

CHRISTA MCAULIFFE ACADEMY



**SCHOOL OF
ARTS AND SCIENCES**
TOUCH THE FUTURE >>>

2011/2012

MIDDLE SCHOOL
COURSE CATALOG

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CMASAS serves students worldwide through a unique personalized approach to education.

CMASAS Main Office

5200 SW Meadows Rd. Ste. 150

Lake Oswego, OR 97035

Phone: 503.226.7374

Toll Free: 888.832.9437

Fax: 866.920.1619

www.PersonalizedEducation.org

Mathematics

2610 Math 6
2700 MS Math Fundamentals
2710 MS Pre-Algebra
2810 MS Algebra

Language Arts

1610 Language Arts 6
1710 Language Arts 7
1810 Language Arts 8

Science

4610 MS Earth Science
4710 MS Life Science
4810 MS Physical Science

Social Studies

3610 MS Ancient History & Geography
3710 MS Modern World History & Geography
3810 MS U.S. History & Geography

Health/Physical Education

7610 Health/P.E. 6
7710 Health/P.E. 7
7810 Health/P.E. 8

Technology

8610 Keyboarding 6
8710 Keyboarding 7
8810 Keyboarding 8
8820 Technology Literacy

Visual & Performing Arts

6610 Art 6
6710 Art 7
6810 Art 8
6620 Visual Arts 6
6720 Visual Arts 7
6820 Visual Arts 8
6630 Music 6
6730 Music 7
6830 Music 8
6640 Dance 6
6740 Dance 7
6849 Dance 8
6650 Theatre 6
6750 Theatre 7
6850 Theatre 8

World Language

5710 MS Spanish 1
5810 MS Spanish 2
5720 MS French 1
5820 MS French 2
5730 MS German 1
5830 MS German 2
5740 MS Latin 1
5840 MS Latin 2
5750 MS Chinese 1
5850 MS Chinese 2

High School Courses

Middle school students can have opportunities to take high school classes for high school credit. See the high school catalog for current course options, and discuss this with your educational facilitator or academic counselor to explore the requirements to see if this is a good choice for you.

2610 Math 6

Grade Level(s): 6th

Students master the four arithmetic operations with whole numbers, positive fractions, positive decimals, and positive and negative integers; they accurately compute and solve problems. They apply their knowledge to statistics and probability. Students understand the concepts of mean, median, and mode of data sets and how to calculate the range. They analyze data and sampling processes for possible bias and misleading conclusions; they use addition and multiplication of fractions routinely to calculate the probabilities for compound events. Students conceptually understand and work with ratios and proportions; they compute percentages (e.g., tax, tips, interest). Students learn about pi and the formulas for the circumference and area of a circle. They use letters for numbers in formulas involving geometric shapes and in ratios to represent an unknown part of an expression. They solve one-step linear equations.

2611 Math 6 A
2612 Math 6 B

2700 MS Math Fundamentals

Grade Level(s): 7th - 8th

Provides continued learning and practice for students not ready for pre-algebra. Greatest emphasis is placed on number theory, addition, subtraction, multiplication, division, fractions, decimals, and percents. Students work towards mastery of each concept, with modifications made to instructional approaches and allowing students to revisit lessons. The goal is to give the student a solid foundation and understanding of basic math, providing the prerequisite for future success in pre-algebra and beyond.

2701 Math Fundamentals A
2702 Math Fundamentals B

2710 MS Pre-Algebra

Grade Level(s): 7th

Students become adept at manipulating numbers and equations and understand the general principles at work. Students learn and use factoring of numerators and denominators and properties of exponents. They learn the Pythagorean theorem and solve problems in which they compute the length of an unknown side. Students learn how to compute the surface area and volume of basic three-dimensional objects and understand how area and volume change with a change in scale. Students make conversions between different units of measurement. They learn and use different representations of fractional numbers (fractions, decimals, and percents) and are proficient at changing from one to another. They increase their facility with ratio and proportion, compute percents of increase and decrease, and compute simple and compound interest. They graph linear functions and understand the idea of slope and its relation to ratio.

2711 Pre-Algebra A
2712 Pre-Algebra B

2810 MS Algebra

Grade Level(s): 8th

Students develop an understanding of the symbolic language of mathematics and the sciences, and algebraic skills and concepts are developed and used in a wide variety of problem-solving situations. Topics include, but are not limited to, arithmetic properties, understanding various operations and rules (i.e. reciprocal, exponents), solving equations and inequalities, absolute values, linear equations, multistep problems, word problems, graphing equations and quadratic functions, parallel and perpendicular lines, slopes, graphical interpretation of multiple equations, monomials, polynomials, and additional algebraic concepts. Students develop the ability to use and know simple aspects of a logical argument, and they will be able to use the properties of the number system to judge the validity of results, justify each step of a procedure, and to prove or disprove statements.

2811 MS Algebra A
2812 MS Algebra B

BUT MATHEMATICS IS THE SISTER, AS WELL AS THE SERVANT, OF THE ARTS AND IS TOUCHED WITH THE SAME MADNESS AND GENIUS. ~HAROLD MARSTON MORSE



AS FAR AS THE LAWS OF MATHEMATICS REFER TO REALITY, THEY ARE NOT CERTAIN; AND AS FAR AS THEY ARE CERTAIN, THEY DO NOT REFER TO REALITY. ~ALBERT EINSTEIN

1610 Language Arts 6

Grade Level(s): 6th
 Students develop skills in word analysis, fluency, and vocabulary. Students read and understand grade-level-appropriate material. They describe and connect the essential ideas, arguments, and perspectives of the text by using their knowledge of text structure, organization, and purpose. They practice responding to what they read through narrative and expository critique. They read and respond to historically or culturally significant works of literature that reflect and enhance their studies of history and social science. Students write clear, coherent, and focused essays. The writing exhibits students' awareness of the audience and purpose. Essays contain formal introductions, supporting evidence, and conclusions. Students progress through the stages of the writing process as needed. They write narrative, expository, persuasive, and descriptive texts of at least 500 to 700 words in each genre; these include narratives, research reports, responses to literature, persuasive compositions, and various expository patterns of development (compare & contrast, problem and solution, etc). Students also engage in listening and presentation activities, developing essential skills.

- 1611 Language Arts 6 A
- 1612 Language Arts 6 B

1710 Language Arts 7

Grade Level(s): 7th
 Students continue to develop skills in word analysis, fluency, and vocabulary; read grade-level material; and describe and connect the essential ideas, arguments, and perspectives of the text by using their knowledge of text structure, organization, and purpose. They practice responding to what they read through narrative and expository critique. They read and respond to historically or culturally significant works of literature that reflect and enhance their studies of history and social science. They also clarify ideas and connect them to other literary works. Students write clear, coherent, and focused essays. The writing exhibits students' awareness of the audience and purpose. Essays contain formal introductions, supporting evidence, and conclusions. Students progress through the stages of the writing process as needed. They write narrative, expository, persuasive, and descriptive texts of at least 500 to 700 words in each genre; these include responses to literature, research reports, persuasive compositions, and summaries of reading materials. Students write and speak with a command of standard English conventions appropriate to this grade level. Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They evaluate the content of oral communication, and they deliver well-organized formal presentations employing traditional rhetorical strategies; these include narrative presentations, oral summaries of articles and books, research presentations, and persuasive presentations.

- 1711 Language Arts 7 A
- 1712 Language Arts 7 B

1810 Language Arts 8

Grade Level(s): 8th
 Students use their knowledge of word origins and word relationships, as well as historical and literary context clues, to determine the meaning of specialized vocabulary and to understand the precise meaning of grade-level-appropriate words. Students read and understand grade-level-appropriate material. They describe and connect the essential ideas, arguments, and perspectives of the text by using their knowledge of text structure, organization, and purpose. In addition, students read one million words annually on their own, including a good representation of narrative and expository text. Students read and respond to historically or culturally significant works of literature that reflect and enhance their studies of history and social science. They clarify the ideas and connect them to other literary works. Students write clear, coherent, and focused essays. The writing exhibits students' awareness of audience and purpose. Essays contain formal introductions, supporting evidence, and conclusions. Students progress through the stages of the writing process as needed. Students write narrative, expository, persuasive, and descriptive essays of at least 500 to 700 words in each genre. Student writing demonstrates a command of standard American English and the research, organizational, and drafting strategies; these include biographies, autobiographies, short stories, narratives, responses to literature, research reports, persuasive compositions, technical documents, and documents related to career development. The standards for written and oral English language conventions have been placed between those for writing and for listening and speaking because these conventions are essential to both sets of skills. Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They evaluate the content of oral communication. Students deliver well-organized formal presentations employing traditional rhetorical strategies (e.g., narration, exposition, persuasion, description).

- 1811 Language Arts 8 A
- 1812 Language Arts 8 B



Books can be dangerous. The best ones should be labeled "This could change your life." ~Helen Exley

3610 MS Ancient History & Geography

Grade Level(s): 6th

Students in expand their understanding of history by studying the people and events of the major Western and non-Western ancient civilizations. Geography is studied in the development of the human story. Emphasis is placed on the everyday lives, problems, and accomplishments of people, their role in developing social, economic, and political structures, and in establishing and spreading ideas that helped transform the world forever. Students develop higher levels of critical thinking by considering why civilizations developed where and when they did, why they became dominant, and why they declined. Students analyze the interactions among the various cultures, emphasizing their enduring contributions and the link between the contemporary and ancient worlds.

3611	MS Ancient History and Geography
3612	MS Ancient History and Geography

3710 MS Modern World History/Geog

Grade Level(s): 7th

Students study the social, cultural, and technological changes that occurred in Europe, Africa, and Asia in the years A. D. 500Ð 1789. After reviewing the ancient world and the ways in which archaeologists and historians uncover the past, students study the history and geography of great civilizations that were developing concurrently throughout the world during medieval and early modern times. They examine the growing economic interaction among civilizations as well as the exchange of ideas, beliefs, technologies, and commodities. They learn about the resulting growth of Enlightenment philosophy and the new examination of the concepts of reason and authority, the natural rights of human beings and the divine right of kings, experimentalism in science, and the dogma of belief. Finally, students assess the political forces let loose by the Enlightenment, particularly the rise of democratic ideas, and they learn about the continuing influence of these ideas in the world today.

3711	MS Modern World History and Geography
3712	MS Modern World History and Geography

3810 MS U.S. History and Geography

Grade Level(s): 8th

Students study the ideas, issues, and events from the framing of the Constitution up to World War I, with an emphasis on America’s role in the war. After reviewing the development of America’s democratic institutions founded on the Judeo-Christian heritage and English parliamentary traditions, particularly the shaping of the Constitution, students trace the development of American politics, society, culture, and economy and relate them to the emergence of major regional differences. They learn about the challenges facing the new nation, with an emphasis on the causes, course, and consequences of the Civil War. They make connections between the rise of industrialization and contemporary social and economic conditions.

3811	MS U.S. History and Geography
3812	MS U.S. History and Geography

4610 MS Earth Science

Grade Level(s): 6th

Students explore Earth and space science through the following topics: plate tectonics and Earth’s structure, shaping Earth’s surface, heat (thermal energy), energy in the Earth system, ecology, and resources. Students learn how to go through the scientific process by asking meaningful questions and conducting careful investigations.

4611	MS Earth Science A
4612	MS Earth Science B

4710 MS Life Science

Grade Level(s): 7th

Students gain understanding of life science topics, including cell biology, genetics, evolution, Earth and life history, the structure and function in living systems, and the physical principles in living systems. Students learn how to go through the scientific process by asking meaningful questions and conducting careful investigations.

4711	MS Life Science A
4712	MS Life Science B

4810 MS Physical Science

Grade Level(s): 8th

Students survey and gain understanding in the realm of physical science, and topics include motion, forces, the structure of matter, Earth in the social system, reactions, chemistry of living systems, the periodic table, and density and buoyancy. Students learn how to go through the scientific process by asking meaningful questions and conducting careful investigations.

4811	Physical Science A
4812	Physical Science B



5750 Chinese

Grade Level(s): 6th-8th

Students learn beginning Chinese; no prior exposure to the Chinese language is required. Students will primarily learn to speak and understand spoken Chinese, and they will also learn how to read and write basic Chinese. They will gain knowledge of the Chinese culture and become aware of both Chinese history and current events

5751 MS Chinese I A
5752 MS Chinese I B

5850 MS Chinese II

Grade Level(s): 6th-8th

Students continue where they left off with Chinese I, building their vocabulary and refining their ability to speak and understand the language, as well as continue practicing reading/writing in the language. They also continue culture and history studies.

5851 MS Chinese II A
5852 MS Chinese II B

5720 MS French I

Grade Level(s): 6th-8th

Students learn beginning French; no prior exposure to the French language is required. Students will primarily learn to speak and understand spoken French, and they will also learn how to read and write basic French. They will gain knowledge of the French culture and become aware of both French history and current events.

5721 MS French I A
5722 MS French I B

5820 MS French II

Grade Level(s): 6th-8th

Students continue where they left off with French I, building their vocabulary and refining their ability to speak and understand the language, as well as continue practicing reading/writing in the language. They also continue culture and history studies.

5821 MS French II A
5822 MS French II B

5730 MS German I

Grade Level(s): 6th-8th

Students learn beginning German; no prior exposure to the German language is required. Students will primarily learn to speak and understand spoken German, and they will also learn how to read and write basic German. They will gain knowledge of the German culture and become aware of both German history and current events.

5731 Ms German I A
5732 MS German I B

*No culture can live, if it
attempts to be exclusive.
~Mahatma Gandhi*



5830 MS German II

Grade Level(s): 6th-8th

Students continue where they left off with German I, building their vocabulary and refining their ability to speak and understand the language, as well as continue practicing reading/writing in the language. They also continue culture and history studies.

5831 MS German II A
5832 Ms German II B

5740 MS Latin I

Grade Level(s): 6th-8th

Students take Latin to gain a strong linguistic foundation for learning several other languages as well as for building modern vocabulary, especially in the fields of science and medicine. Students interested in language and linguistics, sciences, and medicine are encouraged to take this course. In beginning Latin; no prior exposure to the Latin language is required. Students will primarily learn to speak and understand spoken Latin, and they will also learn how to read and write basic Latin. They will gain knowledge of the ancient Latin culture and become aware of both Latin history and how Latin currently influences culture and language throughout the modern world.

5741 Ms Latin I A
5742 MS Latin I B

5840 MS Latin II

Grade Level(s): 6th-8th

Students continue where they left off with Latin I, building their vocabulary and refining their ability to read, write, and speak Latin. They also continue culture and history studies.

5841 MS Latin II A
5842 Ms Latin II B

5750 MS Spanish I

Grade Level(s): 6th-8th

Students learn beginning Spanish; no prior exposure to the Spanish language is required. Students will primarily learn to speak and understand spoken Spanish, and they will also learn how to read and write basic Spanish. They will gain knowledge of the Spanish culture and become aware of both Spanish history and current events.

5751 Ms German I A
5752 MS German I B

5850 MS Spanish II

Grade Level(s): 6th-8th

Students continue where they left off with Spanish I, building their vocabulary and refining their ability to speak and understand the language, as well as continue practicing reading/writing in the language. They also continue culture and history studies.

5851 MS German II A
5852 Ms German II B

6640/6730/6840 Dance

Grade Level(s): 6th-8th

Students perceive and respond, using the elements of dance. They demonstrate movement skills, process sensory information, and describe movement, using the vocabulary of dance. They apply choreographic principles, processes, and skills to create and communicate meaning through the improvisation, composition, and performance of dance. Students analyze the function and development of dance in past and present cultures throughout the world, noting human diversity as it relates to dance and dancers. Students critically assess and derive meaning from works of dance, performance of dancers, and original works according to the elements of dance and aesthetic qualities. Students apply what they learn in dance to learning across subject areas, and they also learn about careers in and related to dance.

6641	Dance 6 A
6642	Dance 6 B
6741	Dance 7 A
6742	Dance 7 B
68 41	Dance 8 A
6842	Dance 8 B

6630/6730/6830 Music

Grade Level(s): 6th-8th

Students read, notate, listen to, analyze, and describe music and other aural information, using the terminology of music. They apply vocal and instrumental musical skills in performing a varied repertoire of music. They compose and arrange music and improvise melodies, variations, and accompaniments, using digital/electronic technology when appropriate. Students analyze the role of music in past and present cultures throughout the world, noting cultural diversity as it relates to music, musicians, and composers. Also, students critically assess and derive meaning from works of music and the performance of musicians in a cultural context according to the elements of music, aesthetic qualities, and human responses. They apply what they learn in music across subject areas and learn about careers in music. *Students are expected to develop competencies over the course of grades 6th through 8th, with up to two semesters per academic year.

6631	Music 6 A
6632	Music 6 B
6731	Music 7 A
6732	Music 7 B
6831	Music 8 A
6832	Music 8 B

"Imagination is the beginning of creation. You imagine what you desire, you will what you imagine, and at last you create what you will."

~ George Bernard



6650/6750/6850 Theater

Grade Level(s): 6th-8th

Students observe their environment and respond, using the elements of theatre. They also observe formal and informal works of theatre, film/video, and electronic media and respond, using the vocabulary of theatre. Students apply processes and skills in acting, directing, designing, and script writing to create formal and informal theatre, film/videos, and electronic media productions and to perform in them. They analyze the role and development of theatre, film/video, and electronic media in past and present cultures throughout the world, noting diversity as it relates to theatre. Students critique and derive meaning from works of theatre, film/video, electronic media, and theatrical artists on the basis of aesthetic qualities. They apply what they learn in theatre, film/video, and electronic media across subject areas, and learn about careers related to theater. *Students learn and refine skills and competencies throughout grades 6th through 8th, up to two semesters per academic year, attaining mastery by the end of their 8th grade year.

6651	Theater 6 A
6652	Theater 6 B
6751	Theater 7 A
6752	Theater 7 B
6851	Theater 8 A
6852	Theater 8 B



6620/6720/6820 MS Visual Arts

Grade Level(s): 6th-8th

Students learn to perceive and respond to works of art, objects in nature, events, and the environment, and use the vocabulary of the visual arts to express observations. They apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art. They also analyze the role and development of the visual arts in past and present cultures throughout the world, noting human diversity as it relates to the visual arts and artists. Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities, and they apply what they learn in the visual arts across subject areas. *Instruction is customized according to individual skill level in each competency, and students are guided towards greater mastery, continuously refining their visual art skills over the course of grades 6th through 8th, with up to two semesters per academic year.

6621	Visual Arts 6 A
6622	Visual Arts 6 B
6721	Visual Arts 7 A
6722	Visual Arts 7 B
6821	Visual Arts 8 A
6822	Visual Arts 8 B

7610 Health/PE 6

Grade Level(s): 6th

Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities. They demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities. Students assess and maintain a level of physical fitness to improve health and performance. Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance. Finally, students demonstrate and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.

7611	Health/PE 6 A
7612	Health/PE 6 B

7710 Health/PE 7

Grade Level(s): 7th

Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities. They demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities. Students assess and maintain a level of physical fitness to improve health and performance. Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance. Finally, students demonstrate and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.

7711	Health/PE 7 A
7712	Health/PE 7 B

7810 Health/PE 8

Grade Level(s): 8th

Students demonstrate the motor skills and movement patterns needed to perform a variety of physical activities. They demonstrate knowledge of movement concepts, principles, and strategies that apply to the learning and performance of physical activities. Students assess and maintain a level of physical fitness to improve health and performance. Students demonstrate knowledge of physical fitness concepts, principles, and strategies to improve health and performance. Finally, students demonstrate and utilize knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.

7811	Health/PE 8 A
7812	Health/PE 8 B

8610/8710/8810 Keyboarding

Grade Level(s): 6th-8th

Students learn proper finger placement and engage in systematic instruction to build both accuracy and speed. Instruction is customized to student skill level and learning preferences, continuously increasing fluency and efficiency in typing skills.

8611	Keyboarding 6 A
8612	Keyboarding 6 B
8711	Keyboarding 7 A
8712	Keyboarding 7 B
8811	Keyboarding 8 A
8812	Keyboarding 8 B



8820 MS Technology Literacy I

Grade Level(s): 6th-8th

Students will be able to use a computer and its peripherals to complete tasks. They will develop word processing skills, create electronic presentations, create and use databases, and create and use spreadsheets. Students will gain Internet skills including browsing, searching, emailing, researching, and presenting. They will learn and demonstrate basic Internet safety and ethics while engaging in various forms of Online communication.

8821	MS Technology Literacy I A
8822	MS Technology Literacy I B

PERSONALIZED EDUCATION GROUP

ENVISION CREATE EMPOWER



Personalized Education Philosophy

- Education's purpose is to empower students to find their own paths to their own dreams; to create life-long learners who are prepared for both the modern world and the future; and to empower individuals to make a positive impact in the world.
- To this end, a personalized education program is student-centered; a student's educational program is tailored to the student's learning styles, interests, current skill levels, and personal goals.
- Learning is competency-and mastery-based, allowing for extra time and assistance to master concepts a student finds difficult, while also allowing the student to move quickly through previously-mastered material, and eliminating arbitrary limitations on student progress.
- However, as Dewey notes in *Democracy and Education*, "not the target but hitting the target is the end in view," so more important than learning specific concepts is learning how to learn, and gaining competencies that will aid in the hitting of many targets, both current and those yet to be imagined.
- Therefore, education must be forward-leaning, recognizing that the "real world" for which students are being prepared is dynamic, with exponential changes especially in technology.
- To adequately prepare students for a future that is difficult to even imagine, a personalized education program places the greatest value on creativity and the ability to engage in independent, critical thinking.
- Students are guided to become self-cognizant, life-long learners prepared not just for today's world but equipped to continue learning for whatever the future holds.
- As such, a personalized education program is student-driven; students take an active role in their education, from the development of their education plans to collaboration with course instructors.
- Instead of taking authoritative roles or seen as the sole purveyors of knowledge, instructors are instead mentors, offering guidance and feedback while respecting the diverse needs and goals of each student.
- Students also learn to identify and understand cause-and-effect relationships, recognizing connections that span and go beyond content areas, and engage in proactive behaviors leading to personal development and engagement in the service of their community and beyond.