.

In Advanced Statistics, the emphasis shifts to designing & evaluating experiments with attention to sampling methods. Students also investigate random phenomena using probability & simulation, as well as testing hypotheses using numeric simulation. Students have the option of using Advanced Statistics in preparation for the Advanced Placement Statistics exam in May.

High School Science

Biology (1 credit/yr.) – 9th, 10th

This year-long lab course is offered every other year and includes a study of biochemistry, cell biology, evolution, genetics, and bioethics. The class also reads a variety of articles from scientific journals and includes frequent laboratory investigations and hands-on activities. *See also: Health section*

Astrobiology (½ credit)

This semester-long course is an introduction to an interdisciplinary field of study touching on evolution, genetics, chemistry, astronomy, anthropology, aerospace engineering and physics. The class includes a study of organisms that live in extreme environments on Earth, experiments related to remote sensing of data, practical astronomy, the history of space exploration, and SETI (the Search for Extraterrestrial Intelligence).

Neuroscience (½ credit)

This semester-long class is an introduction to the workings of the human brain. Coursework includes dissection of a brain, memory experiments, psychology research, and an investigation of current events in neuroscience (such as using the mind to control artificial limbs; cochlear implants). Students will also investigate sensory systems as part of the nervous system. It includes a focus on vision investigation of optical illusions.

Chemistry (1 credit/yr.)

The first semester of this lab-based course focuses upon how to represent the near invisible world in words, symbols, and simple algebraic expressions. Examination of atomic theory, the Periodic Table of Elements, stoichiometry, and reaction prediction are some of the concepts & skills developed. The second semester focuses on how energy and matter are exchanged through chemical reactions. This includes thermodynamics,

oxidation & reduction, acid/base theory, and experimental design. Students should expect to improve their communication skills through this course, particularly through writing. Students may elect, in cooperation with the educator, to prepare for the AP Chemistry exam through additional study and additional lab work.

Physics (1 credit/yr.)

This year-long introductory course is designed to help students gain a richer

understanding of everyday physical phenomena. Students explore fundamental concepts through readings, discussions, videos, simulations, laboratory experiments, and independent research. Topics include mechanics, thermodynamics, vibrations and wave phenomena, electricity, light, relativity, and quantum theory. The primary textbook for this course is HMH Physics by Serway and Faughn.

High School English

High School English classes are developed as part of an integrated Humanities curriculum to foster a deeper understanding of the interplay between social, political, historical and cultural aspects of life, and to provide students a contextual basis for their learning and growth. Students' writing encompasses poetry, mini-epic "journeys," short stories, monster stories, critical responses to literature, and argumentative essays. Grammar is intrinsic to this course.

English 1-2, Global Literature, Theme: Transformation (1 credit) 9th/10th

Students explore literature from the part of the world that has been, over time, transformed into modern Europe, crossing time by lingering with works from ancient to more contemporary eras. A major focus throughout the year is developing a deep understanding of archetypes. Students read a variety of authors like Homer, Dante, Chekov and Dickens.

English 1-2, Global Literature, Theme: Perspective (1 credit) 9th/10th

Works read relate to areas being studied in the two-year Humanities rotation, with the focus being on ancient to more modern literature from China, India, Africa and the Arab World, and Latin America. Texts include poetry from ancient China and India, short stories by Latin American authors and works by authors such as

Hesse, Bosse, Adichie, and Garcia Marquez.

11th Grade English 3, Theme: Ethics: American Literature (1 credit)

In this component of the American Studies course, students read a variety of texts which are directly related to the period being studied and reflect an array of types, styles and approaches. In the first quarter, reading ranges from works by Cotton Mather, John Whittier, and Anne Bradstreet to Herman Melville and Richard Henry Dana. In the second quarter, authors will include Frederick Douglass, Langston Hughes, F. Scott Fitzgerald, and Zora Neale Hurston. The third and fourth quarter's array will incorporate varied types of texts by multiple authors, including John Steinbeck, Tim O'Brien, and others, along with such nonfiction as *When Books Went to War* and *Devil in the Grove*. Students' work in grammar and comprehension will focus on

preparation for standardized tests and college-level work.

12th Grade English 4, Theme: Leadership (1 credit)

Working within a theme of leadership, the English studies are deeply connected with the Social Studies component of Humanities, with a wide array of reading and writing pertinent to their studies of transformative human

struggles, individual leaders and their impacts, and the complex and deeply interrelated domains of human economics, human-environmental interaction, and world peace.

Prominent offerings will be memoirs, biographies, autobiographies, poetry, story, drama, speeches, and letters. Students will also have opportunities to receive support for written work related to their future plans, including college.

High School Social Studies

Each quarter typically focuses on a period or region in the development of human history, is accompanied by a specific cultural lens to enhance the learning experience, and has, as a guide, quarterly thematic and learning questions.

World History and Contemporary

International Issues (1 credit/yr.) Theme Perspectives, 9th or 10th

Each quarter focuses on a global region, highlighting specific aspects, from ancient to contemporary times. Students work with both primary and secondary sources, and develop an understanding of connections between history, geography, culture and politics. Current events, documentaries, art, music—a wide variety of materials and ideas are called into play. Year A focuses on China and India, Sub-Saharan Africa, Northern Africa and the Islamic World, and Latin America.

World History and Contemporary

International Issues (1 credit/yr.) Theme Transformation, 9th or 10th

The quarters of Year B deal with the Greco-Roman world and the Renaissance, the development of Russia and aspects of Central-Eastern Europe, Germany and France, and the British Isles. The class textbook, used for assignments and shared information, is World History: Patterns of Interaction along with current events,

documentaries, art and music.

American Studies, 11th / 12th Grade, Theme: Ethics: History, Civics and Culture (1 credit/yr.)

The theme overall for the year is Ethics and the United States is the region of focus. The course textbook is Eric Foner's Give Me Liberty! An American History. The first quarter, "Moving in, Spreading Out, Taking Hold," covers the period 1500s to pre-Civil War. The cultural lens is visual arts. The second quarter, "An Essential and Decisive period," covers the Civil War through the Jazz Age and has music as its cultural lens. The third quarter is called "Riding the Rollercoaster" and covers the period of 1929-1980. The cultural lens is "The American Cinema: Stories in a Bold New Medium." The fourth quarter title is "Synthesis: Where the Nation is Now, and What You Will Put Together," and the period is 1980 to the present for the general group studies. The special lens will be the students' individual choice.

*Senior Social Studies, 12th Grade, Theme:
Leadership (1 credit/yr.)*

This course deeply considers multiple aspects of leadership. Students develop an understanding of the principles and mindset of leadership, practice critical thinking, and evaluate how various historical leaders have or have not embodied these principles. They reconsider significant and transformative human struggles, such as the quest for freedom, inclusion and equality through the lens of leadership.

Readings will include works by people in the domains of philosophy, culture, education, science, history, etc. The course text is Critical Thinking, Learn the Tools the Best Thinkers Use by Richard Paul, and Linda Elder. Students will also read Maria Montessori's collection of speeches, *Education and Peace*, and reflect on the impact of leadership on the achievement and maintenance of peace with the environment and with each other.

The culminating project for this course requires students to dedicate their energy and growth to a specific leadership project of their choice, tied to either environmental or social causes, with specific guidelines and agreed-upon outcomes.

*Independent Research Project (½
credit/yr.) 9th, 10th, 11th, 12th*

Students work with an advisor to pursue a topic of personal interest during the academic year, with additional follow-up expected outside of school. The project includes a research component, consulting experts in the community, and a final, tangible product and presentation. Some past projects were: creating a website about the Renaissance; computer programming; learning about fashion and sewing; writing and performing original music; adapting a book to a screenplay; and building solar-powered machines.

College and Career Occupational Education

*Self-Construction – non-credit requirement
9th, 10th, 11th, 12th*

This multi-year course continues the work of understanding self and others. It helps students discern their purpose and path for the future and prepare for the world after graduation. Experiences include leading service projects and student business, developing independent living skills, seriously considering career and life style choices, and college application and choice. The course requires that students reflect on their interests and abilities and the relationship to their career goals, plan out their courses for high school graduation, and prepare for exams to meet their post-secondary goals, complete a resume and practice interviewing.

At the 12th-grade level, students are asked to choose a project tied to future career interests, and will be given assistance in finding a mentor in their field. At the end of the school year, seniors present their projects and portfolio to a panel of peers, parents, and faculty members.

*Independent Research Project (½
credit/yr.) 9th, 10th, 11th, 12th*

In this course, each student works with an advisor to pursue a topic of personal interest during the academic year. Additional follow-up is expected outside of school. The project includes a research component, consulting experts in the community, and a final, tangible product and presentation. Past projects have included creating a website about the Renaissance; computer programming; learning about fashion and sewing; writing and

performing original music; adapting a book to a screenplay; and building solar-powered machines.

Computer Science and Data Structures

Introduction to programming concepts using the Python scripting language. Course will enforce good programming style and logical thinking. Designed for students with

little or no programming language experience, it begins with basic general programming concepts and key concepts of structure. Course then progresses to the intricacies of decision-making, looping, array manipulation, and methods. Finally, the course presents complex data structures including the concepts of object oriented programming and database manipulations using SQL.

Foreign Language

Japanese and Spanish are the two foreign languages that are offered. Individual students may progress through the program at different rates. With prior arrangements, engagement of an outside instructor, completion of required documentation, and regular progress logs indicating significant time commitment, a student may receive permission to earn credit for work done outside of school in a different foreign language.

MS Spanish

This class is a beginner's class that provides the student with a general introduction to the Spanish language: sound system, pronunciation, functional vocabulary related to everyday life, cultural information and basic grammatical structures. Emphasis will be on the acquisition of four skills: listening, speaking, reading and limited writing. There are two main objectives to the course. Foremost is to give the students the ability to carry on a simple conversation. The second is to provide the students with instruction that teaches a basic understanding of Spanish culture, vocabulary, and grammatical concepts.

Spanish I (A and B), (1 credit over two years)

Spanish I It provides the student with a general introduction to the Spanish language: sound system, pronunciation, functional vocabulary related to everyday life, cultural information and basic grammatical structures. Emphasis will be on the acquisition of four skills: listening, speaking, reading and limited writing. There are two main objectives to the course. Foremost is to give the students the ability to carry on a simple conversation. The second is to provide the students with instruction that teaches a basic understanding of Spanish culture, vocabulary, and grammatical concepts.

Spanish II (1 Credit)

Prerequisites: Spanish I or instructor approval upon completion of placement test. Spanish II builds upon knowledge gained in Spanish I. This course also reinforces the skills learned in Spanish I: listening, speaking, reading and writing. Emphasis is on perfecting pronunciation, mastery of the basic grammatical structures, and increased communicative proficiency. Acquisition of functional vocabulary is expected. Students are exposed to the past tenses, future, conditional and subjunctive mood. Students will be expected to apply them in their writing and speaking.

Spanish III (1 credit)

Prerequisites: Successful completion of Spanish I & II, or instructor approval upon completion of placement test. This course builds upon knowledge gained in Spanish I & II. The course is a continuation and recycling of knowledge acquired in Spanish I and Spanish II, as well as an introduction to new vocabulary, structures and expressions. Students will be expected to expand their vocabulary range to include more sophisticated terms, use advanced language expressions, verb tenses and grammatical concepts such as the pluperfect and the subjunctive mood. Students will view Spanish language films and read selected Spanish literature.

Japanese I (1 credit over two years)

This class provides the student with a

general introduction to the Japanese language: sound system, pronunciation, functional vocabulary related to everyday life, cultural information and basic grammatical structures. Emphasis will be on the acquisition of four skills: listening, speaking, reading and limited writing. There are two main objectives to the course. Foremost is to give the students the ability to carry on a simple conversation. The second is to provide the students with instruction that teaches a basic understanding of

Japanese culture, vocabulary, and grammatical concepts.

Independent Study (½ credit/semester) 9th, 10th, 11th, 12th

This course allows each student to work with an advisor to gain credit for outside study of a foreign language. Advance permission is required and typically includes supervision from an outside professional and achievement of predetermined outcomes.

Electives

Electives are offered as a semester or a yearlong class and the choices vary every semester. Not all electives will be offered each year. In addition to the possible choices offered below, students are encouraged to suggest courses that are of personal interest. During the course of their Secondary experience, students are encouraged to explore each area of Visual Arts, Drama, and STEM. Middle school (7th & 8th grade) students do not earn high school credits for their elective courses. Online electives are available through www.redcomet.org.

Independent Research Project (½ credit/yr.) 9th, 10th, 11th, 12th

In this course, a student works with an advisor to pursue a topic of personal interest during the academic year. Additional follow-up is expected outside of school. The project includes a research component, consulting experts in the community, and a final, tangible product and presentation. Past projects have included creating a website about the Renaissance; computer programming; learning about fashion and sewing; writing and performing original music; adapting a book to a screenplay; and building solar-powered machines.

Technology

MATE (Marine Advanced Technology Education) ROV (Remotely Operated Vehicles) - Section 1

The MATE ROV Section 1 class “dives” into underwater robotics. Students will learn about DC power, current, voltage, resistance, and lab safety. Students will work in groups to build a functioning ROV from a kit and other raw materials such as PVC pipes, cables ties, and closed cell foam. Groups will design and build a ROV with the goal of successfully performing specific underwater tasks. Students will learn how to assemble a control system via soldering LEDs, resistors, capacitors, and switches to a PCB. Next groups will wire the ROV to safely deliver power in a very wet environment and figure out the most effective way to add floatation and utilize electric motors for

propulsion. Field trips will be planned to observe outside engineering environments and to test their projects in real world settings. Each STEM activity is designed to emphasize collaborative learning, critical and analytical thinking, creative thinking, problem solving and experimental design.

MATE (Marine Advanced Technology Education) ROV (Remotely Operated Vehicles) - Section 2

The MATE ROV Section 2 class is a continuation of our introduction class (Section 1). In Section 2 students will continue to modify prior ROV projects for outside completion (s) and will begin building advanced ROV kits. Groups will be adding sensors (cameras) and incorporating Arduino programming to their projects.

Architecture and 3D Modeling

Students will explore design and architecture by completing physical scale models. They will use a 3D computer design program (SketchUp) and freeform architectural modeling pieces (ARCKIT©) to aid in the construction of their physical models. The project will require students to work in small groups throughout the semester. Groups will be task with deciding the functionality and purpose of their structures. Students will also have the freedom to choose a design focus for their models, including but not limited to structural engineering, interior design, and technology

integration. Students will work in the WMS Innovation and Design Lab and have the opportunity to use lab tools, 3D printing, and laser cutting to assist in model construction. Each STEM activity is designed to emphasize collaborative learning, critical and analytical thinking, creativity, problem solving and experimental design.

printing, and laser cutting to assist in model construction. Each STEM activity is designed to emphasize collaborative learning, critical and analytical thinking, creativity, problem-solving and experimental design.

Computer Science and Data Structures

Introduction to programming concepts using the Python scripting language. Course will enforce good programming style and logical thinking. Designed for students with little or no programming language experience, it begins with basic general programming concepts and key concepts of structure. Course then progresses to the intricacies of decision-making, looping, array manipulation, and methods. Finally, the course presents complex data structures including the concepts of object oriented programming and database manipulations using SQL.

STEM: Speaker Construction, Circuits, and Leather Work

This semester Innovation and Design Lab students will explore project design, leatherworking, and PCB's (printed circuit boards) & circuits. Each student will have the opportunity to build their own Bluetooth speaker and make a customized leather item. Students will design a speaker enclosure and solder and assemble the audio components necessary for a functional mini speaker system. To aid in the design process students will also learn the basics of 2D & 3D computer design program such as SketchUp, Corel Draw, and Tinkercad. Students will work on these projects in the WMS Innovation and Design Lab and have the opportunity to use lab tools, 3D

Fine Arts

Drama

The first half of the year will focus on the one act play titled, “SuessOdyssey” by Don Zolidis. This comedic retelling of Homer’s “Odyssey” will give students a platform to expand their theatrical and communication skills. Students will not only participate on-stage but will be given the opportunity to learn about the backstage and technical roles involved in creating a production. The semester will conclude with a performance of the one act.

Visual Art

This year will be focused on learning about the diversity of artists in the Pacific Northwest through independent art exploration as well as group collaborative projects. Students will be introduced to a variety of materials and techniques in a choice-based,

student-led art studio. Six general media types will be available, but students are expected to work towards mastery in their choice of materials:

1. Drawing
2. Watercolor
3. Acrylics
4. Paper art
5. Oil pastels
6. Three-dimensional art

Daily sketchbook work will be required as will open-ended monthly projects. Students will be guided to develop their eight Studio Habits of Mind:

- Develop craft
- Engage and persist
- Envision
- Express
- Observe
- Stretch and explore
- Understand the art world
- Reflect

Health and Physical Education

Orienteering (½ credit/yr.) 9th, 10th, 11th, 12th

Orienteering is an outdoor sport that combines hiking, running, and use of a map and compass to navigate a course through unfamiliar terrain. Often called the “thinking sport” because it involves reading maps and making decisions while providing a great workout, Orienteering is a sport for everyone, regardless of age or experience. All students participate in Orienteering a couple of times each year, even if not selecting it as an elective.

Life Sports (½ credit/yr.) 9th, 10th, 11th, 12th

Classes are held on campus and the field and focus on a variety of lifetime sports and activities with the goal of developing a personal fitness plan. The activities include bowling, rock climbing, condition training and many others. Some class sessions will be held at alternative venues like the YMCA. This course is an individualized approach to physical fitness, including cardiovascular endurance, strength, and flexibility.

Health (½ credit if taken outside of the Biology class)

9th, 10th

This year-long course is integrated with Biology and is offered every other year. Topics covered include nutrition, disease transmission, infant/child development, and human sexuality. The course includes activities from the Our Whole Lives curriculum and the King County Family Life and Sexual Health curriculum (FLASH), supplemented by current journal articles and website investigations.

Independent Study (½ credit/yr.) 9th, 10th, 11th, 12th

This course allows each student to work with an advisor to gain credit for outside physical activity. Advance permission is required and typically includes supervision from an outside professional (coach, instructor).

Non Credit Graduation Requirements

Documented Community Service 60 hours over 4 years

Washington State History

Self-construction