

HIGH SCHOOL COURSE CATALOG

2024-2025



AMERICAN MONTESSORI SOCIETY
education that transforms lives
Accredited Member School

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WHAT IS A MONTESSORI HIGH SCHOOL EDUCATION?

The philosophy and observations of Dr. Maria Montessori are at the root of our core values and practices. We employ the classic curriculum and methods developed by Montessori, along with compatible curriculum and programmatic elements supported by current brain research, to provide for a contemporary and culturally relevant program.

The Woodinville Montessori School Board of Trustees established the High School program in 2014 with the following aspirations for each graduate:

- Strongly held values including self-respect, respect for others, integrity, responsibility, compassion, and a commitment to service.
- Social and emotional skills including independence, resilience, perseverance, self-discipline, the ability to collaborate and resolve conflict.
- Learning skills that support the ability to live in a world of constant change. These include flexibility, creative problem solving, critical thinking, intellectual curiosity, and the ability to evaluate accuracy of information.
- An understanding of positive and negative stereotyping and the effects on human relations.
- The knowledge, skills, and confidence to advocate for an inclusive and equitable community.
- The awareness that all life is interdependent, and decisions must consider sustainability of the planet.

“Our graduates leave WMS with strong academics, a strong sense of self, the ability to confidently self-advocate in college, and the ability to work collaboratively with people whose learning style, work flow, and views may differ from their own. While we are a small school, our students come back from colleges and universities, both large and small, and tell us they were very well-prepared.”

- Sunita Pailoor, *WMS Head of School*

A FOCUS ON THE NEEDS OF THE DEVELOPING ADOLESCENT

INTEGRATED ACADEMICS

The WMS High School learning environment values and supports intellectual curiosity, critical thinking, serious discourse and self-reflection. The intent is to build a foundation in the humanities, mathematics, and sciences that enables students to prepare for the college or career experience of their choice. Our rigorous coursework allows flexibility for students to pursue individual projects of interest and to challenge themselves with Honors classes. Our high school offers small, personal classes that support both collaborative and independent student work, including research, analysis and presentations, preparing students for the demands of college.

Multi-Age Education

Core classes in High School are composed of two multi-age cohorts; one cohort consists of 9th and 10th graders and the second cohort consists of 11th and 12th graders. These English, Social Studies, and Science classes are intentionally created so students may continue to benefit from multi-age education. These Montessori communities allow for student leadership, appreciation of differences, and the development of respectful and compassionate relationships. Students learn from others and are both supported and challenged within their classrooms. In all classes, the academic expectations rise as students' progress from Grade 9 to Grade 12.

Honors Classes

The hallmarks of our Honors courses are an emphasis on deeper exploration and a more challenging level of critical thinking, often accompanied by additional content. All high school English, Social Studies, Math, and Science courses offer an Honors level option for students. Examples of Honors work include additional writing and visual components to projects, completion of additional questions or problems for students to further express their learning, and additional readings, reports and presentations.

Montessori Advisory Teacher-Student Partnership

A unique aspect of the WMS High School is that each student is connected with a Montessori Advisory teacher for their entire four years of High School. Each student receives individual attention, daily informal interaction and more structured weekly meetings. This support system allows for the student to practice their communication skills, navigate and overcome hurdles, and helps the student develop a high level of independence, self-discipline, social problem-solving, and self-advocacy.



High School students on a trip to Washington D.C. in spring 2024

COMMUNITY OF BELONGING

Every WMS High School student is seen and their voice is heard. The High School community is designed to help students develop strong partnerships and deep connections with their teachers and each other. Collaborative, positive, and supportive interactions are the norm in this community. For example, weekly community meetings are an integral community experience where multi-age students share thoughts and opinions in a safe environment. After school, High School students often continue to spend time with one another in student-run clubs, athletics, study hall or fulfilling their service hours. Students further develop their connections with one another during week-long intersessions after each quarter and during multi-day overnight trips at the beginning and end of each year.

A STRONG SENSE OF SELF

WMS fosters individual growth within a small, close-knit community. We recognize that each student is on their own academic and personal journey of growth. We value social-emotional well-being through education consisting of understanding, connection, and empathy. Students can be seen defining their sense of self and belonging through academic and non-academic opportunities. Class participation and classwork are often areas where students can share their personal interests and passions. Ethics-based discussions and guided reflections help students define who they want to be.

INDEPENDENCE & ADAPTABILITY

The goal is for young adults to graduate from our program with a sense of purpose in life, a strong moral compass, and experience in transforming ideals into action. Our students have an understanding of the complexities and connections that govern positive interactions in a global society. They know how to take charge of their learning, have a strong work ethic, and are leaders ready for their next step in life. This also allows for adaptability of situations and thinking to adjust to our ever-changing world.

FACULTY QUALIFICATIONS

Sunita Pailoor, Head of School

B.A. in Psychology and English Literature, B.S. Economics, M.A. in Literature, M.Ed.

AMS Montessori Administrator Credential

AMS Montessori-Certified in Elementary I and Elementary II

Pathways to Leadership Certification

Wendy Coulombe, Director of Middle & High School Programs

B.S. in Mathematics, M.S. in Applied Math, Ph.D. in Secondary Mathematics Education

Marc Cobb, Advisory Teacher (Math and Science)

B.A. in English, M. Ed. in Montessori Integrative Learning

AMS Montessori-Certified in Secondary I and Secondary II

Sharon Dunn, Advisory Teacher (Social Studies)

B.A. in North American Studies, M.S.C. in Print Journalism, M.Ed. in Montessori

AMS Montessori-Certified in Secondary I and Secondary II

AMI Montessori-Certified in Early Childhood, Elementary I, and Elementary II

Luke Putvin, Advisory Teacher (English Literature)

B.A. in English, M.A. in Teaching

AMS Montessori-Certified in Secondary I and Secondary II

Kerry Clark, College Counselor

B.A. in Humanities, M.A. in English

College Counseling Certificate

Lyla Irvine, Learning Support Specialist

B.A. in International Relations, M.A. in International Relations

AMS Montessori-Certified in Secondary I and Secondary II

Emily Murray, Mental Health Counselor (Psychology)

B.A. in Cultural Studies and Theater Arts, M.A. in Playwriting, M.S.W.

AMS Montessori-Certified in Elementary I

Sara Brogdon (Art)

B.A. in Painting and Drawing, M.F.A. in Painting and Drawing, M.A. Teaching

Alexa Dolak (P.E.)

B.S. in Recreation and Tourism

Amanda Freerksen (Spanish)

B.A. in Spanish

AMI Montessori-Certified Early Childhood

Shyamala Iyer (Chemistry and Physics)

B.S. in Microbiology, M.S. Natural Sciences, Ph.D. in Microbiology

Max Koh, Director of Finance (Personal Finance)

B.A. in Applied Mathematics

Atsuko Seckinger (Japanese)

B.A. in Music

Cheri Sibthorp (Orienteering)

B.Eng. in Mechanical Engineering

Valerie Wheeler (Music)

B.A. in Music Education

Joanna Zhang (Mathematics & Computer Science)

B.Eng. in Industrial Design

DIPLOMA REQUIREMENTS FOR GRADUATION | 2024-2025

Students earn high school credits in coursework that meets or exceeds Washington State graduation requirements:

Subject	Woodinville Montessori School Graduation Requirements	Washington State Graduation Requirements
English	4 credits	4 credits
Social Studies	4 credits	3 credits
Science	3 credits (4 Recommended)	3 credits
Math	3 credits (4 Recommended)	3 credits
World Language	2 credits (3 Recommended)	2 credits
Fine Arts	2 credits	2 credits
Career & Technical Education	1 credit	1 credit
Health	0.5 credit	0.5 credit
PE	1.5 credits	1.5 credits
Electives	4 credits	4 credits
WA State History	Non-credit requirement	Non-credit requirement
Community Service	Non-credit requirement	N/A
Senior Project	Non-credit requirement	N/A
TOTAL CREDITS EARNED	25 CREDITS	24 CREDITS

FOUR-YEAR SCHEDULE

Below is a typical four-year schedule for our High School students:

Grade 9 (7.0 credits)	Grade 10 (7.0 credits)
Honors World Literature	Honors Western European Literature
Honors World History	Honors Civics (Sem. 1)
Honors Biology	Honors Western European History (Sem. 2)
Honors Geometry	Honors Environmental Science (Sem. 1)
Spanish 1	Honors Forensic Science (Sem. 2)
Music Composition (Sem. 1)	Honors Algebra 2 & Trigonometry
Photography (Sem. 2)	Spanish 2
PE (Sem. 1)	Visual Arts
Health (Sem. 2)	PE

Grade 11 (7.0 credits)	Grade 12 (6.0 credits)
Honors American Literature	Honors Literature & Leadership
Honors American Studies	Honors Critical Thinking
Honors Physics	Honors Chemistry
Honor Precalculus	Honors Calculus I
Spanish 3	Spanish 4
Computer Science	Psychology
Personal Finance (Sem. 1)	Senior Project (Sem. 2)
College & Career Counseling (Sem. 2)	

COURSE CATALOG | 2024-2025

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, critical responses to literature, and argumentative essays. Grammar and composition are emphasized specifically when students are writing longer projects and essays.

- **The 9/10 two-year cycle consists of one year of World Literature and one year of Western European Literature.**
- **The 11/12 two-year cycle is comprised of one year of American Literature and one year of Literature & Leadership.**

World Literature

Grades: 9, 10

Full Year/1 credit/Honors option

This course is a study of literature from Russia, China, India, sub-Saharan Africa, North Africa, the Middle East, and Latin America. It is designed to explore a wide range of literary voices and cultures. Students will read poetry, drama, novels, short stories, folktales, essays, and sacred texts. The majority of student work involves written products, and all students have options for creative, analytical, informal, and experimental pieces. Major texts may include works by Pushkin, Zoshchenko, Confucius, Lao Tzu, Narayan, Beah, Garcia Marquez, and others. The overarching theme of the course is perspectives, and as the class examines different ways of seeing and understanding the world, they also investigate universal themes and experiences.

Western European Literature

Grades: 9, 10

Full Year/1 credit/Honors option

This course focuses on the parts of the world that have transformed to become modern Europe; in the first semester, the course focuses on Great Britain, and the second semester focuses on other parts of Western Europe including Greece, France, and Germany. The theme is transformation, providing students the opportunity to explore works that have contributed to the development of modern Europe ranging from ancient texts to contemporary works. Focus of study complements the regions discussed in Western European History to create an integrated understanding of these regions' cultures and peoples. Student work includes free responses to art, analyses of poetry and intentionally crafted argumentative essays. Texts studied may include works by Shakespeare, Orwell, Ishiguro, Sophocles, Homer, Dickens, Wiesel, Remarque, and more.

American Literature

Grades: 11, 12

Full Year/1 credit/Honors option

Prerequisite: Two years of 9/10 Literature classes

This is a seminar course on the literature of the United States, from the 1800s to the present day. Personal narratives, memoirs, nonfiction works, short stories, novels, poetry, and films are all explored. Each quarter, the literary selections integrate with the timespan being explored in American Studies, the concurrent class on history and culture. Activities include Socratic Dialogues, class discussions, and various writing activities. Students examine literature that has historically been regarded as seminal through a modern lens that encourages probing and contextualization. Texts studied may include works by Douglass, James, Fitzgerald, Steinbeck, Hemingway, O'Connor, Baldwin, Hurston, Hughes, Vonnegut, and more.

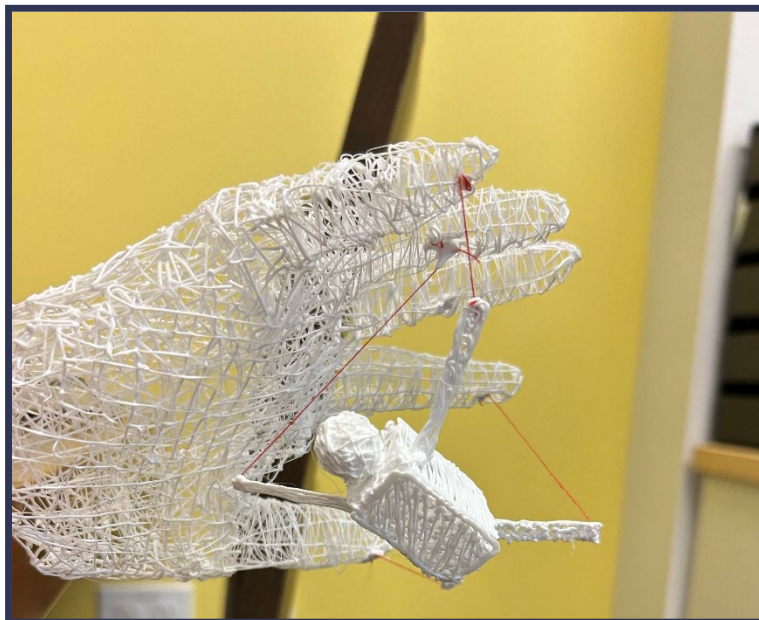
Literature & Leadership

Grades: 11, 12

Full Year/1 credit/Honors option

Prerequisite: Two years of 9/10 Literature classes

This seminar series focuses on the study of transformative human struggles, individual leaders and their impacts, and the complex and deeply interrelated domains of human culture and creativity. It also covers human environmental interaction, sociopolitical constructs, the ways people establish their inner and outer selves, and their places and possibilities in the world. Students engage in a wide variety of reading and writing pertinent to these concepts. Texts include essays, memoirs, biographies, autobiographies, poetry, novels, short stories, drama, speeches, and letters. Each quarter, students read a selected Shakespeare play that is paired with another more modern text; these may include works by Le Guin, Adichie, Lewis, Jiles, and more.



A creative project of a hand holding a small person as if on puppet strings in World Literature focused on Ethical Relationships, sparked by Shakespeare's Othello

SOCIAL STUDIES

Social Studies courses are part of an integrated Humanities curriculum, centering around themes such as journeys, perspectives, belonging, power and character. History classes are structured such that places, peoples, events, cultures, upheavals, and developments are selectively considered to give students a global historical perspective. Teachers take the time to delve into topics in a way that students can authentically connect with and relate to. Students grapple with issues and questions of justice, arts, politics, society, ethics and morality, and create personally meaningful projects.

- **The 9/10 two-year cycle consists of one year of World History and one year of two semester-long courses: Civics and Western European History.**
- **The 11/12 two-year cycle is comprised of one year of American Studies and one year of Critical Thinking.**

World History

Grades: 9, 10

Full Year/1 credit/Honors option

Throughout the year, each quarter focuses on a different global region, highlighting specific aspects from ancient to contemporary times. The theme of perspectives is fundamental as students work with both primary and secondary sources to develop an understanding of connections between history, geography, culture and politics. Critical contemporary issues are woven into studies of China and India, Russia, Sub-Saharan Africa, Northern Africa, the Middle East and Latin America. Current events, documentaries, art, music, and a wide variety of materials and ideas are utilized. Projects may include exploration of World Religions and the impacts of urbanization.

Civics

Grades: 9, 10

Semester/0.5 credit/Honors Option

This course is designed to prepare students to be engaged citizens and responsible future voters. The emphasis is on understanding the functional workings of governments in the United States on multiple levels, from local to state to federal, such that students understand how and why they can take active roles in the structuring of American society. Topics include the Constitution, the Federalist Papers, contemporary analytical data, the judicial system, and the role of the Supreme Court. Subjects for learning and discussion also include the rights enshrined in the Bill of Rights and in additional constitutional amendments and civil rights laws, as well as the intersection between citizen activism and changes in governmental structures and social policy. Online materials used include the PBS Learning Media series *Founding Principles* and material from a variety of organizations, such as Facing History and the 2021 report on Educating for American Democracy. Students participate in work and activities regarding the structure of and ways to access the government at all levels, local to federal.

Western European History

Grades: 9, 10

Semester/0.5 credit/Honors Option

This course is a focused study of particular eras, regions, and peoples, of Western Europe. The theme of transformation pertains to the many significant changes that have unfolded in that part of the world, and the impacts Western Europeans have had on multiple peoples of the globe. Topics include the Greco- Roman Era, the Italian Renaissance, empires and monarchies, the Middle Ages and the Crusades, the Napoleonic era, the roles of Europeans in the Slave Trade and colonization, the rise of modern nation states, the World Wars, post-war and contemporary Europe, and the rise of nationalism post-2010. Many resources are used, including primary and secondary sources, maps, art, music, and video material. Students engage in varied activities and may complete projects on such topics as changing class structures, shifting borders, and important developments in the arts.

American Studies

Grades: 11, 12

Full Year/1 credit/Honors Option

Prerequisite: Two years of 9/10 Social Studies classes

This comprehensive class moves chronologically through American history from the 1800s to the present. As students progress through American Studies, their coursework is integrated with the concurrent American Literature class. Throughout the year, students engage in reading primary and secondary sources, watching and taking notes on documentaries and on lectures by prominent historians, and viewing the nation through such cultural lenses as music, film, dance, and visual arts. Students participate regularly in critical thinking seminars and conversations. In addition, students create and present projects, in a wide array of formats, that cross historical eras to the present and directly reflect students' interests, such as the relationship of Black Southern culture to Black Southern cooking, American fashion over time, the development and impact of Disney, treatment of mental health in the USA, and the evolution of the American superhero. The course textbook is Eric Foner's AP edition of Give Me Liberty! An American History.

Critical Thinking

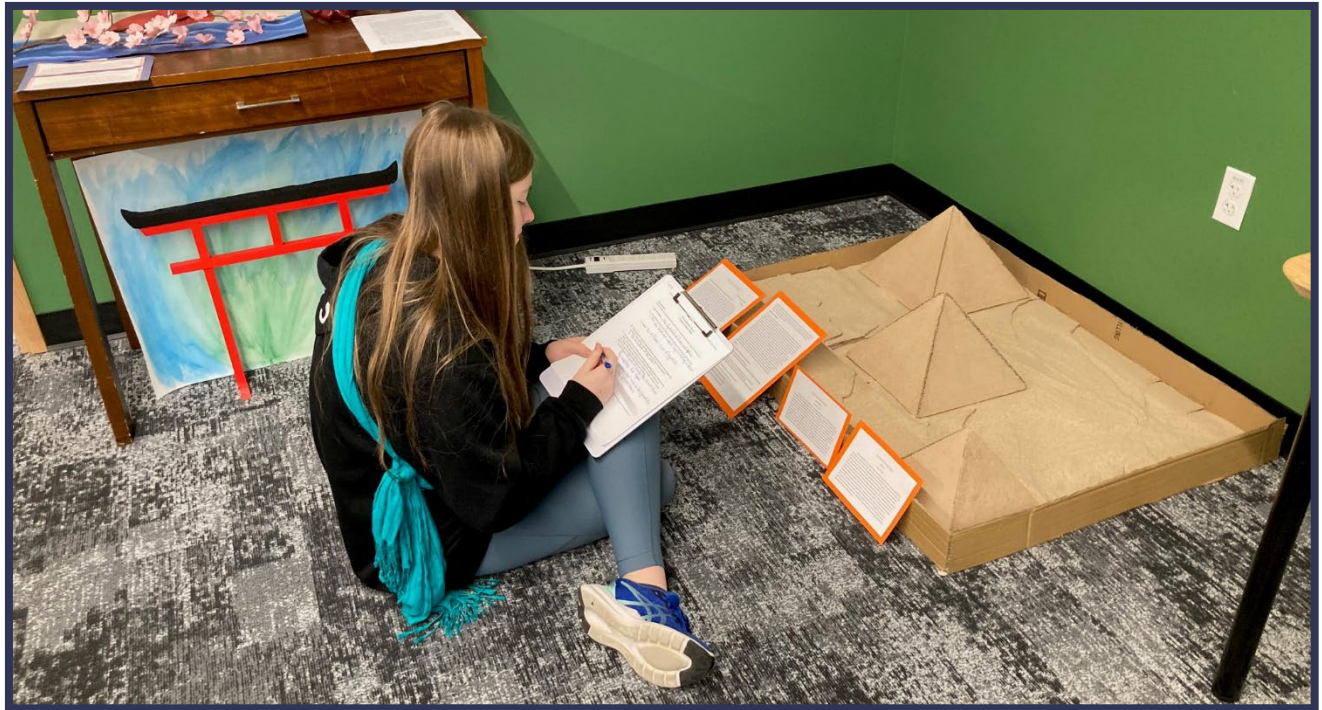
Grades: 11, 12

Full Year/1 credit/Honors option

Prerequisite: Two years of 9/10 Social Studies classes

In this course, students consider multiple aspects of leadership including leadership from within, of oneself, leadership within the family and the community, and leadership in expanded settings and varied situations. Students develop an understanding of the principles and mindset of leadership, practice critical thinking, and reconsider significant and transformative human struggles, such as the quest for freedom, inclusion, equity, and equality. An emphasis is put on the ethical dimensions of actions and decisions, and on the implications of what one writes, says, or does. Varied projects and extensive writing assignments are integral to this class. Texts explored include philosophical works by Aristotle

and Plato as well as college-level texts on ethics, sociology, and aspects of human psychology and sociopolitical constructs. The course texts are *Critical Thinking, Learn the Tools the Best Thinkers Use* by Richard Paul and Linda Elder, and *Thought and Knowledge* by Diane F. Halpern. Students also read Maria Montessori's collection of speeches, *Education and Peace*, and reflect on her ideas.



A student examines a three-dimensional model of the Pyramids of Giza

SCIENCE

Science courses provide students with the opportunity to engage in hands-on, guided inquiry learning featuring frequent class discussions, cutting-edge information, and lab work. There is a focus on working together effectively in a lab group while also building individual understanding. Most science classes are offered as year-long experiences, while science electives are semester-long.

- The 9/10 two-year cycle consists of one year of Biology and one year with two semester-long electives.
- The 11/12 two-year cycle consists of year-long Chemistry and Physics courses.

Biology

Grades: 9, 10

Full Year/1 credit/Honors Option

Corequisite: Concurrent enrollment in Health

This year-long lab course includes a study of biochemistry, cell biology, evolution, genetics, and bioethics. The class reads a variety of articles from scientific journals and participates in frequent laboratory investigations and hands-on activities.

Astrobiology

Grades: 9, 10

Semester/0.5 credit/Honors option

This elective 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).

Forensic Science

Grades: 9, 10

Semester/0.5 credit/Honors option

This elective lab exploration course combines aspects of psychology, chemistry, biology, anatomy and physics to solve (simulated) crimes. Practicing real-world forensic techniques and interpreting actual case studies is part of this course. Lessons include procedures for collection of evidence, observation of a crime scene, fingerprinting, chromatography, toxicology, and DNA analysis. Students engage in numerous hands-on activities, research, and an appreciation of how crimes are solved in the real world.

Environmental Science

Grades: 9, 10

Semester/0.5 credit/Honors option

This elective course is a lab-based introduction to the interdisciplinary, multi-faceted field of environmental science. Topics covered include soil, water and air; land and water use; how to understand and evaluate energy resources; effects of weather on the environment; and ways in which human actions impact the natural environment. This course also prepares students to talk and think about complex issues such as climate change and climate adaptation.

Neuroscience

Grades: 9, 10

Semester/0.5 credit/Honors option

This elective class is an introduction to the workings of the human brain. Coursework includes dissection of a brain, memory experiments, psychology research, vision investigation of optical illusions, and researching current events in neuroscience (i.e. using the mind to control artificial limbs and cochlear implants). Students also learn about sensory systems as part of the nervous system, with a particular focus on vision and hearing.

Chemistry

Grades: 11, 12

Full Year/1 credit/Honors Option

Prerequisite: Completion of or concurrent enrollment in Algebra II/Trigonometry

Chemistry is a lab-based course designed to give students a broad overview of general, inorganic, organic, and environmental chemistry. Students explore fundamental concepts through textbook readings, class discussions, model-based learning modules, problem-solving, laboratory experiments, and independent research. Topics covered in the first semester include sub-atomic structure of elements, arrangement of elements in the periodic table, chemical bonding, reactions, and stoichiometry. Topics covered in the second semester include aqueous solutions, properties of acids and bases, chemical equilibrium, rate of chemical reactions, redox reactions, organic chemistry, and environmental chemistry. Throughout the year students work on applying mathematical skills to solving problems using dimensional analysis, evaluate stoichiometric ratios in chemical reactions, and study equations governing rate of chemical reactions.

Honors Chemistry

Grades: 11, 12

Full Year/1 credit/Honors Option

Prerequisite: Algebra II/Trigonometry

Chemistry is a lab-based course designed to give students a broad overview of general, inorganic, organic, and environmental chemistry. Students explore fundamental concepts through textbook readings, class discussions, model-based learning modules, problem-solving, laboratory experiments, and independent research. Topics covered in the first semester include sub-atomic structure of elements, arrangement of elements in the periodic table, chemical

bonding, reactions, and stoichiometry. Topics covered in the second semester include aqueous solutions, properties of acids and bases, chemical equilibrium, rate of chemical reactions, redox reactions, organic chemistry, and environmental chemistry. Students taking the Honors credit also study additional units covering forces between sub-atomic particles, empirical and molecular formulas of compounds, rate limiting reactions, titration curves and buffer reactions. The Honors classes progress at a faster pace, with more material covered in class, and involve challenging problem-solving assignments in all homework and assessments.

Physics

Grades: 11, 12

Full Year/1 credit/Honors Option

Prerequisite: Completion of or concurrent enrollment in Algebra II/Trigonometry

This is a year-long introductory course with laboratory experiments designed to help students gain a richer understanding of everyday physical phenomena. Students explore fundamental concepts through readings, class discussions, classwork, homework, computer simulations, hands-on activities, laboratory experiments, and independent research. The first semester covers an in-depth analysis of mechanics including the basic kinematic equations for motion, forces governing motion and long-range forces such as gravitational forces on objects. The second semester covers periodic motion, sound waves, light, object formation in plane and curved mirrors, bending of light in lenses (refraction), electricity, solving simple DC series, parallel circuits and magnetism.

Honors Physics

Grades: 11, 12

Full Year/1 credit/Honors Option

Prerequisite: Algebra II/Trigonometry

This is a yearlong introductory course with laboratory experiments designed to help students gain a richer understanding of everyday physical phenomena. Students explore fundamental concepts through readings, class discussions, classwork, homework, computer simulations, hands-on activities, laboratory experiments, and independent research. The first semester covers an in-depth analysis of mechanics including kinematics equations for motion, forces governing motion and long-range forces such as gravitational forces on objects. Students also cover additional units including rotational motion, rotational kinematics, and concept of torque. The second semester covers periodic motion, sound waves, light, object formation in plane and curved mirrors, in-depth analysis of lenses and image formation with a system of lenses, image formation with system of lenses and mirrors in combination, bending of light in lenses (refraction), electricity, complex DC circuits that include use of Kirchhoff's laws, fundamentals of capacitors, and magnetism. The Honors classes progress at a faster pace, with more material covered in class, and involve advanced problem-solving assignments in all homework and assessments.

MATH

Math courses focus on strengthening skills and exemplary analytical thinking. We emphasize use of mathematical vocabulary, communication and collaboration as students engage in challenging multi-step problems and long-term, hands-on projects.

Algebra I

Full Year/1 credit/Honors Option

Prerequisite: Pre-Algebra or equivalent

Algebra 1 is a foundational course to prepare students for the ongoing study of advanced mathematics. Topics covered include real numbers, rational equations and functions, graphing linear equations and inequalities, exponential functions, polynomials, quadratic equations, and factoring. Students also engage in collaborative problem solving, writing and talking about mathematics, and exploring careers that use mathematics.

Geometry

Full Year/1 credit/Honors Option

Prerequisite: Algebra 1

Geometry weaves together experience with geometric problem sets, constructions, and two-column proofs. Along with traditional topics like triangle centers, surface area and volume, and an introduction to trigonometry, this course also introduces students to the Greek alphabet and principles of formal logic. Several hands-on projects during the last two quarters allow students to demonstrate their understanding in novel ways.

Algebra II/Trigonometry

Full Year/1 credit/Honors Option

Prerequisite: Algebra 1 and Geometry

Each topic covered in Algebra II/Trigonometry is explained using algebraic, graphical, and numerical methods to enrich student learning. Students practice their skills using traditional methods of solving equations, apply concepts to real-world applications, and complete longer projects using graphing software. Topics covered in the first semester include solving quadratic equations, factoring polynomials, rational equations, inequalities, complex numbers, functions, transformation of functions, linear and quadratic equations, polynomials, exponential and logarithmic functions. The second semester focuses on trigonometric functions by introducing the unit circle, evaluating trigonometric expressions both algebraically and graphically, using trigonometric identities, polar coordinates and vectors.

Precalculus

Full Year/1 credit/Honors Option

Prerequisite: Algebra II/Trigonometry

Precalculus students engage in mathematical modeling using linear, quadratic, exponential, logarithmic and trigonometric functions, with an emphasis on critical thinking and analysis. Additional topics include polar graphs, parametric equations, partial fraction decomposition, matrices, conic sections, sequences and series, probability, and limits.

Calculus I

Full Year/1 credit/Honors Option

Prerequisite: Precalculus

Calculus I topics include limits, rules of differentiation, applications of derivatives such as related rates and curve sketching, integrals, the Fundamental Theorem of Calculus, differential equations and the volume of solids of revolution. Emphasis is on conceptual understanding of topics via a multi-representational approach. Along with traditional textbook problem-solving, students also work in groups on guided inquiry labs and two hands-on projects that allow students to apply calculus concepts to real-world challenges. Students design waterslides using their knowledge of derivatives to analyze the physics behind safe and fast designs, and also complete an art project modeling volume by cross-sections.

Calculus II

Full Year/1 credit/Honors Option

Prerequisite: Calculus I

Calculus II students continue their study of single variable calculus with additional integration techniques, infinite series, parametric equations, polar coordinates, and vectors. Students are immersed in both theoretical and real-world applications of these concepts. Throughout the year, students complete cumulative review assignments each week to maintain and sharpen their skills in the methods and applications of Calculus. Additional emphasis is on conceptual understanding and the communication of mathematics, both written and orally, using accurate mathematical vocabulary.

Data Science

Full Year/1 credit/Honors Option

Prerequisite: Algebra II/Trigonometry

Data Science introduces students to the main ideas in data science and statistics concepts through tools such as Google Sheets, Python, Data Commons and Tableau/SQL. Students learn to be data explorers in project-based units, through which they develop their understanding of data analysis, sampling, correlation/causation, bias and uncertainty, probability, modeling with data, making and evaluating data-based arguments, and the power of data in society. Statistics topics include analyzing categorical data, displaying and

comparing quantitative data, summarizing quantitative data, modeling data distributions, exploring bivariate numerical data, study design, probability counting and permutations and combinations, random variables, sampling distributions, confidence intervals, hypothesis testing, two sample inference for the difference between groups, chi-square tests, advanced regression, and analysis of variance. At the end of the course students will have a portfolio of their data science work to showcase their newly developed abilities.



A High School art project integrating geometry and art

WORLD LANGUAGES

We offer four levels of Japanese and four levels of Spanish.

Japanese 1

Grades: 9, 10

Full Year/1credit

This one-year course provides a general introduction to the Japanese language. Students learn Hiragana, Katakana, and some Kanji characters, basic grammar patterns, listening and speaking skills. Topics include self- introductions, weather expressions, days of the week, dates of the month, months of the year, family members, occupations, extracurricular school activities, hobbies, and descriptive characteristics of people. Projects take the form of cultural/research presentations, singing Japanese songs, cooking Japanese food, Japanese calligraphy and making a Japanese board game.

Japanese 2

Grades: 9, 10

Full Year/1credit

Prerequisite: Japanese 1

In Japanese 2, students continue to develop their listening, speaking, reading and writing skills utilizing more complex sentence structures. Topics are centered around school and everyday life, including academic subjects, describing classes and teachers, school policies, driving/transportation, daily activities and health. Projects such as singing Japanese songs, cooking Japanese food, writing recipes, creating a made-up restaurant homepage, writing a New Year's card, and Japanese calligraphy provide opportunities to further students' understanding of Japanese culture.

Japanese 3

Grades: 11, 12

Full Year/1 credit

Prerequisite: Japanese 2

Japanese 3 builds upon the knowledge and communication skills gained in Japanese 2. Students study and discuss a variety of practical topics in spoken and written forms, with a focus on accuracy and attention to detail. Topics include holidays, part-time jobs, giving directions, shopping, and Japanese cooking. Students also learn about various Japanese cultural concepts and express their opinions on Japanese society through presentations. Projects include making a street direction map, writing a dialogue, Japanese calligraphy, and making a travel plan.

Japanese 4

Grades: 11, 12

Full Year/1 credit

Prerequisite: Japanese 3

In the fourth year of Japanese, students explore more about the social, historical and cultural aspects that influence Japanese life today. A topic in the first semester is Japanese traditional and modern entertainment, including manga and anime. In the second semester, students learn about environmental issues. Students focus on what it means to be a global citizen, learning to help sustain the environment as well as learning about natural disasters that affect Japan. Projects include research on the Japanese recycling system and preparedness for natural disasters.

Spanish 1

Grades: 9, 10

Full Year/1 credit

In this first year of high school Spanish, students develop a basic understanding of the seven most essential verbs for communication in Spanish, in the present tense. Students also become familiar with other verbs and vocabulary related to the following topics: greetings and introductions, the weather, food, school activities, personal characteristics, colors, geography, families, household activities and traditional stories. Students are introduced to the variety of Spanish-speaking cultures around the world through visual art, biographies, and music.

Spanish 2

Grades: 9, 10

Full Year/1 credit

Prerequisite: Spanish 1

In Spanish 2, students further develop their experiences with the seven most essential verbs for communication in Spanish by working with them in their preterit and imperfect (past tense) forms. Students also become familiar with other verbs and vocabulary related to idioms and expressions, daily routines, staying healthy (including sports and other outdoor activities), travel and immigration, extended family, social concerns and superstitions. This course highlights and incorporates the variety of Spanish-speaking cultures around the world through visual art, biographies, and music.

Spanish 3

Grades: 11, 12

Full Year/1 credit

Prerequisite: Spanish 2

Students expand their vocabulary as well as apply their knowledge of the seven most essential Spanish verbs to communicate about a variety of topics in the past, present and future tenses. This course focuses on animal habitats, environmentalism (including

sustainable fashion and ecotourism), natural disasters, the solar system, notable Latin Americans, folktales, and Spanish customs. Students also become familiar with other verb forms such as the imperative, conditional, and subjunctive. Topics explored in this course are examined through the lens of how they affect the people of Spanish-speaking cultures around the world.

Spanish 4

Grades: 11, 12

Full Year/1 credit

Prerequisite: Spanish 3

Students practice decoding, interpreting, and demonstrating comprehension of current events in Latin America by reading and discussing articles written for Spanish-language learners. Students review previously learned verb forms as well as develop an understanding of compound verbs through an exploration of a variety of topics: social justice issues, environmental concerns, visual and performing arts news, and cultural celebrations. Students expand their vocabulary via thematic units that cover transportation and dwellings around the world, fables and legends, healthcare, sustainability, and technology.



Japanese calligraphy provides an opportunity to further students' understanding of Japanese culture

FINE ARTS

Prior experience from previous fine arts classes will be taken into account so that appropriate challenge levels can be provided.

Visual Arts

Grades: 9-12

Full Year/ 1 credit

The Visual Arts course involves a broad understanding of creative problem-solving skills, artistic materials and techniques, art history, and group collaboration, all within a studio environment. Students begin this year-long course with a painting and drawing unit, developing basic skills and learning the elements and principles of art before techniques are used to produce artworks in various styles and genres. Next, mixed media concepts and techniques are introduced and students work on projects using digital media, collage, found materials, imagery, paint, and more. Additionally, students build skills to work with clay, acrylic adhesive (plaster), wire, soap, and foam, among many other materials, to produce 3-D sculptures. For the third unit, they focus on sculpture to develop spatial awareness and create unique individual mixed media sculptures. Finally, students develop, create, and present a thematic collaborative project as a class, while also developing an individual final project based on their favorite medium and art style.

Mixed Media

Grades: 9-12

Semester/0.5 credit

Students are introduced to the dynamic world of mixed media as they explore various materials, techniques, and concepts. By combining traditional and unconventional materials, students broaden their artistic horizons, discovering new ways to create visually captivating artwork. Students will learn and refine techniques such as collage, assemblage, layering, texture creation, and experimental mark-making. They will also gain proficiency in handling different mediums, including acrylics, clay, pastels, cardboard, natural materials, and more. This class emphasizes creative problem-solving skills by encouraging students to think outside the box. Students learn to overcome artistic challenges, experiment with innovative solutions, and develop their unique artistic voice. Collaborative projects and group critiques are incorporated to encourage students to communicate, exchange ideas, and provide constructive feedback to their peers.

Painting

Grades: 9-12

Semester/0.5 credit

The painting class focuses on different subjects and painting styles, using established painting techniques, elements and principles of art, and creative inspiration. Students strive to master color theory including hue, value, saturation, and color schemes. Using acrylics and watercolor, they experiment with different painting techniques (e.g., wet-on-wet, dry-brush,

layering) and apply color theory to painting exercises (color wheel, color mixing, tonal painting). Students use both drawing and painting knowledge when exploring still life genres such as portrait, landscapes, figures, and abstracts. The class also delves into renowned artists' histories and styles and features guest artists from the local art community to share their expertise, insights, and experiences with the students.

Photography

Grades: 9-12

Semester/ 0.5 credit

In photography class, students gain experience in many techniques and styles, including photo composition, camera focus, lighting, Photoshop techniques, and the many ways photographers bring their subjects to life. Students touch on macro photography, outdoor portrait lighting, indoor portrait lighting styles, and adding layers and adjustments in Photoshop. Students engage in collaborative projects such as dramatic portraits, still life set-ups, design installations, photography record keeping, and narratives using costumes. After exploring various artists and forms of land art, photographers take their phone cameras outside to record their collaborative land art sculptures before establishing technique and beginning a creative photograph journal enriched with mixed media.

Music Composition

Grades: 9-12

Full Year/1 credit

Students learn basic music theory in order to compose their own music and to have their compositions played by their classmates in an ensemble setting. Lessons include activities exploring meter, melody, harmony, song forms, and music arranging. Students choose what types of songs they want to compose and collaborate with other classmates in rehearsals and in student-led composition projects.

Music in Pop Culture

Grades: 9-12

Semester/0.5 credit

Students engage in lessons and activities about music's impact on our everyday life. Students play music from different artists that inspire them and composers from movie and video game soundtracks. Class discussion and student-led projects give students opportunities to explore their relationship with music. Whether it's a way to escape from the world or to raise awareness about important issues, capture our imaginations, or inform our fashion choices, music plays a key role in our lives.

COLLEGE & TECHNICAL EDUCATION

In Grade 11, students take Personal Finance in the fall semester and College & Career Counseling in the spring semester.

Personal Finance

Grade: 11

Semester/0.5 credit

Students learn and discuss various aspects of personal finance, including calculating net income from gross income after taking a multitude of expenses into account, building a budget from this process, understanding credit, exploring lease and mortgage agreements, understanding basic investment concepts, and wealth development and management. Additionally, in the spirit of Maria Montessori's emphasis on Practical Life, this course includes a Life Skills portion in which students explore additional topics such as basic first aid, meal planning, budgeting for groceries, basic sewing/mending skills, ironing, and simple car maintenance such as replacing windshield wipers and checking tire pressure.

College & Career Counseling

Grade: 11

Semester/0.5 credit

This highly individualized course covers all aspects of the college admission process, beginning with the identification of student and family goals in the areas of academics, lifestyle and financial accessibility. Students review aptitude assessments, explore a variety of career paths, create an academic resume, determine a plan for ACT/SAT testing, and develop a balanced college list. Students are introduced to the different types of college applications, discuss how to prepare for interviews, apply for scholarships, and learn about writing personal statements and supplemental essays as they begin work on their own personal narratives in their Literature class.



A selection of colleges recent WMS graduates have gone on to attend

HEALTH & PHYSICAL EDUCATION

Students in Grades 9 and 10 take one semester of Health and a minimum of three semesters of Physical Education. Students in Grades 11 and 12 may choose to participate in P.E. if it fits within their schedules.

Health

Grades: 9, 10

Semester/0.5 credit

Corequisite: Concurrent enrollment in Biology

This course is integrated with Biology and therefore offered every other year. Topics covered include nutrition, disease transmission, infant and 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.

Physical Education & Orienteering

Grades: 9, 10

Semester/0.5 credit

Classes focus on a variety of lifetime sports and activities with the goal of developing a personal fitness plan. This course is an individualized approach to physical fitness, comprised of cardiovascular endurance, strength, and flexibility. Additionally, students travel off-campus to various parks in the area to participate in Orienteering, a combination of map-reading, walking/running, and a scavenger hunt; students use maps to find "controls" which have been placed in different locations around the park.



Class of 2023 student who qualified for the 2022 USA Orienteering Junior Squad roster

ELECTIVES

Computer Science

Grades: 11, 12

Full Year/1 credit

This course introduces students to the fundamental ideas of computer science and how to apply computational thinking across multiple disciplines. Students explore five core concepts: algorithms and programming, computing systems, networks and the internet, data, and the social impacts of computing. Students also become familiar with the concepts and tools of computer science as they learn a subset of the Python programming language. Python topics include primitive types, conditionals, iteration, functions and exceptions, data structures, class objects, as well as programming with Turtle Graphics, Pandas and NumPy. Students do hands-on work to design, write, and test computer programs that solve problems or accomplish tasks. They also have opportunities to use the micro:bit to dive into electronics and Python programming.

Psychology

Grades: 11, 12

Full Year/1 credit

This class combines reading, critical thinking and discussion, hands-on lab work, and written reflection. The first semester begins with a focus on research methods and designs and teaches students to consider these through an ethical lens. Students are then introduced to major branches of psychology, including biological, developmental and cognitive. In semester two, students focus on social and clinical psychology. Finally, students read a memoir and use the culmination of what they've learned to write psychological assessments about the writer on different stages of their journey.

ADDITIONAL GRADUATION REQUIREMENTS (*non-credit courses*)

Washington State History

Grades: 7, 8

WMS Graduation Requirement

Students moving up from WMS Middle School meet this requirement with the successful completion of the Pacific Northwest Studies course. High school students who have not completed Washington State History during Middle School are required to complete a non-credit, semester-long course.

Community Service

Grades: 9, 10, 11 & 12

WMS Graduation Requirement

Community service is an integral part of a Montessori education, reflecting the importance of engagement with our community and our role as global citizens. WMS students complete 60 hours of community service, with 15 hours of service expected each year.

Senior Project

Grade: 12

WMS Graduation Requirement

Seniors have the opportunity to explore a passion as they launch their Senior Projects. This is a semester-long independent study course with specific and concrete end-goals. Students can choose to undertake an ambitious community service or social justice project, learn about a subject they have not studied in school, develop a new skill, or set a goal related to personal growth. Examples include writing a book, creating a photography portfolio, organizing graffiti clean-up parties in a neighborhood, building a community garden, or becoming a certified yoga instructor. Each project culminates with a student presentation to the community documenting their journey as well as their end result. Students receive project support from a mentor (inside or outside the school community), a faculty advisor, and protected time to complete their work during second semester of senior year.



A Class of 2024 senior presents their Senior Project on sustainable fashion