



*Diocese of Venice Curricular Standards  
Grades 9-12 (+8th Grade)*

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ELA

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*English Language Arts (ELA)  
Standards*

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Diocese of Venice  
Curricular Standards:  
**English Language Arts (ELA)**

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*High School Grades 9-12  
(+8th Grade)*



# *Basic Principles underlying All Standards to be used for the Planning of Curriculum for the Diocese of Venice*

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Basic principles which inform all Catholic education in the Schools of the Diocese of Venice are:

- All knowledge, in some way, reflects God’s Truth, Beauty and Goodness.
- Curriculum and instruction enable deeper incorporation of the children into the Church, the formation of community within the school; and respect for the uniqueness and dignity of each person as created in the image of God.
- Education fosters growth in Christian virtue and contributes to development and formation of the whole person in light of his/her ultimate end and the good of the society of which he/she is a member.
- Each subject is to be examined in the context of the Catholic faith and is to be illuminated by Gospel values.
- Learning and formation occur in the Catholic school without separation as does the development of each student on both the natural and supernatural levels.
- Curriculum and instruction seeks to promote a synthesis of faith, life and culture and to form students as disciples of Jesus.



# *Diocese Of Venice Catholic School Standards For English Language Arts (ELA)*



Using writing, speaking, and listening as the communication vehicle for their search for truth, beauty and goodness, students will demonstrate increasing sophistication in all aspects of language usage. Vocabulary, syntax, and the development, organization and presentation of ideas, will reflect the utilization of increasingly arduous content and sources.

The cultural heritage of mankind includes other values apart from the specific ambient of truth. When the Christian teacher helps a pupil to grasp, appreciate and assimilate these values, he is guiding him towards eternal realities. This movement towards the Uncreated Source of all knowledge highlights the importance of teaching for the growth of faith. *The Catholic School*, #42

Reading and literature, as in all truths, are best presented through the perspective of our Catholic faith. These standards are directed toward fostering students' understanding and working knowledge of reading, from the alphabetic principle to comprehension of complex literary and informational text. The aim of these standards "is not merely the attainment of knowledge but the acquisition of values and discovery of truth." - Sacred Congregation for the Catholic Education, (*The Catholic School*, #39)

Literary and artistic works depict the struggles of societies, of families, and of individuals. They spring from the depths of the human heart, revealing its lights and its shadows, its hope and its despair. The Christian perspective goes beyond the merely human, and offers more penetrating criteria for understanding the human struggle and the mysteries of the human spirit. *Religious Dimensions of Education in a Catholic School: Guidelines for Reflection and Renewal*, # 61

The increased attention given to science and technology must not lead to a neglect of the humanities: philosophy, history, literature and art. Since earliest times, each society has developed and handed on its artistic and literary heritage, and our human patrimony is nothing more than the sum total of this cultural wealth... The artistic and literary patrimony of Christianity is vast and gives visible testimony to a faith that has been handed down through centuries. *Religious Dimensions of Education in a Catholic School: Guidelines for Reflection and Renewal*, #60

In a Catholic school, curricular formation....

1. Involves the integral formation of the whole person, body, mind and spirit, in light of his or her ultimate end and the good of society. (1)

2. Promotes human virtues and the dignity of human person, as created in the image and likeness of God and modeled on the person of Jesus Christ. <sup>2</sup>
3. Seeks to know and understand objective reality which includes transcendent Truth, is knowable by reason and faith, and finds its origin, unity, and end in God.
4. Develops a Catholic worldview and enables a deeper incorporation of the student into the heart of the Catholic Church.
5. Encourages a synthesis of faith, life, and culture.

**ELA 8<sup>th</sup> Grade**

LA.8.LA	Language Arts: Grade 8: Language			
	LA.8.LA.1	Conventions of Standard English		
			LA.8.LA.1.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking, especially ;Active and passive voice ;Indicative, imperative, interrogative, conditional and subjunctive moods; Subject/verb agreement; Appositives; Coordinating and subordinating conjunctions.
			LA.8.LA.1.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing, especially; Use of commas, ellipses, and dashes; Apostrophe, semicolon, colon, and hyphen; Complex and compound sentences; Fragments and run-ons; Phrases and clauses
	LA.8.LA.2	Knowledge of Language		
			LA.8.LA.2.1	Use knowledge of language and its convention when writing, speaking, reading, or listening.
	LA.8.LA.3	Vocabulary Acquisition and Use		
			LA.8.LA.3.1	Acquire and use grade-appropriate vocabulary; use a range of strategies to determine meaning and enhance vocabulary (including context clues and reference materials).
			LA.8.LA.3.2	Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., precede, recede, and secede).
			LA.8.LA.3.3	Demonstrate understanding of figurative language and literary devices, such as: simile, metaphor, personification, onomatopoeia, hyperbole, alliteration, imagery, and irony
			LA.8.LA.3.4	Distinguish among the connotations of words with similar denotations (e.g., bullheaded, willful, firm, persistent, resolute).
LA.8.W	Language Arts: Grade 8: Writing			
	LA.8.W.1	Text Types and Purposes		

				LA.8.W.1.1	Write arguments to support claims with clear reasons and relevant evidence; Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize reasons and evidence logically to persuade the audience; Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence; Establish and maintain a formal style; Provide a concluding statement or section that follows from and supports the argument presented.
				LA.8.W.1.2	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through selection, organization, and analysis of relevant content; Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful in aiding comprehension; Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples; Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts; Use precise language and domain-specific vocabulary to inform about or explain the topic; Establish and maintain a formal style; Provide a concluding statement or section that follows from and supports the information or explanation presented.
				LA.8.W.1.3	Write narratives to engage readers with elements of harmony and unity; Engage the reader by establishing a point of view, developing characters, organizing a plot sequence that unfolds naturally/logically; Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters; Use a variety of transition words, phrases, and clauses to convey sequence and show the relationships among experiences and events; Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events; Provide a conclusion that follows from and reflects on the narrated experiences or events.
		LA.8.W.2	Production and Distribution of Writing		
				LA.8.W.2.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience; create a range of writing, such as: poetry, plays, stories, articles, reports, essays, and speeches.
				LA.8.W.2.2	Write a compare/contrast essay or speech.
				LA.8.W.2.3	Produce texts (print or non-print) that explore a variety of cultures and perspectives and are used to develop a religious, moral, and social sense.



				LA.8.W.2.4	Develop/strengthen writing as needed by planning, revising, editing, rewriting, focusing on how well the purpose and audience have been addressed.
				LA.8.W.2.5	Use technology to produce and publish writing and present relationships between information and ideas efficiently as well as to interact and collaborate with others.
		LA.8.W.3	Research to Build and Present Writing		
				LA.8.W.3.1	Generate a thesis statement to guide the structure and development of ideas.
				LA.8.W.3.2	Gather relevant information from multiple print and digital sources, using search terms effectively; assess credibility/accuracy of each source; quote or paraphrase ideas from sources while avoiding plagiarism and following the Modern Language Association (MLA) format for citation.
		LA.8.W.4	Range of Writing		
				LA.8.W.4.1	Write routinely over extended timeframes (time for research, reflection, and revision) and shorter time frames (a single sitting) for a range of tasks, purpose and audiences.
		LA.8.W.5	Responding to Literature		
				LA.8.W.5.1	Create a presentation, artwork, or text in response to a literary work with a commentary that identifies connections and explains divergences from the original.
				LA.8.W.5.2	Make well-supported moral, cultural, textual, and thematic connections across the genres.
LA.8.SL	Language Arts: Grade 8: Speaking and Listening				
		LA.8.SL.1	Comprehension and Collaboration		
				LA.8.SL.1.1	Engage effectively in range collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners; Come to discussions prepared, having read or researched material under study; Follow rules for congenial discussion and decision-making, while working in cooperative learning groups; Pose questions that connect ideas and respond to others' questions and comments with relevant evidence and observations; Acknowledge new information expressed by others, and qualify views in light of the evidence presented; Seek to understand other perspectives and cultures.
				LA.8.SL.1.2	Adjust use of spoken, written, and visual language to a variety of contexts, audiences, and purposes; use appropriate eye contact, body language, volume, pace, and enunciation.
				LA.8.SL.1.3	Analyze the purpose of information presented in diverse media and formats. Evaluate the motives (e.g., social, commercial, political) behind its presentation.

				LA.8.SL.1.4	Use experiences and knowledge of language and logic to address problems creatively and advocate persuasively.
				LA.8.SL.1.5	Delineate a speaker's argument and specific claims, evaluating the soundness of reasoning and the relevance of evidence.
		LA.8.SL.2	Presentation of Knowledge and Ideas		
				LA.8.SL.2.1	Present claims and findings in a focused, coherent manner with relevant evidence, valid reasoning, and selective details.
				LA.8.SL.2.2	Integrate multimedia and visual displays into presentations to clarify information, strengthen evidence, and add interest.
LA.8.L	Language Arts: Grade 8: Literature				
		LA.8.L.1	Key Ideas and Details		
				LA.8.L.1.1	Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
				LA.8.L.1.2	Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
				LA.8.L.1.3	Analyze how particular lines of dialogue or incidents in a story or play propel the action, reveal aspects of a character, or provoke a decision.
		LA.8.L.2	Craft and Structure		
				LA.8.L.2.1	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone.
				LA.8.L.2.2	Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.
		LA.8.L.3	Integration of Knowledge and Ideas		
				LA.8.L.3.1	Analyze the extent to which a film or live production of a story or play stays faithful to the text or script, evaluating the choices made by the director or actors.
				LA.8.L.3.2	Analyze how writers draw upon themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible.
				LA.8.L.3.3	Interpret, analyze, and evaluate narratives, poetry, and plays by making connections to other texts, ideas, cultural perspectives, eras, personal events, and situations
				LA.8.L.3.4	Use criteria to classify, select, and evaluate texts to make informal judgments about the quality of the pieces.

LA.8.IT	Language Arts: Grade 8: Informational and Non-Fiction Text				
		LA.8.IT.1	Key Ideas and Details		
				LA.8.IT.1.1	Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
				LA.8.IT.1.2	Summarize a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas.
				LA.8.IT.1.3	Analyze how a text makes connections to individuals, ideas, or events.
		LA.8.IT.2	Craft and Structure		
				LA.8.IT.2.1	Determine the meaning of words and phrases as used in a text, including figurative, connotative, and technical meanings; analyze impact of specific word choices on meaning and tone, including analogies and allusions to other text.
				LA.8.IT.2.2	Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.
				LA.8.IT.2.3	Determine an author's point of view and/or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.
		LA.8.IT.3	Integration of Knowledge and Ideas		
				LA.8.IT.3.1	Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.
				LA.8.IT.3.2	Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient.
				LA.8.IT.3.3	Analyze two or more texts that provide conflicting information on the same topic and identify where the texts disagree on matters of fact and interpretation.
		LA.8.IT.4	Range of Reading		
				LA.8.IT.4.1	Read non-fiction texts with accuracy and comprehension.

## ELA 9-12 Catholic Integrated Faith Standards

LA.912.IF	Integration of Faith: Grades 9-12	
	LA.912.IF	Catholic Curricular Standards and Dispositions in English Language Arts
	LA.12.IF.1	Analyze literature that reflects the transmission of a Catholic culture and worldview.
	LA.12.IF.2	Analyze works of fiction and non-fiction to uncover authentic Truth.
	LA.12.IF.3	Analyze carefully chosen selections to uncover the proper nature of man, his problems, and his experiences in trying to know and perfect both himself and the world.
	LA.12.IF.4	Share how literature can contribute to strengthening one ' s moral character.
	LA.12.IF.5	Identify how literature interprets the human condition, human behaviors, and human actions in its redeemed and unredeemed state.
	LA.12.IF.6	Describe how the rich spiritual knowledge communicated through fairy tales, fables, myths, parables, and other stories is a reflection on the truth and development of a moral imagination and the mystery, danger, and wonder of human experience.
	LA.12.IF.7	Describe the importance of thinking with images informed by classic Christian and Western symbols and archetypes, including their important role in understanding the battle between good and evil and their role in making visible realities that are complex, invisible, and spiritual.
	LA.12.IF.8	Explain from a Catholic perspective how literature addresses critical questions related to man, such as: How ought men live in community with each other? What are an individual's duties, freedoms, and restraints? What are a society's duties, freedoms, and restraints? What is the relationship between man and God? Between man and the physical world? What is the nature of human dignity and the human spirit? What is love? What is a good life?
	LA.12.IF.9	Describe how poets and writers use language to convey truths that are universal and transcendent.
	LA.12.IF.10	Analyze critical values presented in literature and the degree to which they are in accord or discord with Catholic norms.
	LA.12.IF.11	Use imagination to create dialogue between the reader and fictional characters by entering into the lives of the characters and uncovering deeper meanings, inferences, and relationships between the characters, nature, and God.
	LA.12.IF.12	Explain how literature assists in transcending the limited horizon of human reality.
	LA.12.IF.13	Evaluate complex literary selections for all that is implied in the concept of a person as defined from a Catholic perspective.
	LA.12.IF.14	Analyze how literature helps identify, interpret, and assimilate the cultural patrimony handed down from previous generations.
	LA.12.IF.15	Summarize how literature can reflect the historical and sociological culture of the time period in which it was written and help better understand ourselves and other cultures and times.
	LA.12.IF.16	Demonstrate cultural literacy and familiarity with the great works and authors of the world and in particular the Western canon.
	LA.12.IF.17	Explain how the powerful role of poetic knowledge, the moral imagination, connotative language, and artistic creativity explore difficult and unwieldy elements of the human condition, which is not always explainable with technical linguistic analysis or scientific rationalism.
	LA.12.IF.18	Analyze the author's reasoning and discover the author's intent.

		LA.12.IF.19	Describe how the gratuitousness of literary and artistic creation reflects the divine prerogative. Explain the role of man as a maker, artist, poet, and creator, and how the use of language to create is reflective of our being made in the image and likeness of God.
		LA.12.IF.20	Explain how language can be used as a bridge for communion with others for the betterment of all involved.
		LA.12.IF.21	Write in various ways to naturally order thoughts to the truth with an accurate expression of intent, knowledge, and feelings.
		LA.12.IF.22	Use grammar as a means of signifying concepts and the relationship to reason.
		LA.12.IF.23	Demonstrate the use of effective rhetorical skills in the service and pursuit of truth.
		LA.12.IF.24	Share how literature fosters both prudence and sound judgment in the human person.
		LA.12.IF.25	Develop empathy, care, and compassion for a character as crisis or choice in order to transcend oneself, build virtue, and better understand one's own disposition and humanity.
		LA.12.IF.26	Display the virtues and values evident within stories that involve an ideal and take a stand for love, faith, courage, fidelity, truth, beauty, goodness, and all virtues.
		LA.12.IF.27	Identify with beautifully told and well-crafted works, especially those with elements of unity, harmony, and radiance of form.
		LA.12.IF.28	Share how literature ignites the creative imagination by presenting in rich context amazing lives and situations told by humanity as best storytellers and most alive intellects.
		LA.12.IF.29	Display a sense of the goodness by examining the degree in which characters significantly possess or lack the perfections proper to a) their nature as human persons, b) their proper role in society as understood in their own culture or the world of the text, c) the terms of contemporary culture, and d) the terms of Catholic tradition and moral norms.
		LA.12.IF.30	Delight and wonder through the reading of creative, sound, and healthy stories, plays and poems.

**ELA 9<sup>th</sup>-10<sup>th</sup> Grade**

LAFS.910.L	Grades 9-10 Language Standards			
		LAFS.910.L.1	Conventions of Standard English	
				LAFS.910.L.1.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; Use parallel structure; Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to convey specific meanings and add variety and interest to writing or presentations.
				LAFS.910.L.1.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing; Use a semicolon, with or without a conjunctive adverb, to link two or more closely related independent clauses; Use a colon to introduce a list or quotation; Spell correctly.
		LAFS.910.L.2	Knowledge of Language	
				LAFS.910.L.2.1 Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening; Write and edit work so that it conforms to the guidelines in a style manual (e.g., MLA Handbook, Turabian, Manual for Writers) appropriate for the discipline and writing type.
		LAFS.910.L.3	Vocabulary Acquisition and Use	
				LAFS.910.L.3.1 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9th-10th grade reading and content, choosing flexibly from a range of strategies; Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word, position or function in a sentence) as a clue to the meaning of a word or phrase; Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis, analytical; advocate, advocacy); Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology; Verify the preliminary determination of the meaning of a word

					or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
				LAFS.910.L.3.2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings; Interpret figures of speech (e.g., euphemism, oxymoron) in context and analyze their role in the text; Analyze nuances in the meaning of words with similar denotations.
				LAFS.910.L.3.3	Acquire and use accurate general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.
LAFS.910.RI	Grades 9-10 Reading Standards for Informational Text				
		LAFS.910.RI.1	Key Ideas and Details		
				LAFS.910.RI.1.1	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
				LAFS.910.RI.1.2	Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
				LAFS.910.RI.1.3	Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.
		LAFS.910.RI.2	Craft and Structure		
				LAFS.910.RI.2.1	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).
				LAFS.910.RI.2.2	Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).
				LAFS.910.RI.2.3	Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.
		LAFS.910.RI.3	Integration of Knowledge and Ideas		
				LAFS.910.RI.3.1	Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.

				LAFS.910.RI.3.2	Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.
				LAFS.910.RI.3.3	Analyze seminal U.S. documents of historical and literary significance (e.g: Washington’s Farewell Address, the Gettysburg Address, Roosevelt’s Four Freedoms speech, Dr. King’s Letter from Birmingham Jail), including how they address related themes and concepts.
		LAFS.910.RI.4	Range of Reading and Level of Text Complexity		
				LAFS.910.RI.4.1	By the end of grade 9, read and comprehend literary nonfiction in the grades 9-10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literary nonfiction at the high end of the grades 9-10 text complexity band independently and proficiently.
LAFS.910.RH	Grades 9-10 Reading Standards for Literacy in History/Social Studies 6-12				
		LAFS.910.RH.1	Key Ideas and Details		
				LAFS.910.RH.1.1	Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.
				LAFS.910.RH.1.2	Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.
				LAFS.910.RH.1.3	Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.
		LAFS.910.RH.2	Craft and Structure		
				LAFS.910.RH.2.1	Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social science.
				LAFS.910.RH.2.2	Analyze how a text uses structure to emphasize key points or advance an explanation or analysis.
				LAFS.910.RH.2.3	Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.



		LAFS.910.RH.3	Integration of Knowledge and Ideas		
				LAFS.910.RH.3.1	Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.
				LAFS.910.RH.3.2	Assess the extent to which the reasoning and evidence in a text support the author's claims.
				LAFS.910.RH.3.3	Compare and contrast treatments of the same topic in several primary and secondary sources.
		LAFS.910.RH.4	Range of Reading and Level of Text Complexity		
				LAFS.910.RH.4.1	By the end of grade 10, read and comprehend history/social studies texts in the grades 9-10 text complexity band independently and proficiently.
LAFS.910.RST	Grades 9-10 Reading Standards for Literacy in Science and Technical Subjects 6-12				
		LAFS.910.RST.1	Key Ideas and Details		
				LAFS.910.RST.1.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
				LAFS.910.RST.1.2	Determine the central ideas or conclusions of a text; trace the text, explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
				LAFS.910.RST.1.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.
		LAFS.910.RST.2	Craft and Structure		
				LAFS.910.RST.2.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.
				LAFS.910.RST.2.2	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).
				LAFS.910.RST.2.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.

		LAFS.910.RST.3	Integration of Knowledge and Ideas		
				LAFS.910.RST.3.1	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.
				LAFS.910.RST.3.2	Assess the extent to which the reasoning and evidence in a text support the author’s claim or a recommendation for solving a scientific or technical problem.
				LAFS.910.RST.3.3	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.
		LAFS.910.RST.4	Range of Reading and Level of Text Complexity		
				LAFS.910.RST.4.1	By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.
LAFS.910.RL	Grades 9-10 Reading Standards for Literature				
		LAFS.910.RL.1	Key Ideas and Details		
				LAFS.910.RL.1.1	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
				LAFS.910.RL.1.2	Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
				LAFS.910.RL.1.3	Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.
		LAFS.910.RL.2	Craft and Structure		
				LAFS.910.RL.2.1	Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).

				LAFS.910.RL.2.2	Analyze how an author’s choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashbacks) create such effects as mystery, tension, or surprise.
				LAFS.910.RL.2.3	Analyze a particular point of view or cultural experience reflected in a work of literature from outside the United States, drawing on a wide reading of world literature.
		LAFS.910.RL.3	Integration of Knowledge and Ideas		
				LAFS.910.RL.3.1	Analyze the representation of a subject or a key scene in two different artistic mediums, including what is emphasized or absent in each treatment (e.g., Auden, <i>Musée des Beaux Arts</i> , Breughel's <i>Landscape with the Fall of Icarus</i> ).
				LAFS.910.RL.3.2	Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare).
		LAFS.910.RL.4	Range of Reading and Level of Text Complexity		
				LAFS.910.RL.4.1	By the end of grade 9, read and comprehend literature, including stories, dramas, and poems, in the grades 9-10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 9-10 text complexity band independently and proficiently.
LAFS.910.SL	Grades 9-10 Standards for Speaking and Listening				
		LAFS.910.SL.1	Comprehension and Collaboration		
				LAFS.910.SL.1.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively; Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas; Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate

					views), clear goals and deadlines, and individual roles as needed; Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions; Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.
				LAFS.910.SL.1.2	Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
				LAFS.910.SL.1.3	Evaluate a speaker, a point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.
		LAFS.910.SL.2	Presentation of Knowledge and Ideas		
				LAFS.910.SL.2.1	Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.
				LAFS.910.SL.2.2	Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
				LAFS.910.SL.2.3	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
LAFS.910.W	Grades 9-10 Writing Standards				
		LAFS.910.W.1	Text Types and Purposes		
				LAFS.910.W.1.1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence; Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence; Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audiences' knowledge level and concerns; Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence,

					and between claim(s) and counterclaims; Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing; Provide a concluding statement or section that follows from and supports the argument presented.
				LAFS.910.W.1.2	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content; Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aid comprehension; Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audiences' knowledge of the topic; Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts; Use precise language and domain-specific vocabulary to manage the complexity of the topic; Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing; Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
				LAFS.910.W.1.3	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences; Engage and orient the reader by setting out a problem, situation, or observation, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events; Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters; Use a variety of techniques to sequence events so that they build on one another to create a coherent whole; Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters; Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.
		LAFS.910.W.2	Production and Distribution of Writing		
				LAFS.910.W.2.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

					(Grade-specific expectations for writing types are defined in standards 1-3 above.)
				LAFS.910.W.2.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
				LAFS.910.W.2.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
		LAFS.910.W.3	Research to Build and Present Knowledge		
				LAFS.910.W.3.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
				LAFS.910.W.3.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
				LAFS.910.W.3.3	Draw evidence from literary or informational texts to support analysis, reflection, and research; Apply grades 9-10 Reading standards to literature (e.g., Analyze how an author draws on and transforms source material in a specific work [e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare]); Apply grades 9-10 Reading standards to literary nonfiction (e.g., Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning).
		LAFS.910.W.4	Range of Writing		
				LAFS.910.W.4.1	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
LAFS.910.WHS T	Grades 9-10 Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects				

		LAFS.910.WHST.1	Text Types and Purposes		
				LAFS.910.WHST.1.1	Write arguments focused on discipline-specific content; Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence; Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audiences' knowledge level and concerns; Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims; Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing; Provide a concluding statement or section that follows from or supports the argument presented.
				LAFS.910.WHST.1.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes; Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aid comprehension; Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audiences' knowledge of the topic; Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concept; Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers; Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing; Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
		LAFS.910.WHST.2	Production and Distribution of Writing		
				LAFS.910.WHST.2.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

				LAFS.910.WHST.2.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
				LAFS.910.WHST.2.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
		LAFS.910.WHST.3	Research to Build and Present Knowledge		
				LAFS.910.WHST.3.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
				LAFS.910.WHST.3.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
				LAFS.910.WHST.3.3	Draw evidence from informational texts to support analysis, reflection, and research.
		LAFS.910.WHST.4	Range of Writing		
				LAFS.910.WHST.4.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
<b>ELA 11<sup>th</sup>-12<sup>th</sup> Grade</b>					
LAFS.1112.L	Grades 11-12 Language Standards				
		LAFS.1112.L.1	Conventions of Standard English		
				LAFS.1112.L.1.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking; Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested; Resolve issues of complex or contested usage, consulting references (e.g., Merriam-Webster's Dictionary of English Usage, Garner's Modern American Usage) as needed.



				LAFS.1112.L.1.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing; Observe hyphenation convention; Spell correctly.
		LAFS.1112.L.2	Knowledge of Language		
				LAFS.1112.L.2.3	Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening; Vary syntax for effect, consulting references (e.g., Tufte’s Artful Sentences) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.
		LAFS.1112.L.3	Vocabulary Acquisition and Use		
				LAFS.1112.L.3.1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11-12 reading and content, choosing flexibly from a range of strategies; Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word’s position or function in a sentence) as a clue to the meaning of a word or phrase; Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable); Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage; Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
				LAFS.1112.L.3.2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings; Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text; Analyze nuances in the meaning of words with similar denotations.
				LAFS.1112.L.3.3	Acquire and use accurate general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.
LAFS.1112.RI	Grades 11-12 Reading Standards for Informational Text				
		LAFS.1112.RI.1	Key Ideas and Details		

				LAFS.1112.RI.1.1	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
				LAFS.1112.RI.1.2	Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.
				LAFS.1112.RI.1.3	Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.
		LAFS.1112.RI.2	Craft and Structure		
				LAFS.1112.RI.2.1	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).
				LAFS.1112.RI.2.2	Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.
				LAFS.1112.RI.2.3	Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness or beauty of the text.
		LAFS.1112.RI.3	Integration of Knowledge and Ideas		
				LAFS.1112.RI.3.1	Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.
				LAFS.1112.RI.3.2	Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., The Federalist, presidential addresses).
				LAFS.1112.RI.3.3	Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including The Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.

		LAFS.1112.RI.4	Range of Reading and Level of Text Complexity		
				LAFS.1112.RI.4.1	By the end of grade 11, read and comprehend literary nonfiction in the grades 11-12 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11-12 text complexity band independently and proficiently.
LAFS.1112.RH	Grades 11-12 Reading Standards for Literacy in History/Social Studies 6-12				
		LAFS.1112.RH.1	Key Ideas and Details		
				LAFS.1112.RH.1.1	Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
				LAFS.1112.RH.1.2	Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
				LAFS.1112.RH.1.3	Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.
		LAFS.1112.RH.2	Craft and Structure		
				LAFS.1112.RH.2.1	Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines faction in Federalist No. 10).
				LAFS.1112.RH.2.2	Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
				LAFS.1112.RH.2.3	Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.
		LAFS.1112.RH.3	Integration of Knowledge and Ideas		
				LAFS.1112.RH.3.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

				LAFS.1112.RH.3.2	Evaluate an author’s premises, claims, and evidence by corroborating or challenging them with other information.
				LAFS.1112.RH.3.3	Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.
		LAFS.1112.RH.4	Range of Reading and Level of Text Complexity		
				LAFS.1112.RH.4.1	By the end of grade 12, read and comprehend history/social studies texts in the grades 11-12 text complexity band independently and proficiently.
LAFS.1112.RST	Grades 11-12 Reading Standards for Literacy in Science and Technical Subjects 6-12				
		LAFS.1112.RST.1	Key Ideas and Details		
				LAFS.1112.RST.1.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.
				LAFS.1112.RST.1.2	Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
				LAFS.1112.RST.1.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
		LAFS.1112.RST.2	Craft and Structure		
				LAFS.1112.RST.2.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.
				LAFS.1112.RST.2.2	Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.
				LAFS.1112.RST.2.3	Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.
		LAFS.1112.RST.3	Integration of Knowledge and Ideas		
				LAFS.1112.RST.3.1	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

				LAFS.1112.RST.3.2	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.
				LAFS.1112.RST.3.3	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
		LAFS.1112.RST.4	Range of Reading and Level of Text Complexity		
				LAFS.1112.RST.4.1	By the end of grade 12, read and comprehend science/technical texts in the grades 11-12 text complexity band independently and proficiently.
LAFS.1112.RL	Grades 11-12 Reading Standards for Literature				
		LAFS.1112.RL.1	Key Ideas and Details		
				LAFS.1112.RL.1.1	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
				LAFS.1112.RL.1.2	Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.
				LAFS.1112.RL.1.3	Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).
		LAFS.1112.RL.2	Craft and Structure		
				LAFS.1112.RL.2.1	Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)
				LAFS.1112.RL.2.2	Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.
				LAFS.1112.RL.2.3	Analyze a case in which grasping a point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).

		LAFS.1112.RL.3	Integration of Knowledge and Ideas		
				LAFS.1112.RL.3.1	Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text. (Include at least one play by Shakespeare and one play by an American dramatist.)
				LAFS.1112.RL.3.2	Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics.
		LAFS.1112.RL.4	Range of Reading and Level of Text Complexity		
				LAFS.1112.RL.4.1	By the end of grade 11, read and comprehend literature, including stories, dramas, and poems, in the grades 11-12 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11-12 text complexity band independently and proficiently.
LAFS.1112.SL	Grades 11-12 Standards for Speaking and Listening				
		LAFS.1112.SL.1	Comprehension and Collaboration		
				LAFS.1112.SL.1.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively; Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas; Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed; Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives; Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when

					possible; and determine what additional information or research is required to deepen the investigation or complete the task.
				LAFS.1112.SL.1.2	Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.
				LAFS.1112.SL.1.3	Evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.
		LAFS.1112.SL.2	Presentation of Knowledge and Ideas		
				LAFS.1112.SL.2.1	Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.
				LAFS.1112.SL.2.2	Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
				LAFS.1112.SL.2.3	Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.
LAFS.1112.W	Grades 11-12 Writing Standards				
		LAFS.1112.W.1	Text Types and Purposes		
				LAFS.1112.W.1.1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence; Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence; Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audiences’ knowledge level, concerns, values, and possible biases; Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims; Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in

					which they are writing; Provide a concluding statement or section that follows from and supports the argument presented.
				LAFS.1112.W.1.2	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content; Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aid comprehension; Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience, the knowledge of the topic; Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concept; Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing; Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
				LAFS1112.W.1.3	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences; Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events; Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters; Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution); Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters; Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.
		LAFS.1112.W.2	Production and Distribution of Writing		



				LAFS.1112.W.2.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
				LAFS.1112.W.2.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
				LAFS.1112.W.2.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
		LAFS.1112.W.3	Research to Build and Present Knowledge		
				LAFS.1112.W.3.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
				LAFS.1112.W.3.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
				LAFS.1112.W.3.3	Draw evidence from literary or informational texts to support analysis, reflection, and research; Apply grades 11-12 Reading standards to literature (e.g., Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics); Apply grades 11-12 Reading standards to literary nonfiction (e.g. Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., The Federalist, presidential addresses]).
		LAFS.1112.W.4	Range of Writing		

				LAFS.1112.W.4.1	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
LAFS.1112.WHST	Grades 11-12 Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects				
		LAFS.1112.WHST.1	Text Types and Purposes		
				LAFS.1112.WHST.1.1	Write arguments focused on discipline-specific content; Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence; Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience, the knowledge level, concerns, values, and possible biases; Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims; Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing; Provide a concluding statement or section that follows from or supports the argument presented.
				LAFS.1112.WHST.1.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes; Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension; Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic; Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts; Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers; Provide a concluding statement or section that follows from and

					supports the information or explanation provided (e.g., articulating implications or the significance of the topic).
		LAFS.1112.WHST.2	Production and Distribution of Writing		
				LAFS.1112.WHST.2.1	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
				LAFS.1112.WHST.2.2	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
				LAFS.1112.WHST.2.3	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
		LAFS.1112.WHST.3	Research to Build and Present Knowledge		
				LAFS.1112.WHST.3.1	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
				LAFS.1112.WHST.3.2	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
				LAFS.1112.WHST.3.3	Draw evidence from informational texts to support analysis, reflection, and research.
		LAFS.1112.WHST.4	Range of Writing		
				LAFS.1112.WHST.4.1	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
EU1	Big Idea 1: Question and Explore				
		EU1.1	Personal interest and intellectual curiosity inspire investigation of topics or issues that may or may not be clearly defined. A well-crafted investigation explores the complexity of an issue or topic. Further inquiry can lead to unexpected conclusions, resolutions, innovations, or solutions.		

			LO1.1A	Contextualizing and identifying the complexities of a problem or issue.
			LO1.1B	Posing questions and seeking out answers that reflect multiple, divergent, or contradictory perspectives.
			LO1.1C	Identifying a topic of inquiry.
			LO1.1D	Articulating the purpose and significance of the scholarly inquiry
			LO1.1E	Developing and revising a focused research question/project goal.
		EU1.2	Strengthening understanding of a concept or issue requires questioning existing ideas, using what is known to discover what is not known, and making connections to prior knowledge.	
			LO1.2A	Retrieving, questioning, organizing, and using prior knowledge about a topic.
		EU1.3	The investigative process is aided by the effective organization, management, and selection of resources and information. Appropriate technologies and tools enable the scholar to become more efficient, productive, and credible.	
			LO1.3A	Accessing and managing information using effective strategies.
		EU1.4	The relevance and credibility of the source of information is determined by the context of its use.	
			LO1.4A	Evaluating the relevance and credibility of the source of information and data in relation to the inquiry.
		EU1.5	There are multiple ways to investigate questions, problems, and issues. Methods should be aligned with the purpose of the inquiry.	
			LO1.5A	Identifying the information needed for the context of the inquiry.
			LO1.5B	Designing, planning, and implementing a scholarly inquiry.
			LO1.5C	Demonstrating perseverance through setting goals, managing time, and working independently on a long-term project.
			LO1.5D	Employing ethical research practices.
EU2	Big Idea 2: Understand and Analyze			
		EU2.1	Authors express their ideas, perspectives, and/or arguments through their works. The first step in evaluating an author's perspective or argument is to comprehend it. Such comprehension requires reading, viewing, listening, and thinking critically	
			LO2.1A	Employing appropriate reading strategies and reading critically for a specific purpose.
			LO2.1B	Summarizing and explaining a text's main idea or aim while avoiding faulty generalizations and oversimplification.
		EU2.2	Authors choose evidence to shape and support their arguments. Individuals evaluate the line of reasoning and evidence to determine to what extent they believe or accept an argument.	
			LO2.2A	Explaining and analyzing the logic and line of reasoning of an argument.
			LO2.2B	Evaluating the relevance and credibility of evidence used to support an argument, taking context into consideration.
			LO2.2C	Evaluating the validity of an argument.

				LO2.2D	Evaluating and critiquing others, inquiries, studies, artistic works, and/or perspectives.
		EU2.3	Arguments have implications and consequences.		
				LO2.3A	Connecting an argument to broader issues by examining the implications of the author's claim.
				LO2.3B	Evaluating potential resolutions, conclusions, or solutions to problems or issues raised by an argument.
EU3	Big Idea 3: Evaluate Multiple Perspectives				
		EU3.1	Different perspectives often lead to competing and alternative arguments. The complexity of an issue emerges when people bring these differing, multiple perspectives to the conversation.		
				LO3.1A	Identifying, comparing, and interpreting multiple perspectives on or arguments about an issue.
				LO3.1B	Evaluating objections, implications, and limitations of alternate, opposing, or competing perspectives or arguments.
EU4	Big Idea 4: Synthesize Ideas				
		EU4.1	Scholarly works convey perspectives and demonstrate effective reasoning that have been selected for the intended audience, purpose, and situation.		
				LO4.1A	Formulating a well reasoned argument, taking the complexities of the problem or issue into consideration.
				LO4.1B	Selecting and consistently applying an appropriate disciplinary or interdisciplinary approach to form a scholarly argument or aesthetic rationale.
		EU4.2	Scholars responsibly and purposefully engage with the evidence to develop a compelling argument or aesthetic rationale.		
				LO4.2A	Interpreting, using, and synthesizing qualitative and/ or quantitative data/information from various perspectives and sources (e.g., primary, secondary, print, nonprint) to develop and support an argument.
				LO4.2B	Providing insightful and cogent commentary that links evidence with claims.
		EU4.3	Responsible participation in the scholarly community requires acknowledging and respecting the prior findings and contributions of others.		
				LO4.3A	Attributing knowledge and ideas accurately and ethically, using an appropriate citation style.
		EU4.4	Forming one's own perspective and reaching new understandings involve innovative thinking and synthesis of existing knowledge with personally generated evidence.		
				LO4.4A	: Extending an idea, question, process, or product to innovate or create new understandings.
		EU4.5	Arguments, choices, and solutions present intended and unintended opportunities and consequences.		

				LO4.5A	Offering resolutions, conclusions, and/or solutions based on evidence considering limitations and implications.
EU5	Big Idea 5: Team, Transform, and Transmit				
		EU5.1	How a perspective or argument is presented affects how people interpret or react to it. The same perspective or argument may be developed or presented differently depending on audience, purpose, and context.		
				LO5.1A(S)	Planning, producing, and presenting a cohesive argument, considering audience, context, and purpose.
				LO5.1A(R)	Planning and producing a cohesive academic paper, considering audience, context, and purpose.
				LO5.1B	Adhering to established conventions of grammar, usage, style, and mechanics.
				LO5.1C	Communicating information through appropriate media using effective techniques of design.
				LO5.1D	Adapting an argument for context, purpose, and/or audience.
				LO5.1E	Engaging an audience by employing effective techniques of delivery or performance.
				LO5.1F	Defending inquiry choices and final product with clarity, consistency, and conviction.
		EU5.2	Teams are most effective when they draw on the diverse perspectives, skills, and backgrounds of team members to address complex, open-ended problems.		
				LO5.2A	Providing individual contributions to overall collaborative effort to accomplish a task or a goal.
				LO5.2A	Fostering constructive team climate, resolving conflicts, and facilitating the contributions of all team members to address complex, open-ended problems.
		EU5.3	Reflection increases learning, self-awareness, and personal growth through identification and evaluation of personal conclusions and their implications.		
				LO5.3A	Reflecting on and revising their own writing, thinking, and creative processes.
				LO5.3B	Reflecting on experiences of collaborative effort.
				LO5.3C	Reflecting on the larger significance of engaging in the overall inquiry process and producing a completed scholarly work.
		EU5.4	Scholars perform, present, and/or produce their work within a larger community. Throughout the inquiry process, scholars interact with and benefit from the scholarly community through thoughtful engagement with the opinions and critiques of others.		
				LO 5.4A	Engaging in peer review to provide constructive responses to one another's work, appropriate to the stage of a project's development.
				LO 5.4B	Engaging in peer review to receive and consider responses to their work.



# *Mathematics Standards*

Diocese of Venice  
Curricular Standards:  
**Mathematics**

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*High School Grades 9-12  
(+8th Grade)*





# *Basic Principles underlying All Standards to be used for the Planning of Curriculum for the Diocese of Venice*

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Basic principles which inform all Catholic education in the Schools of the Diocese of Venice are:

- All knowledge, in some way, reflects God's Truth, Beauty and Goodness.
- Curriculum and instruction enable deeper incorporation of the children into the Church, the formation of community within the school; and respect for the uniqueness and dignity of each person as created in the image of God.
- Education fosters growth in Christian virtue and contributes to development and formation of the whole person in light of his/her ultimate end and the good of the society of which he/she is a member.
- Each subject is to be examined in the context of the Catholic faith and is to be illuminated by Gospel values.
- Learning and formation occur in the Catholic school without separation as does the development of each student on both the natural and supernatural levels.
- Curriculum and instruction seeks to promote a synthesis of faith, life and culture and to form students as disciples of Jesus.



# *Diocese Of Venice Catholic School Standards For Mathematics*



Mathematics is the study of quantity, structure, space, and change. Attention should be paid to the needs of today's society in teaching mathematics by fostering real world application, enabling students to undertake responsibilities in society both locally and globally while witnessing to the faith.

Individual subjects must be taught according to their own particular methods. It would be wrong to consider subjects as mere adjuncts to faith or as a useful means of teaching apologetics. They enable the pupil to assimilate skills, knowledge, intellectual methods and moral and social attitudes, all of which help to develop his personality and lead him to take his place as an active member of the community of man. Their aim is not merely the attainment of knowledge but the acquisition of values and the discovery of truth. *The Catholic School, 39*

## **In a Catholic school, curricular formation...**

1. Involves the integral formation of the whole person, body, mind, and spirit, in light of his or her ultimate end and the good of society.<sup>i</sup>
2. Promotes human virtues and the dignity of the human person, as created in the image and likeness of God and modeled on the person of Jesus Christ.<sup>ii</sup>
3. Seeks to know and understand objective reality which includes transcendent Truth, is knowable by reason and faith, and finds its origin, unity, and end in God.
4. Develops a Catholic worldview and enables a deeper incorporation of the student into the heart of the Catholic Church.<sup>iii</sup>
5. Encourages a synthesis of faith, life, and culture.<sup>iv</sup>

**Mathematics 8<sup>th</sup> Grade Catholic Integrated Faith Standards**

MA.8.IF	Catholic Curricular Standards and Dispositions in Mathematics			
	MA.8.IF	3rd Grade Math Integration of Faith		
			MA.8.IF.1	Recognize the power of the human mind as both a gift from God and a reflection of Him in whose image and likeness we are made.
			MA.8.IF.2	Demonstrate the mental habits of precise, determined, careful, and accurate questioning, inquiry, and reasoning.
			MA.8.IF.3	Connecting the discipline within mathematics to the development of natural virtues
			MA.8.IF.4	Develop lines of inquiry (as developmentally appropriate) to understand why things are true and why they are false.
			MA.8.IF.6	Survey the truths about mathematical objects that are interesting in their own right and independent of human opinions.
			MA.8.IF.5	Display a sense of wonder about mathematical relationships as well as confidence in mathematical certitude.

**8<sup>th</sup> Grade Mathematics**

MA.8.EE	Grade 8 Expressions & Equations			
		MA.8.EE.1	Work with radicals and integer exponents.	
				MA.8.EE.1.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$ .
				MA.8.EE.1.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$ , where $p$ is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
				MA.8.EE.1.3 Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as $3 \times 10^8$ and the population of the world as $7 \times 10^9$ , and determine that the world population is more than 20 times larger.
				MA.8.EE.1.4 Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

		MA.8.EE.2	Understand the connections between proportional relationships, lines, and linear equations.		
				MA.8.EE.2.1	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.
				MA.8.EE.2.2	Use similar triangles to explain why the slope $m$ is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at $b$ .
		MA.8.EE.3	Analyze and solve linear equations and pairs of simultaneous linear equations.		
				MA.8.EE.3.1	Solve linear equations in one variable; a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$ , $a = a$ , or $a = b$ results (where $a$ and $b$ are different numbers); Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.
				MA.8.EE.3.2	Analyze and solve pairs of simultaneous linear equations; a. Understand that solutions to a system of two linear equations in two variables correspond

					to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously; Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6; c. Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.
MA.8.F	Grade 8 Functions				
		MA.8.F.1	Define, evaluate, and compare functions.		
				MA.8.F.1.1	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.
				MA.8.F.1.2	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.
				MA.8.F.1.3	Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function $A = s^2$ giving the area of a

					square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.
		MA.8.F.2	Use functions to model relationships between quantities.		
				MA.8.F.2.1	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
				MA.8.F.2.2	Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.
MA.8.G	Grade 8 Geometry				
		MA.8.G.1	Understand congruence and similarity using physical models, transparencies, or geometry software.		
				MA.8.G.1.1	Verify experimentally the properties of rotations, reflections, and translations; a. Lines are taken to lines, and line segments to line segments of the same length; Angles are taken to angles of the same measure; c. Parallel lines are taken to parallel lines.
				MA.8.G.1.2	Understand that a two-dimensional figure is congruent to another if the second can be obtained

					from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.
				MA.8.G.1.3	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
				MA.8.G.1.4	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
				MA.8.G.1.5	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.
		MA.8.G.2	Understand and apply the Pythagorean Theorem.		
				MA.8.G.2.1	Explain a proof of the Pythagorean Theorem and its converse.
				MA.8.G.2.2	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
				MA.8.G.2.3	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.



		MA.8.G.3	Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.		
				MA.8.G.3.1	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.
MA.8.SP	Grade 8 Statistics & Probability				
		MA.8.SP.1	Investigate patterns of association in bivariate data.		
				MA.8.SP.1.1	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
				MA.8.SP.1.2	Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
				MA.8.SP.1.3	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.
				MA.8.SP.1.4	Understand that patterns of association can also be seen in bivariate categorical data by displaying

					frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?
MA.8.NS	Grade 8 The Number System				
		MA.8.NS.1	Know that there are numbers that are not rational, and approximate them by rational numbers.		
				MA.8.NS.1.1	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
				MA.8.NS.1.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., $\sqrt{2}$ ). For example, by truncating the decimal expansion of $\sqrt{2}$ , show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.

**Mathematics 9<sup>th</sup>-12<sup>th</sup> Grade Catholic Integrated Faith Standards**

MA.912.IF	Catholic Curricular Standards and Dispositions in Mathematics		
	MA.912.IF	High School Math Integration of Faith	
			MA.912.IF.1 Demonstrate the mental habits of precise, determined, careful, and accurate questioning, inquiry, and reasoning in the pursuit of transcendent truths.
			MA.912.IF.2 Develop lines of inquiry to understand why things are true and why they are false.
			MA.912.IF.3 Have faith in the glory and dignity of human reason as both a gift from God and a reflection of Him in whose image and likeness we are made.
			MA.912.IF.4 Explain how mathematics in its reflection of the good, true, and beautiful reveals qualities of being and the presence of God.
			MA.912.IF.5 Display a sense of wonder about mathematical relationships, especially mathematical certitude which is independent of human opinion.
			MA.912.IF.6 Share with others the beauty, harmony, proportion, radiance, and wholeness present in mathematics.
			MA.912.IF.7 Advocate for the pursuit of understanding for its own sake and the intrinsic value or discovery of the true and the beautiful often at the requirement of great sacrifice, discipline, and effort.
			MA.912.IF.8 Exhibit appreciation for the ongoing nature of mathematical inquiry.
			MA.912.IF.9 Exhibit habits of thinking quantitatively and in an orderly manner, especially through immersion in mathematical observations found within creation.

			MA.912.IF.10	Propose how mathematical objects or proofs (such as the golden mean, the Fibonacci numbers, the musical scale, and geometric proofs) suggest divine origin.
			MA.912.IF.11	Exhibit appreciation for the process of discovering meanings and truths existing within the solution of the problem and not just arriving at an answer.
			MA.912.IF.12	Exhibit humility at knowing that as a human being man can only grasp a portion of the truths of the universe.
			MA.912.IF.13	Advance an understanding of the ability of the human intellect to know and the desire of the will to want to know more.
			MA.912.IF.14	Explain the nature of rational discourse and argument and the desirability of precision and deductive certainty which mathematics makes possible and is not possible to the same degree in other disciplines.
			MA.912.IF.15	Demonstrate how sound logical arguments and other processes of mathematics are foundational to its discipline.
			MA.912.IF.16	Recognize how mathematical arguments and processes can be extrapolated to other areas of study, including theology and philosophy.
			MA.912.IF.17	Explain how it is possible to mentally abstract and construct mathematical objects from direct observations of reality and how one's perception of that reality is important to what one is doing (see Appendix F).
			MA.912.IF.18	Recognize personal bias in inquiry and articulate why inquiry should be undertaken in a fair and independent manner.
			MA.912.IF.19	Evaluate the ongoing nature of mathematical inquiry, its inexhaustibility, and its openness to the infinite.
			MA.912.IF.20	Explain man's limitations of understanding and uncovering all mathematical knowledge.

			MA.912.IF.21	Explain how fundamental questions of values, common sense, and religious and human truths and experiences are beyond the scope of mathematical inquiry and its syllogisms.
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**Algebra High School**

MA.912.A-APR	Grades 9-12 Algebra: Arithmetic with Polynomials Rational Expressions				
		MA.912.A-APR.1	Perform arithmetic operations on polynomials		
				MA.912.A-APR.1.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.
		MA.912.A-APR.2	Understand the relationship between zeros and factors of polynomials		
				MA.912.A-APR.2.1	Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number $a$ , the remainder on division by $x - a$ is $p(a)$ , so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$ .
				MA.912.A-APR.2.2	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.
		MA.912.A-APR.3	Use polynomial identities to solve problems		
				MA.912.A-APR.3.1	Prove polynomial identities and use them to describe numerical relationships. For example, the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.
				MA.912.A-APR.3.2	Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of $x$ and $y$ for a positive integer $n$ , where $x$ and $y$ are any numbers, with

					coefficients determined for example by Pascal's Triangle.
		MA.912.A-APR.4	Rewrite rational expressions		
				MA.912.A-APR.4.1	Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$ , where $a(x)$ , $b(x)$ , $q(x)$ , and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$ , using inspection, long division, or, for the more complicated examples, a computer algebra system.
				MA.912.A-APR.4.2	Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.
MA.912.A-CED	Grades 9-12 Algebra: Creating Equations				
		MA.912.A-CED.1	Create equations that describe numbers or relationships		
				MA.912.A-CED.1.1	Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational, absolute, and exponential functions.
				MA.912.A-CED.1.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
				MA.912.A-CED.1.3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. For example,

					represent inequalities describing nutritional and cost constraints on combinations of different foods.
				MA.912.A-CED.1.4	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law $V = IR$ to highlight resistance $R$ .
MA.912.A-REI	Grades 9-12 Algebra: Reasoning with Equations and Inequalities				
		MA.912.A-REI.1	Understand solving equations as a process of reasoning and explain the reasoning		
				MA.912.A-REI.1.1	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
				MA.912.A-REI.1.2	Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.
		MA.912.A-REI.2	Solve equations and inequalities in one variable		
				MA.912.A-REI.2.1	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
				MA.912.A-REI.2.2	Solve quadratic equations in one variable; a. Use the method of completing the square to transform any quadratic equation in $x$ into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form; Solve quadratic equations by inspection (e.g., for $x^2 = 49$ ), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when



					the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers $a$ and $b$ .
		MA.912.A-REI.3	Solve systems of equations		
				MA.912.A-REI.3.1	Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.
				MA.912.A-REI.3.2	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
				MA.912.A-REI.3.3	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = 3x$ and the circle $x^2 + y^2 = 3$ .
				MA.912.A-REI.3.4	Represent a system of linear equations as a single matrix equation in a vector variable.
				MA.912.A-REI.3.5	Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension $3 \times 3$ or greater).
		MA.912.A-REI.4	Represent and solve equations and inequalities graphically		
				MA.912.A-REI.4.1	Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).
				MA.912.A-REI.4.2	Explain why the $x$ -coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$ ; find the solutions approximately, e.g., using technology to graph the functions, make tables of

					values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.
				MA.912.A-REI.4.3	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.
MA.912.A-SSE	Grades 9-12 Algebra: Seeing Structure in Expressions				
		MA.912.A-SSE.1	Interpret the structure of expressions		
				MA.912.A-SSE.1.1	Interpret expressions that represent a quantity in terms of its context; a. Interpret parts of an expression, such as terms, factors, and coefficients; Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret as the product of $P$ and a factor not depending on $P$ .
				MA.912.A-SSE.1.2	Use the structure of an expression to identify ways to rewrite it. For example, see $x^2 - y^2$ as $(x - y)(x + y)$ , thus recognizing it as a difference of squares that can be factored as $(x - y)(x + y)$ .
		MA.912.A-SSE.2	Write expressions in equivalent forms to solve problems		
				MA.912.A-SSE.2.1	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression; a. Factor a quadratic expression to reveal the zeros of the function it defines; Complete the square in a

					quadratic expression to reveal the maximum or minimum value of the function it defines; c. Use the properties of exponents to transform expressions for exponential functions. For example the expression can be rewritten as $a^x = b^y$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.
				MA.912.A-SSE.2.2	Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.
<b>Calculus High School</b>					
MA.912.C	Grades 9-12 Calculus				
		MA.912.C.1	Limits and Continuity		
				MA.912.C.1.1	Understand the concept of limit and estimate limits from graphs and tables of values.
				MA.912.C.1.2	Find limits by substitution.
				MA.912.C.1.3	Find limits of sums, differences, products, and quotients.
				MA.912.C.1.4	Find limits of rational functions that are undefined at a point.
				MA.912.C.1.5	Find one-sided limits.
				MA.912.C.1.6	Find limits at infinity.
				MA.912.C.1.7	Decide when a limit is infinite and use limits involving infinity to describe asymptotic behavior.
				MA.912.C.1.8	Find special limits such as
				MA.912.C.1.9	Understand continuity in terms of limits.
				MA.912.C.1.10	Decide if a function is continuous at a point.
				MA.912.C.1.11	Find the types of discontinuities of a function.

				MA.912.C.1.12	Understand and use the Intermediate Value Theorem on a function over a closed interval.
				MA.912.C.1.13	Understand and apply the Extreme Value Theorem: If $f(x)$ is continuous over a closed interval, then $f$ has a maximum and a minimum on the interval.
		MA.912.C.2	Differential Calculus		
				MA.912.C.2.1	Understand the concept of derivative geometrically, numerically, and analytically, and interpret the derivative as an instantaneous rate of change or as the slope of the tangent line.
				MA.912.C.2.2	State, understand, and apply the definition of derivative.
				MA.912.C.2.3	Find the derivatives of functions, including algebraic, trigonometric, logarithmic, and exponential functions.
				MA.912.C.2.4	Find the derivatives of sums, products, and quotients.
				MA.912.C.2.5	Find the derivatives of composite functions using the Chain Rule.
				MA.912.C.2.6	Find the derivatives of implicitly-defined functions.
				MA.912.C.2.7	Find derivatives of inverse functions.
				MA.912.C.2.8	Find second derivatives and derivatives of higher order.
				MA.912.C.2.9	Find derivatives using logarithmic differentiation.
				MA.912.C.2.10	Understand and use the relationship between differentiability and continuity.
				MA.912.C.2.11	Understand and apply the Mean Value Theorem.
		MA.912.C.3	Applications of Derivatives		

				MA.912.C.3.1	Find the slope of a curve at a point, including points at which there are vertical tangent lines and no tangent lines.
				MA.912.C.3.2	Find an equation for the tangent line to a curve at a point and a local linear approximation.
				MA.912.C.3.3	Decide where functions are decreasing and increasing. Understand the relationship between the increasing and decreasing behavior of $f$ and the sign of $f'$ .
				MA.912.C.3.4	Find local and absolute maximum and minimum points.
				MA.912.C.3.5	Find points of inflection of functions. Understand the relationship between the concavity of $f$ and the sign of $f''$ . Understand points of inflection as places where concavity changes.
				MA.912.C.3.6	Use first and second derivatives to help sketch graphs. Compare the corresponding characteristics of the graphs of $f$ , $f'$ , and $f''$ .
				MA.912.C.3.7	Use implicit differentiation to find the derivative of an inverse function.
				MA.912.C.3.8	Solve optimization problems.
				MA.912.C.3.9	Find average and instantaneous rates of change. Understand the instantaneous rate of change as the limit of the average rate of change. Interpret a derivative as a rate of change in applications, including velocity, speed, and acceleration.
				MA.912.C.3.10	Find the velocity and acceleration of a particle moving in a straight line.
				MA.912.C.3.11	Model rates of change, including related rates problems.
				MA.912.C.3.12	Solve problems using the Newton-Raphson method.
		MA.912.C.4	Integral Calculus		

				MA.912.C.4.1	Use rectangle approximations to find approximate values of integrals.
				MA.912.C.4.2	Calculate the values of Riemann Sums over equal subdivisions using left, right, and midpoint evaluation points.
				MA.912.C.4.3	Interpret a definite integral as a limit of Riemann sums.
				MA.912.C.4.4	Interpret a definite integral of the rate of change of a quantity over an interval as the change of the quantity over the interval. That is, $\int_a^b f(x)dx = f(b) - f(a)$ (Fundamental Theorem of Calculus).
				MA.912.C.4.5	Use the Fundamental Theorem of Calculus to evaluate definite and indefinite integrals and to represent particular antiderivatives. Perform analytical and graphical analysis of functions so defined.
				MA.912.C.4.6	Use these properties of definite integrals: $[f(x) + g(x)]dx = f(x)dx + g(x)dx$ , $\int k f(x)dx = k \int f(x)dx$ , $\int f(x)dx = 0$ , $\int f(x)dx = - \int f(x)dx$ , $\int f(x)dx + \int f(x)dx = 2 \int f(x)dx$ . If $f(x) \geq g(x)$ on $[a, b]$ , then $\int_a^b f(x)dx \geq \int_a^b g(x)dx$ .
				MA.912.C.4.7	Use integration by substitution (or change of variable) to find values of integrals.
				MA.912.C.4.8	Use Riemann Sums, the Trapezoidal Rule, and technology to approximate definite integrals of functions represented algebraically, geometrically, and by tables of values.
		MA.912.C.5	Applications of Integration		
				MA.912.C.5.1	Find specific antiderivatives using initial conditions, including finding velocity functions from acceleration functions, finding position

					functions from velocity functions, and solving applications related to motion along a line.
				MA.912.C.5.2	Solve separable differential equations, and use them in modeling.
				MA.912.C.5.3	Solve differential equations of the form $dy/dt=ky$ as applied to growth and decay problems.
				MA.912.C.5.4	Use slope fields to display a graphic representation of the solution to a differential equation, and locate particular solutions to the equation.
				MA.912.C.5.5	Use definite integrals to find the area between a curve and the x-axis or between two curves.
				MA.912.C.5.6	Use definite integrals to find the average value of a function over a closed interval.
				MA.912.C.5.7	Use definite integrals to find the volume of a solid with known cross-sectional area, including solids of revolution.
				MA.912.C.5.8	Apply integration to model, and solve problems in physical, biological, and social sciences.
MA.912.F-BF	Grades 9-12 Functions: Building Functions				
		MA.912.F-BF.1	Build a function that models a relationship between two quantities.		
				MA.912.F-BF.1.1	Write a function that describes a relationship between two quantities; a. Determine an explicit expression, a recursive process, or steps for calculation from a context; Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model; c. Compose functions. For example, if $T(y)$ is the temperature in the

					atmosphere as a function of height, and $h(t)$ is the height of a weather balloon as a function of time, then $T(h(t))$ is the temperature at the location of the weather balloon as a function of time.
				MA.912.F-BF.1.2	Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.
		MA.912.F-BF.2	Build new functions from existing functions		
				MA.912.F-BF.2.1	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , $f(kx)$ , and $f(x + k)$ for specific values of $k$ (both positive and negative); find the value of $k$ given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.
				MA.912.F-BF.2.2	Find inverse functions; a. Solve an equation of the form $f(x) = c$ for a simple function $f$ that has an inverse and write an expression for the inverse. For example, $f(x) = 2x - 3$ or $f(x) = (x + 1)/(x - 1)$ for $x \neq 1$ ; Verify by composition that one function is the inverse of another; c. Read values of an inverse function from a graph or a table, given that the function has an inverse; d. Produce an invertible function from a non-invertible function by restricting the domain.
				MA.912.F-BF.2.3	Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.
				MA.912.F-BF.2.4	Use the change of base formula.



MA.912.F-IF	Grades 9-12 Functions: interpreting Functions				
		MA.912.F-IF.1	Understand the concept of a function and use function notation.		
				MA.912.F-IF.1.1	Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If $f$ is a function and $x$ is an element of its domain, then $f(x)$ denotes the output of $f$ corresponding to the input $x$ . The graph of $f$ is the graph of the equation $y = f(x)$ .
				MA.912.F-IF.1.2	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
				MA.912.F-IF.1.3	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by $f(0) = f(1) = 1$ , $f(n+1) = f(n) + f(n-1)$ for $n \geq 1$ .
		MA.912.F-IF.2	Interpret functions that arise in applications in terms of the context		
				MA.912.F-IF.2.1	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.

				MA.912.F-IF.2.2	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function $h(n)$ gives the number of person-hours it takes to assemble engines in a factory, then the positive integers would be an appropriate domain for the function.
				MA.912.F-IF.2.3	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.
		MA.912.F-IF.3	Analyze functions using different representations		
				MA.912.F-IF.3.1	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases; a. Graph linear and quadratic functions and show intercepts, maxima, and minima; Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions; c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior; d. Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior; e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude, and using phase shift.
				MA.912.F-IF.3.2	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function; a. Use the process of factoring and completing the square in a

					quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context; Use the properties of exponents to interpret expressions for exponential functions. For example, identify percent rate of change in functions such as $y =$ , $y =$ , $y =$ , $y =$ , and classify them as representing exponential growth or decay.
				MA.912.F-IF.3.3	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.
MA.912.F-LE	Grades 9-12 Functions: Linear, Quadratic, & Exponential Models				
		MA.912.F-LE.1	Construct and compare linear, quadratic, and exponential models and solve problems		
				MA.912.F-LE.1.1	Distinguish between situations that can be modeled with linear functions and with exponential functions; a. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals; Recognize situations in which one quantity changes at a constant rate per unit interval relative to another; c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.
				MAFS.912.F-LE.1.2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).

				MAFS.912.F-LE.1.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.
				MAFS.912.F-LE.1.4	For exponential models, express as a logarithm the solution to $ab^t = d$ where $a$ , $c$ , and $d$ are numbers and the base $b$ is 2, 10, or $e$ ; evaluate the logarithm using technology.
		MAFS.912.F-LE.2	Interpret expressions for functions in terms of the situation they model		
				MAFS.912.F-LE.2.1	Interpret the parameters in a linear or exponential function in terms of a context.
MA.912.F-TF	Grades 9-12 Functions: Trigonometric Functions				
		MA.912.TF.1	Extend the domain of trigonometric functions using the unit circle		
				MA.912.TF.1.1	Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle; Convert between degrees and radians.
				MA.912.TF.1.2	Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.
				MA.912.TF.1.3	Use special triangles to determine geometrically the values of sine, cosine, tangent for $\pi/3$ , $\pi/4$ and $\pi/6$ , and use the unit circle to express the values of sine, cosine, and tangent for $\pi/3$ , $\pi/4$ , $\pi/6$ , $\pi/3 + x$ , and $2\pi/3$ , $\pi/4 + x$ , $\pi/6 + x$ in terms of their values for $x$ , where $x$ is any real number.

				MA.912.TF.1.4	Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.
		MA.912.TF.2	Model periodic phenomena with trigonometric functions		
				MA.912.TF.2.1	Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.
				MA.912.TF.2.2	Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.
				MA.912.TF.2.3	Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.
		MA.912.TF.3	Prove and apply trigonometric identities		
				MA.912.TF.3.1	Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to calculate trigonometric ratios.
				MA.912.TF.3.2	Prove the addition and subtraction, half-angle, and double-angle formulas for sine, cosine, and tangent and use these formulas to solve problems.
<b>Geometry High School</b>					
MA.912.G-C	Grades 9-12 Geometry: Circles				
		MA.912.G-C.1	Understand and apply theorems about circles		
				MA.912.G-C.1.1	Prove that all circles are similar.
				MA.912.G-C.1.2	Identify and describe relationships among inscribed angles, radii, and chords. Include the

					relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.
				MA.912.G-C.1.3	Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.
				MA.912.G-C.1.4	Construct a tangent line from a point outside a given circle to the circle.
		MA.912.G-C.2	Find arc lengths and areas of sectors of circles		
				MA.912.G-C.2.1	Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.
MA.912.G-CO	Grades 9-12 Geometry: Congruence				
		MA.912.G-CO.1	Experiment with transformations in the plane		
				MA.912.G-CO.1.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
				MA.912.G-CO.1.2	Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).

				MA.912.G-CO.1.3	Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.
				MA.912.G-CO.1.4	Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.
				MA.912.G-CO.1.5	Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.
		MA.912.G-CO.2	Understand congruence in terms of rigid motions.		
				MA.912.G-CO.2.1	Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.
				MA.912.G-CO.2.2	Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.
				MA.912.G-CO.2.3	Explain how the criteria for triangle congruence (ASA, SAS, SSS, and Hypotenuse-Leg) follow from the definition of congruence in terms of rigid motions.
		MA.912.G-CO.3	Prove geometric theorems		
				MA.912.G-CO.3.1	Prove theorems about lines and angles; use theorems about lines and angles to solve problems. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate

					interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.
				MA.912.G-CO.3.2	Prove theorems about triangles; use theorems about triangles to solve problems. Theorems include: measures of interior angles of a triangle sum to $180^\circ$ ; triangle inequality theorem; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.
				MA.912.G-CO.3.3	Prove theorems about parallelograms; use theorems about parallelograms to solve problems. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.
		MA.912.G-CO.4	Make geometric constructions		
				MA.912.G-CO.4.1	Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
				MA.912.G-CO.4.2	Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.



MA.912.G-GPE	Grades 9-12 Geometry: Expressing Geometric properties with Equations				
		MA.912.G-GPE.1	Translate between the geometric description and the equation for a conic section		
				MA.912.G-GPE.1.1	Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.
				MA.912.G-GPE.1.2	Derive the equation of a parabola given a focus and directrix.
				MA.912.G-GPE.1.3	Derive the equations of ellipses and hyperbolas given the foci and directrices.
		MA.912.G-GPE.2	Use coordinates to prove simple geometric theorems algebraically		
				MA.912.G-GPE.2.1	Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point $(0, 2)$ .
				MA.912.G-GPE.2.2	Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).
				MA.912.G-GPE.2.3	Find the point on a directed line segment between two given points that partitions the segment in a given ratio.

				MA.912.G-GPE.2.4	Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.
MA.912.G-GMD	Grades 9-12 Geometry: Geometric Measurement & Dimension				
		MA.912.G-GMD.1	Explain volume formulas and use them to solve problems		
				MA.912.G-GMD.1.1	Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. Use dissection arguments, Cavalieri's principle, and informal limit arguments.
				MA.912.G-GMD.1.2	Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.
				MA.912.G-GMD.1.3	Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.
		MAFS.912.G-GMD.2	Visualize relationships between two-dimensional and three-dimensional objects		
				MAFS.912.G-GMD.2.1	Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
MA.912.G-MG	Grades 9-12 Geometry: Modeling with Geometry				
		MA.912.G-MG.1	Apply geometric concepts in modeling situations		
				MA.912.G-MG.1.1	Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).

				MA.912.G-MG.1.2	Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).
				MA.912.G-MG.1.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).
MA.912.G-SRT	Grades 9-12 Geometry: Similarity, right Triangles, & Trigonometry				
		MA.912.G-SRT.1	Understand similarity in terms of similarity transformations		
				MA.912.G-SRT.1.1	Verify experimentally the properties of dilations given by a center and a scale factor: • A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged; • The dilation of a line segment is longer or shorter in the ratio given by the scale factor.
				MA.912.G-SRT.1.2	Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.
				MA.912.G-SRT.1.3	Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.
		MA.912.G-SRT.2	Prove theorems involving similarity		
				MA.912.G-SRT.2.1	Prove theorems about triangles. Theorems include: a line parallel to one side of a triangle divides the

					other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.
				MA.912.G-SRT.2.2	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.
		MA.912.G-SRT.3	Define trigonometric ratios and solve problems involving right triangles		
				MA.912.G-SRT.3.1	Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.
				MA.912.G-SRT.3.2	Explain and use the relationship between the sine and cosine of complementary angles.
				MA.912.G-SRT.3.3	Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.
		MAFS.912.G-SRT.4	Apply trigonometry to general triangles		
				MAFS.912.G-SRT.4.1	Derive the formula $A = \frac{1}{2} ab \sin(C)$ for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.
				MAFS.912.G-SRT.4.2	Prove the Laws of Sines and Cosines and use them to solve problems.
				MAFS.912.G-SRT.4.3	Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).
MA.912.N-Q	Grades 9-12 Number & Number Quantities				
		MA.912.N-Q.1	Reason quantitatively and use units to solve problems.		

				MA.912.N-Q.1.1	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
				MA.912.N-Q.1.2	Define appropriate quantities for the purpose of descriptive modeling.
				MA.912.N-Q.1.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
MA.912.N-CN	Grades 9-12 Number Quantity: The Complex Number System				
		MA.912.N-CN.1	Perform arithmetic operations with complex numbers.		
				MA.912.N-CN.1.1	Know there is a complex number $i$ such that $i^2 = -1$ , and every complex number has the form $a + bi$ with $a$ and $b$ real.
				MA.912.N-CN.1.2	Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.
				MA.912.N-CN.1.3	Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.
		MA.912.N-CN.2	Represent complex numbers and their operations on the complex plane.		
				MA.912.N-CN.2.1	Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number.
				MA.912.N-CN.2.2	Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on

					the complex plane; use properties of this representation for computation. For example, $(-1 + \sqrt{3}i)^3 = 8$ because $(-1 + \sqrt{3}i)$ has modulus 2 and argument $120^\circ$ .
				MA.912.N-CN.2.3	Calculate the distance between numbers in the complex plane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints.
		MA.912.N-CN.3	Use complex numbers in polynomial identities and equations.		
				MA.912.N-CN.3.1	Solve quadratic equations with real coefficients that have complex solutions.
				MA.912.N-CN.3.2	Extend polynomial identities to the complex numbers. For example, rewrite $x + 4$ as $(x + 2i)(x - 2i)$ .
				MA.912.N-CN.3.3	Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.
MA.912.N-RN	Grades 9-12 Number Quantity: The Real Number System				
		MA.912.N-RN.1	Extend the properties of exponents to rational exponents.		
				MA.912.N-RN.1.1	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example, we define to be the cube root of 5 because we want $=$ to hold, so must equal 5.
				MA.912.N-RN.1.2	Rewrite expressions involving radicals and rational exponents using the properties of exponents.

		MA.912.N-RN.2	Use properties of rational and irrational numbers.		
				MA.912.N-RN.2.1	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.
MA.912.N-VM	Grades 9-12 Number & Quantity: Vector & Matrix Quantities				
		MA.912.N-VM.1	Represent and model with vector quantities.		
				MA.912.N-VM.1.1	Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., $v$ , $ v $ , $\ v\ $ , $v$ ).
				MA.912.N-VM.1.2	Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.
				MA.912.N-VM.1.3	Solve problems involving velocity and other quantities that can be represented by vectors.
		MA.912.N-VM.2	Perform operations on vectors.		
				MA.912.N-VM.2.1	<p>Add and subtract vectors.</p> <ul style="list-style-type: none"> <li>•a. Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that the magnitude of a sum of two vectors is typically not the sum of the magnitudes.</li> <li>•b. Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum.</li> <li>•c. Understand vector subtraction <math>v - w</math> as <math>v + (-w)</math>, where <math>-w</math> is the additive inverse of <math>w</math>, with the</li> </ul>

					same magnitude as $w$ and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and perform vector subtraction component-wise..
				MA.912.N-VM.2.2	Multiply a vector by a scalar; a. Represent scalar multiplication graphically by scaling vectors and possibly reversing their direction; perform scalar multiplication component-wise, e.g., as $c =$ ; Compute the magnitude of a scalar multiple $cv$ using $\ cv\  =  c v$ . Compute the direction of $cv$ knowing that when $ c v \neq 0$ , the direction of $cv$ is either along $v$ (for $c > 0$ ) or against $v$ (for $c < 0$ ).
		MA.912.N-VM.3	Perform operations on matrices and use matrices in applications.		
				MA.912.N-VM.3.1	Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.
				MA.912.N-VM.3.2	Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled.
				MA.912.N-VM.3.3	Add, subtract, and multiply matrices of appropriate dimensions.
				MA.912.N-VM.3.4	Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties.
				MA.912.N-VM.3.5	Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.



				MA.912.N-VM.3.6	Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as transformations of vectors.
				MA.912.N-VM.3.7	Work with 2 x2 matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area.
MA.912.S-CP	Grades 9-12 Statistics & Probability: Conditional Probability & the Rules of Probability				
		MA.912.S-CP.1	Understand independence and conditional probability and use them to interpret data		
				MA.912.S-CP.1.1	Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).
				MA.912.S-CP.1.2	Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.
				MA.912.S-CP.1.3	Understand the conditional probability of A given B as $P(A \text{ and } B)/P(B)$ , and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.
				MA.912.S-CP.1.4	Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional

					probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.
				MA.912.S-CP.1.5	Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.
		MA.912.S-CP.2	Use the rules of probability to compute probabilities of compound events in a uniform probability model		
				MA.912.S-CP.2.1	Find the conditional probability of A given B as the fraction of B, "s outcomes that also belong to A, and interpret the answer in terms of the model.
				MA.912.S-CP.2.2	Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$ , and interpret the answer in terms of the model.
				MA.912.S-CP.2.3	Apply the general Multiplication Rule in a uniform probability model, $P(A \text{ and } B) = P(A)P(B A) = P(B)P(A B)$ , and interpret the answer in terms of the model.
				MA.912.S-CP.2.4	Use permutations and combinations to compute probabilities of compound events and solve problems.
MA.912.S-ID	Grades 9-12 Statistics & Probability: Interpreting Categorical & Quantitative Data				

		MA.912.S-ID.1	Summarize represent, and interpret data on a single count or measurement variable		
				MA.912.S-ID.1.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).
				MA.912.S-ID.1.2	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
				MA.912.S-ID.1.3	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
				MA.912.S-ID.1.4	Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.
		MA.912.S-ID.2	Summarize, represent, and interpret data on two categorical and quantitative variables		
				MA.912.S-ID.2.1	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.
				MA.912.S-ID.2.2	Represent data on two quantitative variables on a scatter plot, and describe how the variables are related; a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function

					suggested by the context. Emphasize linear, and exponential models; Informally assess the fit of a function by plotting and analyzing residuals; c. Fit a linear function for a scatter plot that suggests a linear association.
		MA.912.S-ID.3	Interpret linear models		
				MA.912.S-ID.3.1	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.
				MA.912.S-ID.3.2	Compute (using technology) and interpret the correlation coefficient of a linear fit.
				MA.912.S-ID.3.3	Distinguish between correlation and causation.
MA.912.S-IC	Grades 9-12 Statistics & Probability: Making Inferences & Justifying Conclusions				
		MA.912.S-IC.1	Understand and evaluate random processes underlying statistical experiments		
				MA.912.S-IC.1.1	Understand statistics as a process for making inferences about population parameters based on a random sample from that population.
				MAFS.912.S-IC.1.2	Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?
		MA.912.S-IC.2	Make inferences and justify conclusions from sample surveys, experiments, and observational studies		
				MA.912.S-IC.2.1	Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.

				MA.912.S-IC.2.2	Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.
				MA.912.S-IC.2.3	Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.
				MA.912.S-IC.2.4	Evaluate reports based on data.
MA.912.S-MD	Grades 9-12 Statistics & Probability: Using Probability to Make Decisions				
		MA.912.S-MD.1	Calculate expected values and use them to solve problems		
				MA.912.S-MD.1.1	Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.
				MA.912.S-MD.1.2	Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.
				MA.912.S-MD.1.3	Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. For example, find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.
				MA.912.S-MD.1.4	Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. For example, find a current data

					distribution on the number of TV sets per household in the United States, and calculate the expected number of sets per household. How many TV sets would you expect to find in 100 randomly selected households?
		MA.912.S-MD.2	Use probability to evaluate outcomes of decisions		
				MA.912.S-MD.2.1	Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values; a. Find the expected payoff for a game of chance. For example, find the expected winnings from a state lottery ticket or a game at a fast-food restaurant; Evaluate and compare strategies on the basis of expected values. For example, compare a high-deductible versus a low-deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.
				MA.912.S-MD.2.2	Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).
				MA.912.S-MD.2.3	Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).

<sup>i</sup> *The Catholic School, 1977, #36, 47, 49. Gravissimum Educationis, 1965, #1, par. 1; USCCB. Seven themes of Catholic social teaching.*

<sup>ii</sup> *The Religious Dimension of Education in a Catholic School, 1988, #52, 56; The Catholic School, 1977, #55.*

<sup>iii</sup> *The Religious Dimension of Education in a Catholic School, 1988, #71, 74-77; The Catholic School, 1977, #50*

<sup>iv</sup> *The Religious Dimension of Education in a Catholic School, 1988, #52; The Catholic School, #37.*



# *Science Standards*

Diocese of Venice  
Curricular Standards:  
**Science**

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*Middle School and High School  
Grades 6-12*





# *Basic Principles underlying All Standards to be used for the Planning of Curriculum for the Diocese of Venice*

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Basic principles which inform all Catholic education in the Schools of the Diocese of Venice are:

- All knowledge, in some way, reflects God's Truth, Beauty and Goodness.
- Curriculum and instruction enable deeper incorporation of the children into the Church, the formation of community within the school; and respect for the uniqueness and dignity of each person as created in the image of God.
- Education fosters growth in Christian virtue and contributes to development and formation of the whole person in light of his/her ultimate end and the good of the society of which he/she is a member.
- Each subject is to be examined in the context of the Catholic faith and is to be illuminated by Gospel values.
- Learning and formation occur in the Catholic school without separation as does the development of each student on both the natural and supernatural levels.
- Curriculum and instruction seeks to promote a synthesis of faith, life and culture and to form students as disciples of Jesus.



# *Diocese Of Venice Catholic School Standards For Science*



By the very nature of creation, material being is endowed with its own stability, truth and excellence, its own order and laws. We must respect these truths as we recognize the methods proper to every science and technique.

*Gaudium et Spes, #36*

Science is a gift of human intellect, which is given to us by God to help us understand His Creation. Science is the study of interdependent relations in our earth's systems and structures that reflect God's truth, beauty, and goodness. These standards are directed toward life, earth, and physical aspects that enable deeper incorporation of children into the Church, the formation of community within the school, and respect for the uniqueness and dignity of each person as created in the image of God recognizing that scientific knowledge is a call to serve.

Life, Earth, and Physical Science foster growth in Christian virtue and develop an appreciation for God's creation and the good of society. Science is developing our stewardship and relationship in all aspects of our faith and Gospel values.

## **In a Catholic school, curricular formation....**

1. Involves the integral formation of the whole person, body, mind and spirit, in light of his or her ultimate end and the good of society. <sup>(1)</sup>
2. Promotes human virtues and the dignity of human person, as created in the image and likeness of God and modeled on the person of Jesus Christ. <sup>2</sup>
3. Seeks to know and understand objective reality which includes transcendent Truth, is knowable by reason and faith, and finds its origin, unity, and end in God.
4. Develops a Catholic worldview and enables a deeper incorporation of the student into the heart of the Catholic Church.
5. Encourages a synthesis of faith, life, and culture.

**Science K-6 Catholic Integrated Faith Standards**

SC.K6.IF	K-6 Integration of Faith - Catholic Curricular Standards and Dispositions in Scientific Topics			
	SC.K6.IF.1	Scientific Topics - General Standards		
			SC.K6.IF.1.1	Exhibit care and concern at all stages of life for each human person as an image and likeness of God.
			SC.K6.IF.1.2	Describe the unity of faith and reason with confidence that there exists no contradiction between the God of nature and the God of faith.
			SC.K6.IF.1.3	Value the human body as the temple of the Holy Spirit.
	SC.K6.IF.2	Scientific Topics - Intellectual Standards		
			IS1SC.K6.IF.2.1	Explain what it means to say that God created the world and all matter out of nothing at a certain point in time; how it manifests His wisdom, glory, and purpose; and how He holds everything in existence according to His plan.
			IS1SC.K6.IF.2.2	Describe the relationships, elements, underlying order, harmony, and meaning in God's creation.
			IS1SC.K6.IF.2.3	Explain how creation is an outward sign of God's love and goodness and, therefore, is , "sacramental" in nature.
			IS1SC.K6.IF.2.4	Give examples of the beauty evident in God's creation.
			IS1SC.K6.IF.2.5	Explain the processes of conservation, preservation, overconsumption, and stewardship in relation to caring for that which God has given to sustain and delight us.
			IS1SC.K6.IF.2.6	Describe God's relationship with man and nature.
			IS1SC.K6.IF.2.7	Describe how science and technology should always be at the service of humanity and, ultimately, to God, in harmony with His purposes.
			IS1SC.K6.IF.2.8	Explain how science properly limits its focus to how things physically exist and is not designed to answer issues of meaning, the value of things, or the mysteries of the human person.

			IS1SC.K6.IF.2.9	Describe how the use of the scientific method to explore and understand nature differs, yet complements, the theological and philosophical questions one asks in order to understand God and His works.
			IS1SC.K6.IF.2.1 0	Analyze the false assumption that science can replace faith.
			IS1SC.K6.IF.2.1 1	List the basic contributions of significant Catholics to science such as Galileo, Copernicus, Mendel, and others.
	SC.K6.IF.3	Scientific Topics - Dispositional Standards		
			DS1SC.K6.IF.3.1	Display a sense of wonder and delight about the natural universe and its beauty.
			DS1SC.K6.IF.3.2	Share concern and care for the environment as a part of God's creation.
			DS1SC.K6.IF.3.3	Accept the premise that nature should not be manipulated simply at man's will or only viewed as a thing to be used, but that man must cooperate with God's plan for himself and for nature.
			DS1SC.K6.IF.3.4	Accept that scientific knowledge is a call to serve and not simply a means to gain power, material prosperity, or success.

**8<sup>th</sup> Grade Science**

SC.8.E	Grade 8 Earth and Space Science		
	SC.8.E.5	Earth in Space and Time	
			SC.8.E.5.1 Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance.
			SC.8.E.5.2 Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars.
			SC.8.E.5.3 Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size, and composition.
			SC.8.E.5.4 Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions.
			SC.8.E.5.5 Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness).
			SC.8.E.5.6 Create models of solar properties including: rotation, structure of the Sun, convection, sunspots, solar flares, and prominences.
			SC.8.E.5.7 Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions.
			SC.8.E.5.8 Compare various historical models of the Solar System, including geocentric and heliocentric.
			SC.8.E.5.9 Explain the impact of objects in space on each other including:
			SC.8.E.5.10 Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information.
			SC.8.E.5.11 Identify and compare characteristics of the electromagnetic spectrum such as wavelength, frequency, use, and hazards and recognize its application to an understanding of planetary images and satellite photographs.

				SC.8.E.5.12	Summarize the effects of space exploration on the economy and culture of Florida.
SC.8.L	Grade 8 Life Science				
		SC.8.L.18	Matter and Energy Transformations		
				SC.8.L.18.1	Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.
				SC.8.L.18.2	Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.
				SC.8.L.18.3	Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.
				SC.8.L.18.4	Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.
SC.8.N	Grade 8 Nature of Science				
		SC.8.N.1	The Practice of Science		
				SC.8.N.1.1	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.
				SC.8.N.1.2	Design and conduct a study using repeated trials and replication.
				SC.8.N.1.3	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.
				SC.8.N.1.4	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.
				SC.8.N.1.5	Analyze the methods used to develop a scientific explanation as seen in different fields of science.

				SC.8.N.1.6	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.
		SC.8.N.2	The Characteristics of Scientific Knowledge		
				SC.8.N.2.1	Distinguish between scientific and pseudoscientific ideas.
				SC.8.N.2.2	Discuss what characterizes science and its methods.
		SC.8.N.3	The Role of Theories, Laws, Hypotheses, and Models		
				SC.8.N.3.1	Select models useful in relating the results of their own investigations.
				SC.8.N.3.2	Explain why theories may be modified but are rarely discarded.
		SC.8.N.4	Science and Society		
				SC.8.N.4.1	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.
				SC.8.N.4.2	Explain how political, social, and economic concerns can affect science, and vice versa.
SC.8.P	Grade 8 Physical Science				
		SC.8.P.8	Properties of Matter		
				SC.8.P.8.1	Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.
				SC.8.P.8.2	Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.
				SC.8.P.8.3	Explore and describe the densities of various materials through measurement of their masses and volumes.
				SC.8.P.8.4	Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.

				SC.8.P.8.5	Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.
				SC.8.P.8.6	Recognize that elements are grouped in the periodic table according to similarities of their properties.
				SC.8.P.8.7	Explore the scientific theory of atoms (also known as atomic theory) by recognizing that atoms are the smallest unit of an element and are composed of sub-atomic particles (electrons surrounding a nucleus containing protons and neutrons).
				SC.8.P.8.8	Identify basic examples of and compare and classify the properties of compounds, including acids, bases, and salts.
				SC.8.P.8.9	Distinguish among mixtures (including solutions) and pure substances.
		SC.8.P.9	Changes in Matter		
				SC.8.P.9.1	Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.
				SC.8.P.9.2	Differentiate between physical changes and chemical changes.
				SC.8.P.9.3	Investigate and describe how temperature influences chemical changes.



**Science 7<sup>th</sup>-12<sup>th</sup> Grade Catholic Integrated Faith Standards**

SC.712.IF	7th-12th Grade Integration of Faith - Catholic Curricular Standards and Dispositions in Scientific Topics			
	SC.712.IF.1	Scientific Topics - General Standards		
			SC.712.IF.1.1	Exhibit a primacy of care and concern at all stages of life for each human person as an image and likeness of God.
			SC.712.IF.1.2	Explain and promote the unity of faith and reason with confidence that there exists no contradiction between the God of nature and the God of the faith.
			SC.712.IF.1.3	Value the human body as the temple of the Holy Spirit.
			SC.712.IF.1.4	Share how the beauty and goodness of God is reflected in nature and the study of the natural sciences.
	SC.712.IF.2	Scientific Topics - Intellectual Standards		
			SC.712.IF.2.1	Articulate how science properly situates itself within other academic disciplines (e.g., history, theology) for correction and completion in order to recognize the limited material explanation of reality to which it is properly attuned.
			SC.712.IF.2.2	Demonstrate confidence in human reason and in one's ability to know the truth about God's creation and the fundamental intelligibility of the world.
			SC.712.IF.2.3	Analyze how the pursuit of scientific knowledge, for utilitarian purposes alone or for the misguided manipulation of nature, thwarts the pursuit of authentic Truth and the greater glory of God.
			SC.712.IF.2.4	Relate how the search for truth, even when it concerns a finite reality of the natural world or of man, is never-ending and always points beyond to something higher than the immediate object of study.
			SC.712.IF.2.5	Explain the processes of conservation, preservation, overconsumption, and stewardship as it relates to creation and to caring for that which God has given to sustain and delight us.
			SC.712.IF.2.6	Evaluate the relationship between God, man, and nature, and the proper role in the totality of being and creation.

			SC.712.IF.2.7	Describe humanity’s natural situation in, and dependence upon, physical reality and how man carries out his role as a cooperator with God in the work of creation.
			SC.712.IF.2.8	Evaluate the errors present in the belief system of scientific naturalism or scientism[2] (which includes materialism[3] and reductionism[4]), which posits that scientific exploration and explanation is the only valid source of meaning.
			SC.712.IF.2.9	Distinguish the difference between the use of the scientific method and the use of theological inquiry to know and understand God’s creation and universal truths.
			SC.712.IF.2.10	Articulate the limitations of science (the scientific method and constraints of the physical world) to know and understand God and transcendent reality.
			SC.712.IF.2.11	Identify key Catholic scientists such as Copernicus, Mendel, DaVinci, Bacon, Pasteur, Volta, St. Albert the Great, and others and the witness and evidence they supply against the false claim that Catholicism is not compatible with science.
			SC.712.IF.2.12	Analyze and articulate the Church’s approach to the theory of evolution.
			SC.712.IF.2.13	Relate how the human soul is specifically created by God for each human being, does not evolve from lesser matter, and is not inherited from our parents.
			SC.712.IF.2.14	Explain how understanding the physiological properties of a human being does not address the existence of the transcendent spirit of the human person (see Appendix E).
			SC.712.IF.2.15	Explain the supernatural design hypothesis in terms of the Borde-Vilenkin-Guth Proof, the Second Law of Thermodynamics, entropy, and anthropic coincidences (fine tuning of initial conditions and universal constants) (see Appendix E).
			SC.712.IF.2.16	Articulate the details of the Galileo affair to counter the assumption that the Church is anti-science.
			SC.712.IF.2.17	Demonstrate an understanding of the moral issues involving in vitro fertilization, human cloning, human genetic manipulation, and human experimentation and what the Church teaches regarding work in these areas.
	SC.712.IF.3	Scientific Topics - Dispositional Standards		
			SC.712.IF.3.1	Display a deep sense of wonder and delight about the natural universe.

			SC.712.IF.3.2	Share how natural phenomena have more than a utilitarian meaning and purpose and exemplify the handiwork of the Creator.
			SC.712.IF.3.3	Subscribe to the premise that nature should not be manipulated at will, but should be respected for its natural purpose and end as destined by the creator God.
			SC.712.IF.3.4	Share concern and care for the environment as part of God's creation.
			SC.712.IF.3.5	Adhere to the idea of the simultaneous complexity and simplicity of physical reality.

**9<sup>th</sup>-12<sup>th</sup> Grade Science**

**Earth Space Science**

SC.912.E	Grades 9-12 Earth and Space Science				
		SC.912.E.5	Earth in Space and Time		
				SC.912.E.5.1	Cite evidence used to develop and verify the scientific theory of the Big Bang (also known as the Big Bang Theory) of the origin of the universe.
				SC.912.E.5.2	Identify patterns in the organization and distribution of matter in the universe and the forces that determine them.
				SC.912.E.5.3	Describe and predict how the initial mass of a star determines its evolution.
				SC.912.E.5.4	Explain the physical properties of the Sun and its dynamic nature and connect them to conditions and events on Earth.
				SC.912.E.5.5	Explain the formation of planetary systems based on our knowledge of our Solar System and apply this knowledge to newly discovered planetary systems.
				SC.912.E.5.6	Develop logical connections through physical principles, including Kepler's and Newton's Laws about the relationships and the effects of Earth, Moon, and Sun on each other.
				SC.912.E.5.7	Relate the history of and explain the justification for future space exploration and continuing technology development.
				SC.912.E.5.8	Connect the concepts of radiation and the electromagnetic spectrum to the use of historical and newly-developed observational tools.
				SC.912.E.5.9	Analyze the broad effects of space exploration on the economy and culture of Florida.
				SC.912.E.5.10	Describe and apply the coordinate system used to locate objects in the sky.

				SC.912.E.5.11	Distinguish the various methods of measuring astronomical distances and apply each in appropriate situations.
		SC.912.E.6	Earth Structures		
				SC.912.E.6.1	Describe and differentiate the layers of Earth and the interactions among them.
				SC.912.E.6.2	Connect surface features to surface processes that are responsible for their formation.
				SC.912.E.6.3	Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.
				SC.912.E.6.4	Analyze how specific geologic processes and features are expressed in Florida and elsewhere.
				SC.912.E.6.5	Describe the geologic development of the present day oceans and identify commonly found features.
				SC.912.E.6.6	Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.
		SC.912.E.7	Earth Systems and Patterns		
				SC.912.E.7.1	Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
				SC.912.E.7.2	Analyze the causes of the various kinds of surface and deep water motion within the oceans and their impacts on the transfer of energy between the poles and the equator.
				SC.912.E.7.3	Differentiate and describe the various interactions among Earth systems, including: atmosphere, hydrosphere, cryosphere, geosphere, and biosphere.
				SC.912.E.7.4	Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.

				SC.912.E.7.5	Predict future weather conditions based on present observations and conceptual models and recognize limitations and uncertainties of such predictions.
				SC.912.E.7.6	Relate the formation of severe weather to the various physical factors.
				SC.912.E.7.7	Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.
				SC.912.E.7.8	Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.
				SC.912.E.7.9	Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.
<b>Life Science</b>					
SC.912.L	Grades 9-12 Life Science				
		SC.912.L.14	Organization and Development of Living Organisms		
				SC.912.L.14.1	Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.
				SC.912.L.14.2	Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).
				SC.912.L.14.3	Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.
				SC.912.L.14.4	Compare and contrast structure and function of various types of microscopes.

				SC.912.L.14.5	Explain the evidence supporting the scientific theory of the origin of eukaryotic cells (endosymbiosis).
				SC.912.L.14.6	Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.
				SC.912.L.14.7	Relate the structure of each of the major plant organs and tissues to physiological processes.
				SC.912.L.14.8	Explain alternation of generations in plants.
				SC.912.L.14.9	Relate the major structure of fungi to their functions.
				SC.912.L.14.10	Discuss the relationship between the evolution of land plants and their anatomy.
				SC.912.L.14.11	Classify and state the defining characteristics of epithelial tissue, connective tissue, muscle tissue, and nervous tissue.
				SC.912.L.14.12	Describe the anatomy and histology of bone tissue.
				SC.912.L.14.13	Distinguish between bones of the axial skeleton and the appendicular skeleton.
				SC.912.L.14.14	Identify the major bones of the axial and appendicular skeleton.
				SC.912.L.14.15	Identify major markings (such as foramina, fossae, tubercles, etc.) on a skeleton. Explain why these markings are important.
				SC.912.L.14.16	Describe the anatomy and histology, including ultrastructure, of muscle tissue.
				SC.912.L.14.17	List the steps involved in the sliding filament of muscle contraction.
				SC.912.L.14.18	Describe signal transmission across a myoneural junction.
				SC.912.L.14.19	Explain the physiology of skeletal muscle.
				SC.912.L.14.20	Identify the major muscles of the human on a model or diagram.

				SC.912.L.14.21	Describe the anatomy, histology, and physiology of the central and peripheral nervous systems and name the major divisions of the nervous system.
				SC.912.L.14.22	Describe the physiology of nerve conduction, including the generator potential, action potential, and the synapse.
				SC.912.L.14.23	Identify the parts of a reflex arc.
				SC.912.L.14.24	Identify the general parts of a synapse and describe the physiology of signal transmission across a synapse.
				SC.912.L.14.25	Identify the major parts of a cross section through the spinal cord.
				SC.912.L.14.26	Identify the major parts of the brain on diagrams or models.
				SC.912.L.14.27	Identify the functions of the major parts of the brain, including the meninges, medulla, pons, midbrain, hypothalamus, thalamus, cerebellum and cerebrum.
				SC.912.L.14.28	Identify the major functions of the spinal cord.
				SC.912.L.14.29	Define the terms endocrine and exocrine.
				SC.912.L.14.30	Compare endocrine and neural controls of physiology.
				SC.912.L.14.31	Describe the physiology of hormones including the different types and the mechanisms of their action.
				SC.912.L.14.32	Describe the anatomy and physiology of the endocrine system.
				SC.912.L.14.33	Describe the basic anatomy and physiology of the reproductive system.
				SC.912.L.14.34	Describe the composition and physiology of blood, including that of the plasma and the formed elements.
				SC.912.L.14.35	Describe the steps in hemostasis, including the mechanism of coagulation. Include the basis for blood typing and transfusion reactions.
				SC.912.L.14.36	Describe the factors affecting blood flow through the cardiovascular system.
				SC.912.L.14.37	Explain the components of an electrocardiogram.



				SC.912.L.14.38	Describe normal heart sounds and what they mean.
				SC.912.L.14.39	Describe hypertension and some of the factors that produce it.
				SC.912.L.14.40	Describe the histology of the major arteries and veins of systemic, pulmonary, hepatic portal, and coronary circulation.
				SC.912.L.14.41	Describe fetal circulation and changes that occur to the circulatory system at birth.
				SC.912.L.14.42	Describe the anatomy and the physiology of the lymph system.
				SC.912.L.14.43	Describe the histology of the respiratory system.
				SC.912.L.14.44	Describe the physiology of the respiratory system including the mechanisms of ventilation, gas exchange, gas transport and the mechanisms that control the rate of ventilation.
				SC.912.L.14.45	Describe the histology of the alimentary canal and its associated accessory organs.
				SC.912.L.14.46	Describe the physiology of the digestive system, including mechanical digestion, chemical digestion, absorption and the neural and hormonal mechanisms of control.
				SC.912.L.14.47	Describe the physiology of urine formation by the kidney.
				SC.912.L.14.48	Describe the anatomy, histology, and physiology of the ureters, the urinary bladder and the urethra.
				SC.912.L.14.49	Identify the major functions associated with the sympathetic and parasympathetic nervous systems.
				SC.912.L.14.50	Describe the structure of vertebrate sensory organs. Relate structure to function in vertebrate sensory systems.
				SC.912.L.14.51	Describe the function of the vertebrate integumentary system.

				SC.912.L.14.52	Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.
				SC.912.L.14.53	Discuss basic classification and characteristics of plants. Identify bryophytes, pteridophytes, gymnosperms, and angiosperms.
		SC.912.L.15	Diversity and Evolution of Living Organisms		
				SC.912.L.15.1	Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.
				SC.912.L.15.2	Discuss the use of molecular clocks to estimate how long ago various groups of organisms diverged evolutionarily from one another.
				SC.912.L.15.3	Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.
				SC.912.L.15.4	Describe how and why organisms are hierarchically classified and based on evolutionary relationships.
				SC.912.L.15.5	Explain the reasons for changes in how organisms are classified.
				SC.912.L.15.6	Discuss distinguishing characteristics of the domains and kingdoms of living organisms.
				SC.912.L.15.7	Discuss distinguishing characteristics of vertebrate and representative invertebrate phyla, and chordate classes using typical examples.
				SC.912.L.15.8	Describe the scientific explanations of the origin of life on Earth.
				SC.912.L.15.9	Explain the role of reproductive isolation in the process of speciation.
				SC.912.L.15.10	Identify basic trends in hominid evolution from early ancestors six million years ago to modern humans,

					including brain size, jaw size, language, and manufacture of tools.
				SC.912.L.15.11	Discuss specific fossil hominids and what they show about human evolution.
				SC.912.L.15.12	List the conditions for Hardy-Weinberg equilibrium in a population and why these conditions are not likely to appear in nature. Use the Hardy-Weinberg equation to predict genotypes in a population from observed phenotypes.
				SC.912.L.15.13	Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.
				SC.912.L.15.14	Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.
				SC.912.L.15.15	Describe how mutation and genetic recombination increase genetic variation.
		SC.912.L.16	Heredity and Reproduction		
				SC.912.L.16.1	Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.
				SC.912.L.16.2	Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.
				SC.912.L.16.3	Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.
				SC.912.L.16.4	Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.
				SC.912.L.16.5	Explain the basic processes of transcription and translation, and how they result in the expression of genes.

				SC.912.L.16.6	Discuss the mechanisms for regulation of gene expression in prokaryotes and eukaryotes at transcription and translation level.
				SC.912.L.16.7	Describe how viruses and bacteria transfer genetic material between cells and the role of this process in biotechnology.
				SC.912.L.16.8	Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.
				SC.912.L.16.9	Explain how and why the genetic code is universal and is common to almost all organisms.
				SC.912.L.16.10	Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.
				SC.912.L.16.11	Discuss the technologies associated with forensic medicine and DNA identification, including restriction fragment length polymorphism (RFLP) analysis.
				SC.912.L.16.12	Describe how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, polymerase chain reaction, ligation, and transformation) is used to construct recombinant DNA molecules (DNA cloning).
				SC.912.L.16.13	Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.
				SC.912.L.16.14	Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.
				SC.912.L.16.15	Compare and contrast binary fission and mitotic cell division.

				SC.912.L.16.16	Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.
				SC.912.L.16.17	Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.
		SC.912.L.17	Interdependence		
				SC.912.L.17.1	Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.
				SC.912.L.17.2	Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
				SC.912.L.17.3	Discuss how various oceanic and freshwater processes, such as currents, tides, and waves, affect the abundance of aquatic organisms.
				SC.912.L.17.4	Describe changes in ecosystems resulting from seasonal variations, climate change and succession.
				SC.912.L.17.5	Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.
				SC.912.L.17.6	Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.
				SC.912.L.17.7	Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.
				SC.912.L.17.8	Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.

				SC.912.L.17.9	Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.
				SC.912.L.17.10	Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.
				SC.912.L.17.11	Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
				SC.912.L.17.12	Discuss the political, social, and environmental consequences of sustainable use of land.
				SC.912.L.17.13	Discuss the need for adequate monitoring of environmental parameters when making policy decisions.
				SC.912.L.17.14	Assess the need for adequate waste management strategies.
				SC.912.L.17.15	Discuss the effects of technology on environmental quality.
				SC.912.L.17.16	Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.
				SC.912.L.17.17	Assess the effectiveness of innovative methods of protecting the environment.
				SC.912.L.17.18	Describe how human population size and resource use relate to environmental quality.
				SC.912.L.17.19	Describe how different natural resources are produced and how their rates of use and renewal limit availability.
				SC.912.L.17.20	Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.
		SC.912.L.18	Matter and Energy Transformations		

				SC.912.L.18.1	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
				SC.912.L.18.2	Describe the important structural characteristics of monosaccharides, disaccharides, and polysaccharides and explain the functions of carbohydrates in living things.
				SC.912.L.18.3	Describe the structures of fatty acids, triglycerides, phospholipids, and steroids. Explain the functions of lipids in living organisms. Identify some reactions that fatty acids undergo. Relate the structure and function of cell membranes.
				SC.912.L.18.4	Describe the structures of proteins and amino acids. Explain the functions of proteins in living organisms. Identify some reactions that amino acids undergo. Relate the structure and function of enzymes.
				SC.912.L.18.5	Discuss the use of chemiosmotic gradients for ATP production in chloroplasts and mitochondria.
				SC.912.L.18.6	Discuss the role of anaerobic respiration in living things and in human society.
				SC.912.L.18.7	Identify the reactants, products, and basic functions of photosynthesis.
				SC.912.L.18.8	Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.
				SC.912.L.18.9	Explain the interrelated nature of photosynthesis and cellular respiration.
				SC.912.L.18.10	Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.
				SC.912.L.18.11	Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.

				SC.912.L.18.12	Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.
<b>The Nature of Science</b>					
SC.912.N	Grades 9-12 Nature of Science				
		SC.912.N.1	The Practice of Science		
				SC.912.N.1.1	Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following:
				SC.912.N.1.2	Describe and explain what characterizes science and its methods.
				SC.912.N.1.3	Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.
				SC.912.N.1.4	Identify sources of information and assess their reliability according to the strict standards of scientific investigation.
				SC.912.N.1.5	Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.
				SC.912.N.1.6	Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.
				SC.912.N.1.7	Recognize the role of creativity in constructing scientific questions, methods and explanations.
		SC.912.N.2	The Characteristics of Scientific Knowledge		



				SC.912.N.2.1	Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).
				SC.912.N.2.2	Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.
				SC.912.N.2.3	Identify examples of pseudoscience (such as astrology, phrenology) in society.
				SC.912.N.2.4	Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
				SC.912.N.2.5	Describe instances in which scientists' varied backgrounds, talents, interests, and goals influence the inferences and thus the explanations that they make about observations of natural phenomena and describe that competing interpretations (explanations) of scientists are a strength of science as they are a source of new, testable ideas that have the potential to add new evidence to support one or another of the explanations.
		SC.912.N.3	The Role of Theories, Laws, Hypotheses, and Models		
				SC.912.N.3.1	Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.

				SC.912.N.3.2	Describe the role consensus plays in the historical development of a theory in any one of the disciplines of science.
				SC.912.N.3.3	Explain that scientific laws are descriptions of specific relationships under given conditions in nature, but do not offer explanations for those relationships.
				SC.912.N.3.4	Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.
				SC.912.N.3.5	Describe the function of models in science, and identify the wide range of models used in science.
		SC.912.N.4	Science and Society		
				SC.912.N.4.1	Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making.
				SC.912.N.4.2	Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.
<b>Physical Science</b>					
SC.912.P	Grades 9-12 Physical Science				
		SC.912.P.8	Matter		
				SC.912.P.8.1	Differentiate among the four states of matter.
				SC.912.P.8.2	Differentiate between physical and chemical properties and physical and chemical changes of matter.
				SC.912.P.8.3	Explore the scientific theory of atoms (also known as atomic theory) by describing changes in the atomic model over time and why those changes were necessitated by experimental evidence.
				SC.912.P.8.4	Explore the scientific theory of atoms (also known as atomic theory) by describing the structure of atoms in

					terms of protons, neutrons and electrons, and differentiate among these particles in terms of their mass, electrical charges and locations within the atom.
				SC.912.P.8.5	Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.
				SC.912.P.8.6	Distinguish between bonding forces holding compounds together and other attractive forces, including hydrogen bonding and van der Waals forces.
				SC.912.P.8.7	Interpret formula representations of molecules and compounds in terms of composition and structure.
				SC.912.P.8.8	Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.
				SC.912.P.8.9	Apply the mole concept and the law of conservation of mass to calculate quantities of chemicals participating in reactions.
				SC.912.P.8.10	Describe oxidation-reduction reactions in living and non-living systems.
				SC.912.P.8.11	Relate acidity and basicity to hydronium and hydroxyl ion concentration and pH.
				SC.912.P.8.12	Describe the properties of the carbon atom that make the diversity of carbon compounds possible.
				SC.912.P.8.13	Identify selected functional groups and relate how they contribute to properties of carbon compounds.
		SC.912.P.10	Energy		
				SC.912.P.10.1	Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.
				SC.912.P.10.2	Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.

				SC.912.P.10.3	Compare and contrast work and power qualitatively and quantitatively.
				SC.912.P.10.4	Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.
				SC.912.P.10.5	Relate temperature to the average molecular kinetic energy.
				SC.912.P.10.6	Create and interpret potential energy diagrams, for example: chemical reactions, orbits around a central body, motion of a pendulum.
				SC.912.P.10.7	Distinguish between endothermic and exothermic chemical processes.
				SC.912.P.10.8	Explain entropy's role in determining the efficiency of processes that convert energy to work.
				SC.912.P.10.9	Describe the quantization of energy at the atomic level.
				SC.912.P.10.10	Compare the magnitude and range of the four fundamental forces (gravitational, electromagnetic, weak nuclear, strong nuclear).
				SC.912.P.10.11	Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.
				SC.912.P.10.12	Differentiate between chemical and nuclear reactions.
				SC.912.P.10.13	Relate the configuration of static charges to the electric field, electric force, electric potential, and electric potential energy.
				SC.912.P.10.14	Differentiate among conductors, semiconductors, and insulators.
				SC.912.P.10.15	Investigate and explain the relationships among current, voltage, resistance, and power.
				SC.912.P.10.16	Explain the relationship between moving charges and magnetic fields, as well as changing magnetic fields and

					electric fields, and their application to modern technologies.
				SC.912.P.10.17	Explore the theory of electromagnetism by explaining electromagnetic waves in terms of oscillating electric and magnetic fields.
				SC.912.P.10.18	Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications.
				SC.912.P.10.19	Explain that all objects emit and absorb electromagnetic radiation and distinguish between objects that are blackbody radiators and those that are not.
				SC.912.P.10.20	Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
				SC.912.P.10.21	Qualitatively describe the shift in frequency in sound or electromagnetic waves due to the relative motion of a source or a receiver.
				SC.912.P.10.22	Construct ray diagrams and use thin lens and mirror equations to locate the images formed by lenses and mirrors.
		SC.912.P.12	Motion		
				SC.912.P.12.1	Distinguish between scalar and vector quantities and assess which should be used to describe an event.
				SC.912.P.12.2	Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.
				SC.912.P.12.3	Interpret and apply Newton's three laws of motion.
				SC.912.P.12.4	Describe how the gravitational force between two objects depends on their masses and the distance between them.

				SC.912.P.12.5	Apply the law of conservation of linear momentum to interactions, such as collisions between objects.
				SC.912.P.12.6	Qualitatively apply the concept of angular momentum.
				SC.912.P.12.7	Recognize that nothing travels faster than the speed of light in vacuum which is the same for all observers no matter how they or the light source are moving.
				SC.912.P.12.8	Recognize that Newton's Laws are a limiting case of Einstein's Special Theory of Relativity at speeds that are much smaller than the speed of light.
				SC.912.P.12.9	Recognize that time, length, and energy depend on the frame of reference.
				SC.912.P.12.10	Interpret the behavior of ideal gases in terms of kinetic molecular theory.
				SC.912.P.12.11	Describe phase transitions in terms of kinetic molecular theory.
				SC.912.P.12.12	Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.
				SC.912.P.12.13	Explain the concept of dynamic equilibrium in terms of reversible processes occurring at the same rates.
<b>Earth Science</b>					
ENG	Energy Transfer				
		ENG-1	Energy can be converted from one form to another.		
				ENG-1.A	Explain how solar energy is acquired and transferred by living organisms.
				ENG-1.B	Explain how energy flows and matter cycles through trophic levels.
				ENG-1.C	Determine how the energy decreases as it flows through ecosystems.
				ENG-1.D	Describe food chains and food webs, and their constituent members by trophic level.

		ENG-2	Most of the Earth’s atmospheric processes are driven by input of energy from the sun		
				ENG-2.A	Explain how the sun’s energy affects the Earth’s surface.
				ENG-2.B	Describe how the Earth’s geography affects weather and climate.
				ENG-2.C	Describe the environmental changes and effects that result from El Niño or La Niña events (El Niño–Southern Oscillation).
		ENG-3	Humans use energy from a variety of sources, resulting in positive and negative consequences		
				ENG-3.A	Identify differences between nonrenewable and renewable energy sources.
				ENG-3.B	Describe trends in energy consumption.
				ENG-3.C	Identify types of fuels and their uses.
				ENG-3.D	Identify where natural energy resources occur.
				ENG-3.E	Describe the use and methods of fossil fuels in power generation.
				ENG-3.F	Describe the effects of fossil fuels on the environment.
				ENG-3.G	Describe the use of nuclear energy in power generation.
				ENG-3.H	Describe the effects of the use of nuclear energy on the environment.
				ENG-3.I	Describe the effects of the use of biomass in power generation on the environment.
				ENG-3.J	Describe the use of solar energy in power generation.
				ENG-3.K	Describe the effects of the use of solar energy in power generation on the environment.
				ENG-3.L	Describe the use of hydroelectricity in power generation.

				ENG-3.M	Describe the effects of the use of hydroelectricity in power generation on the environment.
				ENG-3.N	Describe the use of geothermal energy in power generation.
				ENG-3.O	Describe the effects of the use of geothermal energy in power generation on the environment.
				ENG-3.P	Describe the use of hydrogen fuel cells in power generation.
				ENG-3.Q	Describe the effects of the use of hydrogen fuel cells in power generation on the environment.
				ENG-3.R	Describe the use of wind energy in power generation.
				ENG-3.S	Describe the effects of the use of wind energy in power generation on the environment.
				ENG-3.T	Describe methods for conserving energy.
ERT	Interactions Between Earth Systems				
		ERT-1	Ecosystems are the result of biotic and abiotic interactions.		
				ERT-1.A	Explain how the availability of resources influences species interactions.
				ERT-1.B	Describe the global distribution and principal environmental aspects of terrestrial biomes.
				ERT-1.C	Describe the global distribution and principal environmental aspects of aquatic biomes.
				ERT-1.D	Explain the steps and reservoir interactions in the carbon cycle.
				ERT-1.E	Explain the steps and reservoir interactions in the nitrogen cycle.
				ERT-1.F	Explain the steps and reservoir interactions in the phosphorus cycle.



				ERT-1.G	Explain the steps and reservoir interactions in the hydrologic cycle.
		ERT-2	Ecosystems have structure and diversity that change over time		
				ERT-2.A	Explain levels of biodiversity and their importance to ecosystems.
				ERT-2.B	Describe ecosystem services.
				ERT-2.C	Describe the results of human disruptions to ecosystem services.
				ERT-2.D	Describe island biogeography
				ERT-2.E	Describe the role of island biogeography in evolution.
				ERT-2.F	Describe ecological tolerance.
				ERT-2.G	Explain how natural disruptions, both short and long-term, impact an ecosystem.
				ERT-2.H	Describe how organisms adapt to their environment.
				ERT-2.I	Describe ecological succession.
				ERT-2.J	Describe the effect of ecological succession on ecosystems.
		ERT-3	Populations change over time in reaction to a variety of factors		
				ERT-3.A	Identify differences between generalist and specialist species.
				ERT-3.B	Identify differences between K- and r-selected species.
				ERT-3.C	Explain survivorship curves.
				ERT-3.D	Describe carrying capacity.
				ERT-3.E	Describe the impact of carrying capacity on ecosystems.
				ERT-3.F	Explain how resource availability affects population growth.

		ERT-4	Earth's systems interact, resulting in a state of balance over time.		
				ERT-4.A	Describe the geological changes and events that occur at convergent, divergent, and transform plate boundaries.
				ERT-4.B	Describe the characteristics and formation of soil.
				ERT-4.C	Describe similarities and differences between properties of different soil types.
				ERT-4.D	Describe the structure and composition of the Earth's atmosphere.
				ERT-4.E	Explain how environmental factors can result in atmospheric circulation.
				ERT-4.F	Describe the characteristics of a watershed.
EIN	Interactions Between Different Species and the Environment				
		EIN-1	Human populations change in reaction to a variety of factors, including social and cultural factors.		
				EIN-1.A	Explain age structure diagrams.
				EIN-1.B	Explain factors that affect total fertility rate in human populations.
				EIN-1.C	Explain how human populations experience growth and decline.
				EIN-1.D	Define the demographic transition.
		EIN-2	When humans use natural resources, they alter natural systems.		
				EIN-2.A	Explain the concept of the tragedy of the commons.
				EIN-2.B	Describe the effect of clearcutting on forests.

				EIN-2.C	Describe changes in agricultural practices.
				EIN-2.D	Describe agricultural practices that cause environmental damage.
				EIN-2.E	Describe different methods of irrigation.
				EIN-2.F	Describe the benefits and drawbacks of different methods of irrigation.
				EIN-2.G	Describe the benefits and drawbacks of different methods of pest control
				EIN-2.H	Identify different methods of meat production.
				EIN-2.I	Describe the benefits and drawbacks of different methods of meat production.
				EIN-2.J	Describe causes of and problems related to overfishing.
				EIN-2.K	Describe natural resource extraction through mining.
				EIN-2.L	Describe ecological and economic impacts of natural resource extraction through mining.
				EIN-2.M	Describe the effects of urbanization on the environment.
				EIN-2.N	Explain the variables measured in an ecological footprint.
		EIN-3	Pollutants can have both direct and indirect impacts on the health of organisms, including humans.		
				EIN-3.A	Define lethal dose 50% (LD50).
				EIN-3.B	Evaluate dose response curves.
				EIN-3.C	Identify sources of human health issues that are linked to pollution.
				EIN-3.D	Explain human pathogens and their cycling through the environment.
		EIN-4	The health of a species is closely tied to its ecosystem, and minor environmental		

			changes can have a large impact.		
				EIN-4.A	Explain the environmental problems associated with invasive species and strategies to control them.
				EIN-4.B	Explain how species become endangered and strategies to combat the problem.
				EIN-4.C	Explain how human activities affect biodiversity and strategies to combat the problem.
STB	Sustainability				
		STB-1	Humans can mitigate their impact on land and water resources through sustainable use.		
				STB-1.A	Explain the concept of sustainability.
				STB-1.B	Describe methods for mitigating problems related to urban runoff.
				STB-1.C	Describe integrated pest management.
				STB-1.D	Describe the benefits and drawbacks of integrated pest management (IPM).
				STB-1.E	Describe sustainable agricultural and food production practices.
				STB-1.F	Describe the benefits and drawbacks of aquaculture.
				STB-1.G	Describe methods for mitigating human impact on forests.
		STB-2	Human activities have physical, chemical, and biological consequences for the atmosphere.		
				STB-2.A	Identify the sources and effects of air pollutants.
				STB-2.B	Explain the causes and effects of photochemical smog and methods to reduce it.

				STB-2.C	Describe thermal inversion and its relationship with pollution.
				STB-2.D	Describe natural sources of CO <sub>2</sub> and particulates.
				STB-2.E	Identify indoor air pollutants.
				STB-2.F	Describe the effects of indoor air pollutants.
				STB-2.G	Explain how air pollutants can be reduced at the source.
				STB-2.H	Describe acid deposition.
				STB-2.I	Describe the effects of acid deposition on the environment.
				STB-2.J	Describe human activities that result in noise pollution and its effects.
		STB-3	Human activities, including the use of resources, have physical, chemical, and biological consequences for ecosystems.		
				STB-3.A	Identify differences between point and nonpoint sources of pollution.
				STB-3.B	Describe the impacts of human activities on aquatic ecosystems.
				STB-3.C	Describe endocrine disruptors.
				STB-3.D	Describe the effects of endocrine disruptors on ecosystems.
				STB-3.E	Describe the impacts of human activity on wetlands and mangroves.
				STB-3.F	Explain the environmental effects of excessive use of fertilizers and detergents on aquatic ecosystems.
				STB-3.G	Describe the effects of thermal pollution on aquatic ecosystems.
				STB-3.H	Describe the effect of persistent organic pollutants (POPs) on ecosystems.

				STB-3.I	Describe bioaccumulation and biomagnification.
				STB-3.J	Describe the effects of bioaccumulation and biomagnification.
				STB-3.K	Describe solid waste disposal methods.
				STB-3.L	Describe the effects of solid waste disposal methods.
				STB-3.M	Describe changes to current practices that could reduce the amount of generated waste and their associated benefits and drawbacks.
				STB-3.N	Describe best practices in sewage treatment.
		STB-4	Local and regional human activities can have impacts at the global level.		
				STB-4.A	Explain the importance of stratospheric ozone to life on Earth.
				STB-4.B	Describe chemicals used to substitute for chlorofluorocarbons (CFCs).
				STB-4.C	Identify the greenhouse gases.
				STB-4.D	Identify the sources and potency of the greenhouse gases.
				STB-4.E	Identify the threats to human health and the environment posed by an increase in greenhouse gases.
				STB-4.F	Explain how changes in climate, both short- and long term, impact ecosystems.
				STB-4.G	Explain the causes and effects of ocean warming.
				STB-4.H	Explain the causes and effects of ocean acidification.



# *Social Studies/History Standards*

Diocese of Venice  
Curricular Standards:  
**Social Studies and History**

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*High School Grades 9-12  
(+8th Grade)*





# *Basic Principles underlying All Standards to be used for the Planning of Curriculum for the Diocese of Venice*

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Basic principles which inform all Catholic education in the Schools of the Diocese of Venice are:

- All knowledge, in some way, reflects God's Truth, Beauty and Goodness.
- Curriculum and instruction enable deeper incorporation of the children into the Church, the formation of community within the school; and respect for the uniqueness and dignity of each person as created in the image of God.
- Education fosters growth in Christian virtue and contributes to development and formation of the whole person in light of his/her ultimate end and the good of the society of which he/she is a member.
- Each subject is to be examined in the context of the Catholic faith and is to be illuminated by Gospel values.
- Learning and formation occur in the Catholic school without separation as does the development of each student on both the natural and supernatural levels.
- Curriculum and instruction seeks to promote a synthesis of faith, life and culture and to form students as disciples of Jesus.



# *Diocese Of Venice Catholic School Standards For Social Studies and History*



Social Science is the study of society and the relationship of individual members within society which we use to uncover the truth of our connection with one another through time and across geographic barriers. This study also helps to discover the deeper truth of each one's relationship with God.

A curriculum that is open to the intercultural perspective presents the students with a study of civilizations that were previously unknown to them, or were remote from them, but which now are brought to their attention, as well as being brought much "closer" thanks to globalization and modern means of communication, crossing barriers of space and ideological defenses. Teaching that aims to help students understand the reality in which they live cannot ignore the aspect of encounter. On the contrary, teaching has the duty to favor dialogue, as well as cultural and spiritual exchanges.

*Educating to Intercultural Dialogue in Catholic Schools: Living in Harmony for a Civilization of Love, #68*

*Teachers should guide the students' work in such a way that they will be able to discover a religious dimension in the world of human history. As a preliminary, they should be encouraged to develop a taste for historical truth, and therefore to realize the need to look critically at texts and curricula which, at times, are imposed by a government or distorted by the ideology of the author...they will see the development of civilizations, and learn about progress...When they are ready to appreciate it, students can be invited to reflect on the fact that this human struggle takes place within the divine history [of universal salvation]. At this moment, the religious dimension of history begins to shine forth in all its luminous grandeur.*

*The Religious Dimension of a Catholic School, 1988, # 58-59*

## **In a Catholic school, curricular formation...**

1. Involves the integral formation of the whole person, body, mind, and spirit, in light of his or her ultimate end and the good of society.<sup>i</sup>
2. Promotes human virtues and the dignity of the human person, as created in the image and likeness of God and modeled on the person of Jesus Christ.<sup>ii</sup>

3. Seeks to know and understand objective reality which includes transcendent Truth, is knowable by reason and faith, and finds its origin, unity, and end in God.
4. Develops a Catholic worldview and enables a deeper incorporation of the student into the heart of the Catholic Church.<sup>iii</sup>
5. Encourages a synthesis of faith, life, and culture.<sup>iv</sup>

### **Catholic Standards for Social Science**

Students will use Social Science to nurture respect for all human life, develop an appreciation for multicultural diversity, and understand our responsibilities as Christian citizens of our communities and the world.

- A. To understand Catholic Tradition and its positive moral actions as students identify the importance of promoting human dignity, protecting human rights, and building the common good within the political systems of the United States government, not just with those around us, but for those who have gone before us and those who will come after us. CSAD2
- B. To delineate between the rights, duties, and responsibilities to one another, to our country, and to the global society as it is defined by Catholic social justice teaching.
- C. To use Catholic doctrine in order to directly promote human dignity and the responsibility of individuals to participate in civic discourse at the local, federal, and global level: value the diversity among students in the classroom and school community as children of God. CSAD3
- D. To respond to Catholic values that directly affect human dignity and the responsibility of individuals for the betterment of society.
- E. To promote Catholic identity while working to resolve conflict and acknowledging the role of the United States government, as evidenced by its citizens, by actively participating in the promotion of peace and solidarity.
- F. To display Catholic teachings and values while understanding the role of government in protecting human rights, discerning what is positive in the world, what needs to be transformed, and what injustice must be overcome. CSAD4
- G. Strive for a habitual vision of excellence. CSAD6

**Social Studies/History 7<sup>th</sup>-12<sup>th</sup> Grade Catholic Integrated Faith Standards**

SS.712.IF	7th-12th Grade Integration of Faith- Catholic Curricular Standards and Dispositions in History		
	SS.712.IF.1	History - General Standards	
			SS.712.IF.1.1
			SS.712.IF.1.2
			SS.712.IF.1.3
			SS.712.IF.1.4
			SS.712.IF.1.5
	SS.712.IF.2	History - Intellectual Property	
			SS.712.IF.2.1
			SS.712.IF.2.2
			SS.712.IF.2.3
			SS.712.IF.2.4
			SS.712.IF.2.5
			SS.712.IF.2.6

				developmental timeline, but also within the larger story of historical, cultural, and intellectual development.
			SS.712.IF.2.7	Identify, from the Catholic perspective, the motivating values, philosophies, and theologies that have informed particular societies (e.g., Mexico, Canada, early colonies in the U.S.).
			SS.712.IF.2.8	Demonstrate the ways men and societies change and/or persist over time to better understand the human condition.
			SS.712.IF.2.9	Evaluate how societies provide a sense of coherence and meaning to human life, shaping and forming human culture and events.
			SS.712.IF.2.10	Analyze great figures and events in history using the systematic frameworks of Western philosophical tradition and Catholic moral norms and virtue to better understand both those people and events.
			SS.712.IF.2.11	Compare the actions of peoples according to their historical and cultural norms to the expectations of current Catholic moral norms and virtues.
			SS.712.IF.2.12	Demonstrate how historical events and patterns of change help predict and plan for future events.
			SS.712.IF.2.13	Describe how the moral qualities of a citizenry naturally give rise to the nature of the government and influence societal outcomes and destinies.
			SS.712.IF.2.14	Relate how the development of a broader viewpoint of history and events affects individual experiences and deepens a sense of being and the world.
			SS.712.IF.2.15	Analyze the thoughts and deeds of great men and women of the past.
			SS.712.IF.2.16	Analyze and exhibit mastery of essential dates, persons, places, and facts, relevant to the Western tradition and the Catholic Church.
			SS.712.IF.2.17	Examine texts for historical truths, recognizing bias or distortion by the author and overcoming a relativistic viewpoint.
			SS.712.IF.2.18	Analyze historical events, especially those involving critical human experiences of good and evil, so as to enlarge understanding of self and others.

			SS.712.IF.2.19	Distinguish the basic elements of Christian social ethics within historical events.
			SS.712.IF.2.20	Evaluate how Christian social ethics extend to questions of politics, economy, and social institutions and not just personal moral decision-making.
			SS.712.IF.2.21	Evaluate the concept of subsidiarity and its role in Catholic social doctrine.
			SS.712.IF.2.22	Analyze the concept of solidarity and describe its effect on a local, regional, and global level.
			SS.712.IF.2.23	Compare the right to own private property with the universal distribution of goods and the distribution of goods in a socialist society.
			SS.712.IF.2.24	Summarize the case for the dignity of work and the rights of workers.
			SS.712.IF.2.25	Examine the Church's position on freedom and man's right to participate in the building up of society and contributing to the common good.
			SS.712.IF.2.26	Articulate the tension and distinction between religious freedom and social cohesion.
			SS.712.IF.2.27	Identify the dangers of relativism present in the notion that one culture cannot critique another, and that truth is simply culturally created.
	SS.712.IF.3	History - Dispositional Standards		
			SS.712.IF.3.1	Select and describe beautiful artifacts from different times and cultures.
			SS.712.IF.3.2	Exhibit love for the common good and a shared humanity with those present, those who have gone before, and those who will come after.
			SS.712.IF.3.3	Evaluate the aesthetics (idea of beauty) of different cultures and times to better appreciate the purpose and power of both cultural and transcendent notions of the beautiful.
			SS.712.IF.3.4	Share Catholic virtues and values (i.e., prudence and wisdom) gleaned from the study of human history to better evaluate personal

				behaviors, trends of contemporary society, and prevalent social pressures and norms.
			SS.712.IF.3.5	Justify how history, as a medium, can assist in recognizing and rejecting contemporary cultural values that threaten human dignity and are contrary to the Gospel message.
			SS.712.IF.3.6	Demonstrate respect and appreciation for the qualities and characteristics of different cultures in order to pursue peace and understanding, knowledge and truth.

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## 8<sup>th</sup> Grade Social Studies

8 <sup>th</sup> Grade Social Studies				
SS.8.A	Grade 8 American History			
	SS.8.A.1	Use research and inquiry skills to analyze American History using primary and secondary sources.		
			SS.8.A.1.1	Provide supporting details for an answer from text, interview for oral history, check validity of information from research/text, and identify strong vs. weak arguments.
			SS.8.A.1.2	Analyze charts, graphs, maps, photographs and timelines; analyze political cartoons; determine cause and effect.
			SS.8.A.1.3	Analyze current events relevant to American History topics through a variety of electronic and print media resources.
			SS.8.A.1.4	Differentiate fact from opinion, utilize appropriate historical research and fiction/nonfiction support materials.
			SS.8.A.1.5	Identify, within both primary and secondary sources, the author, audience, format, and purpose of significant historical documents.
			SS.8.A.1.6	Compare interpretations of key events and issues throughout American History.
			SS.8.A.1.7	View historic events through the eyes of those who were there as shown in their art, writings, music, and artifacts.
	SS.8.A.2	Examine the causes, course, and consequences of British settlement in the American colonies.		
			SS.8.A.2.1	Compare the relationships among the British, French, Spanish, and Dutch in their struggle for colonization of North America.
			SS.8.A.2.2	Compare the characteristics of the New England, Middle, and Southern colonies.
			SS.8.A.2.3	Differentiate economic systems of New England, Middle and Southern colonies including indentured servants and slaves as labor sources.



			SS.8.A.2.4	Identify the impact of key colonial figures on the economic, political, and social development of the colonies.
			SS.8.A.2.5	Discuss the impact of colonial settlement on Native American populations.
			SS.8.A.2.6	Examine the causes, course, and consequences of the French and Indian War.
			SS.8.A.2.7	Describe the contributions of key groups (Africans, Native Americans, women, and children) to the society and culture of colonial America.
	SS.8.A.3	Demonstrate an understanding of the causes, course, and consequences of the American Revolution and the founding principles of our nation.		
			SS.8.A.3.1	Explain the consequences of the French and Indian War in British policies for the American colonies from 1763 - 1774.
			SS.8.A.3.2	Explain American colonial reaction to British policy from 1763 - 1774.
			SS.8.A.3.3	Recognize the contributions of the Founding Fathers (John Adams, Sam Adams, Benjamin Franklin, John Hancock, Alexander Hamilton, Thomas Jefferson, James Madison, George Mason, George Washington) during American Revolutionary efforts.
			SS.8.A.3.4	Examine the contributions of influential groups to both the American and British war efforts during the American Revolutionary War and their effects on the outcome of the war.
			SS.8.A.3.5	Describe the influence of individuals on social and political developments during the Revolutionary era.
			SS.8.A.3.6	Examine the causes, course, and consequences of the American Revolution.
			SS.8.A.3.7	Examine the structure, content, and consequences of the Declaration of Independence.
			SS.8.A.3.8	Examine individuals and groups that affected political and social motivations during the American Revolution.

			SS.8.A.3.9	Evaluate the structure, strengths, and weaknesses of the Articles of Confederation and its aspects that led to the Constitutional Convention.
			SS.8.A.3.10	Examine the course and consequences of the Constitutional Convention (New Jersey Plan, Virginia Plan, Great Compromise, Three-Fifths Compromise, compromises regarding taxation and slave trade, Electoral College, state vs. federal power, empowering a president).
			SS.8.A.3.11	Analyze support and opposition (Federalists, Federalist Papers, Anti Federalists, Bill of Rights) to ratification of the U.S. Constitution.
			SS.8.A.3.12	Examine the influences of George Washington's presidency in the formation of the new nation.
			SS.8.A.3.13	Explain major domestic and international economic, military, political, and socio-cultural events of John Adams's presidency.
			SS.8.A.3.14	Explain major domestic and international economic, military, political, and socio-cultural events of Thomas Jefferson's presidency.
			SS.8.A.3.15	Examine this time period (1763-1815) from the perspective of historically under-represented groups (children, indentured servants, Native Americans, slaves, women, working class).
			SS.8.A.3.16	Examine key events in Florida history as each impacts this era of American history.
	SS.8.A.4	Demonstrate an understanding of the domestic and international causes, course, and consequences of westward expansion.		
			SS.8.A.4.1	Examine the causes, course, and consequences of United States westward expansion and its growing diplomatic assertiveness (War of 1812, Convention of 1818, Adams-Onis Treaty, Missouri Compromise, Monroe Doctrine, Trail of Tears, Texas annexation, Manifest Destiny, Oregon Territory, Mexican American War/Mexican Cession, California Gold Rush, Compromise of 1850, Kansas Nebraska Act, Gadsden Purchase).

			SS.8.A.4.2	Describe the debate surrounding the spread of slavery into western territories and Florida.
			SS.8.A.4.3	Examine the experiences and perspectives of significant individuals and groups during this era of American History.
			SS.8.A.4.4	Discuss the impact of westward expansion on cultural practices and migration patterns of Native American and African slave populations.
			SS.8.A.4.5	Explain the causes, course, and consequences of the 19th century transportation revolution on the growth of the nation's economy.
			SS.8.A.4.6	Identify technological improvements (inventions/inventors) that contributed to industrial growth.
			SS.8.A.4.7	Explain the causes, course, and consequences (industrial growth, subsequent effect on children and women) of New England's textile industry.
			SS.8.A.4.8	Describe the influence of individuals on social and political developments of this era in American History.
			SS.8.A.4.9	Analyze the causes, course and consequences of the Second Great Awakening on social reform movements.
			SS.8.A.4.10	Analyze the impact of technological advancements on the agricultural economy and slave labor.
			SS.8.A.4.11	Examine the aspects of slave culture including plantation life, resistance efforts, and the role of the slaves' spiritual system.
			SS.8.A.4.12	Examine the effects of the 1804 Haitian Revolution on the United States acquisition of the Louisiana Territory.
			SS.8.A.4.13	Explain the consequences of landmark Supreme Court decisions (McCulloch v. Maryland [1819], Gibbons v. Odgen [1824], Cherokee Nation v. Georgia [1831], and Worcester v. Georgia [1832]) significant to this era of American history.
			SS.8.A.4.14	Examine the causes, course, and consequences of the women's suffrage movement (1848 Seneca Falls Convention, Declaration of Sentiments).
			SS.8.A.4.15	Examine the causes, course, and consequences of literature movements (Transcendentalism) significant to this era of American history.
			SS.8.A.4.16	Identify key ideas and influences of Jacksonian democracy.

			SS.8.A.4.17	Examine key events and peoples in Florida history as each impacts this era of American history.
			SS.8.A.4.18	Examine the experiences and perspectives of different ethnic, national, and religious groups in Florida, explaining their contributions to Florida's and America's society and culture during the Territorial Period.
	SS.8.A.5	Examine the causes, course, and consequence of the Civil War and Reconstruction including its effects on American peoples.		
			SS.8.A.5.1	Explain the causes, course, and consequence of the Civil War (sectionalism, slavery, states' rights, balance of power in the Senate).
			SS.8.A.5.2	Analyze the role of slavery in the development of sectional conflict.
			SS.8.A.5.3	Explain major domestic and international economic, military, political, and socio-cultural events of Abraham Lincoln's presidency.
			SS.8.A.5.4	Identify the division (Confederate and Union States, Border states, western territories) of the United States at the outbreak of the Civil War.
			SS.8.A.5.5	Compare Union and Confederate strengths and weaknesses.
			SS.8.A.5.6	Compare significant Civil War battles and events and their effects on civilian populations.
			SS.8.A.5.7	Examine key events and peoples in Florida history as each impacts this era of American history.
			SS.8.A.5.8	Explain and evaluate the policies, practices, and consequences of Reconstruction (presidential and congressional reconstruction, Johnson's impeachment, Civil Rights Act of 1866, the 13th, 14th, and 15th Amendments, opposition of Southern whites to Reconstruction, accomplishments and failures of Radical Reconstruction, presidential election of 1876, end of Reconstruction, rise of Jim Crow laws, rise of Ku Klux Klan).
SS.8.C	Grade 8 Civics and Government			

	SS.8.C.1	The student will evaluate the roles, rights, and responsibilities of United States citizens and determine methods of active participation in society, government, and the political system.		
			SS.8.C.1.1	Identify the constitutional provisions for establishing citizenship.
			SS.8.C.1.2	Compare views of self-government and the rights and responsibilities of citizens held by Patriots, Loyalists, and other colonists.
			SS.8.C.1.3	Recognize the role of civic virtue in the lives of citizens and leaders from the colonial period through Reconstruction.
			SS.8.C.1.4	Identify the evolving forms of civic and political participation from the colonial period through Reconstruction.
			SS.8.C.1.5	Apply the rights and principles contained in the Constitution and Bill of Rights to the lives of citizens today.
			SS.8.C.1.6	Evaluate how amendments to the Constitution have expanded voting rights from our nation's early history to present day.
	SS.8.C.2	The student will demonstrate an understanding of the principles, functions, and organization of government.		
			SS.8.C.2.1	Evaluate and compare the essential ideals and principles of American constitutional government expressed in primary sources from the colonial period to Reconstruction.
SS.8.E	Grade 8 Economics			
	SS.8.E.1	Understand the fundamental concepts relevant to the development of a market economy.		

			SS.8.E.1.1	Examine motivating economic factors that influenced the development of the United States economy over time including scarcity, supply and demand, opportunity costs, incentives, profits, and entrepreneurial aspects.
	SS.8.E.2	Understand the fundamental concepts relevant to the institutions, structure, and functions of a national economy.		
			SS.8.E.2.1	Analyze contributions of entrepreneurs, inventors, and other key individuals from various gender, social, and ethnic backgrounds in the development of the United States economy.
			SS.8.E.2.2	Explain the economic impact of government policies.
			SS.8.E.2.3	Assess the role of Africans and other minority groups in the economic development of the United States.
	SS.8.E.3	Understand the fundamental concepts and interrelationships of the United States economy in the international marketplace.		
			SS.8.E.3.1	Evaluate domestic and international interdependence.
SS.8.FL	Grade 8 Financial Literacy			
	SS.8.FL.1	Earning Income		
			SS.8.FL.1.1	Explain that careers are based on working at jobs in the same occupation or profession for many years. Describe the different types of education and training required by various careers.
			SS.8.FL.1.2	Identify the many decisions people must make over a lifetime about their education, jobs, and careers that affect their incomes and job opportunities.
			SS.8.FL.1.3	Explain that getting more education and learning new job skills can increase a persons human capital and productivity.

			SS.8.FL.1.4	Examine the fact that people with less education and fewer job skills tend to earn lower incomes than people with more education and greater job skills.
			SS.8.FL.1.5	Examine the fact that investment in education and training generally has a positive rate of return in terms of the income that people earn over a lifetime, with some education or training having a higher rate of return than others.
			SS.8.FL.1.6	Identify the opportunity costs that education, training, and development of job skills have in the terms of time, effort, and money.
			SS.8.FL.1.7	Identify that interest, dividends, and capital appreciation (gains) are forms of income earned from financial investments.
			SS.8.FL.1.8	Discuss the fact that some people receive income support from government because they have low incomes or qualify in other ways for government assistance.
	SS.8.FL.2	Buying Goods and Services		
			SS.8.FL.2.1	Explain why when deciding what to buy, consumers may choose to gather information from a variety of sources. Describe how the quality and usefulness of information provided by sources can vary greatly from source to source. Explain that, while many sources provide valuable information, other sources provide information that is deliberately misleading.
			SS.8.FL.2.2	Analyze a source's incentives in providing information about a good or service, and how a consumer can better assess the quality and usefulness of the information.
			SS.8.FL.2.3	Describe the variety of payment methods people can use in order to buy goods and services.
			SS.8.FL.2.4	Examine choosing a payment method, by weighing the costs and benefits of the different payment options.
			SS.8.FL.2.5	Discuss the fact that people may revise their budget based on unplanned expenses and changes in income.
	SS.8.FL.3	Saving		

			SS.8.FL.3.1	Explain that banks and other financial institutions loan funds received from depositors to borrowers and that part of the interest received from these loans is used to pay interest to depositors for the use of their money.
			SS.8.FL.3.2	Explain that, for the saver, an interest rate is the price a financial institution pays for using a saver's money and is normally expressed as an annual percentage of the amount saved.
			SS.8.FL.3.3	Discuss that interest rates paid on savings and charged on loans, like all prices, are determined in a market.
			SS.8.FL.3.4	Explain that, when interest rates increase, people earn more on their savings and their savings grow more quickly.
			SS.8.FL.3.5	Identify principal as the initial amount of money upon which interest is paid.
			SS.8.FL.3.6	Identify the value of a person's savings in the future as determined by the amount saved and the interest rate. Explain why the earlier people begin to save, the more savings they will be able to accumulate, all other things equal, as a result of the power of compound interest.
			SS.8.FL.3.7	Discuss the different reasons that people save money, including large purchases (such as higher education, autos, and homes), retirement, and unexpected events. Discuss how people's tastes and preferences influence their choice of how much to save and for what to save.
			SS.8.FL.3.8	Explain that, to assure savers that their deposits are safe from bank failures, federal agencies guarantee depositor savings in most commercial banks, savings banks, and savings associations up to a set limit.
	SS.8.FL.4	Financial Literacy		
			SS.8.FL.4.1	Explain that people who apply for loans are told what the interest rate on the loan will be. An interest rate is the price of using someone else's money expressed as an annual percentage of the loan principal.
			SS.8.FL.4.2	Identify a credit card purchase as a loan from the financial institution that issued the card. Explain that credit card interest rates tend to be higher than rates for other loans. In addition, financial institutions may charge significant fees related to a credit card and its use.



			SS.8.FL.4.3	Examine the fact that borrowers who use credit cards for purchases and who do not pay the full balance when it is due pay much higher costs for their purchases because interest is charged monthly. Explain how a credit card user can avoid interest charges by paying the entire balance within the grace period specified by the financial institution.
			SS.8.FL.4.4	Explain that lenders charge different interest rates based on the risk of nonpayment by borrowers. Describe why the higher the risk of nonpayment, the higher the interest rate charged by financial institutions, and the lower the risk of nonpayment, the lower the interest rate charged.
	SS.8.FL.5	Financial Investing		
			SS.8.FL.5.1	Describe the differences among the different types of financial assets, including a wide variety of financial instruments such as bank deposits, stocks, bonds, and mutual funds. Explain that real estate and commodities are also often viewed as financial assets.
			SS.8.FL.5.2	Calculate the amount of interest income received from depositing a certain amount of money in a bank account paying 1 percent per year and from owning a bond paying 5 percent per year in order to analyze that interest is received from money deposited in bank accounts as well as by owning a corporate or government bond or making a loan.
			SS.8.FL.5.3	Discuss that when people buy corporate stock, they are purchasing ownership shares in a business that if the business is profitable, they will expect to receive income in the form of dividends and/or from the increase in the stock's value, that the increase in the value of an asset (like a stock) is called a capital gain, and if the business is not profitable, investors could lose the money they have invested.
			SS.8.FL.5.4	Explain that the price of a financial asset is determined by the interaction of buyers and sellers in a financial market.
			SS.8.FL.5.5	Explain that the rate of return earned from investments will vary according to the amount of risk and, in general, a trade-off exists between the security of an investment and its expected rate of return.
	SS.8.FL.6	Protecting and Insuring		

			SS.8.FL.6.1	Analyze the fact that personal financial risk exists when unexpected events can damage health, income, property, wealth, or future opportunities.
			SS.8.FL.6.2	Identify insurance as a product that allows people to pay a fee (called a premium) now to transfer the costs of a potential loss to a third party.
			SS.8.FL.6.3	Describe how a person may self-insure by accepting a risk and saving money on a regular basis to cover a potential loss.
			SS.8.FL.6.4	Discuss why insurance policies that guarantee higher levels of payment in the event of a loss (coverage) have higher prices.
			SS.8.FL.6.5	Discuss that insurance companies charge higher premiums to cover higher-risk individuals and events because the risk of monetary loss is greater for these individuals and events.
			SS.8.FL.6.6	Explain that individuals can choose to accept some risk, to take steps to avoid or reduce risk, or to transfer risk to others through the purchase of insurance and that each option has different costs and benefits.
			SS.8.FL.6.7	Evaluate social networking sites and other online activity from the perspective of making individuals vulnerable to harm caused by identity theft or misuse of their personal information.
SS.8.G	Grade 8 Geography			
	SS.8.G.1	Understand how to use maps and other geographic representations, tools, and technology to report information.		
			SS.8.G.1.1	Use maps to explain physical and cultural attributes of major regions throughout American history.
			SS.8.G.1.2	Use appropriate geographic tools and terms to identify and describe significant places and regions in American history.
	SS.8.G.2	Understand physical and cultural characteristics of places.		
			SS.8.G.2.1	Identify the physical elements and the human elements that define and differentiate regions as relevant to American history.

			SS.8.G.2.2	Use geographic terms and tools to analyze case studies of regional issues in different parts of the United States that have had critical economic, physical, or political ramifications.
			SS.8.G.2.3	Use geographic terms and tools to analyze case studies of how selected regions of the United States have changed over time.
	SS.8.G.3	Understand the relationships between the Earth's ecosystems and the populations that dwell within them.		
			SS.8.G.3.1	Locate and describe in geographic terms the major ecosystems of the United States.
			SS.8.G.3.2	Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in the United States and Florida over time.
	SS.8.G.4	Understand the characteristics, distribution, and migration of human populations.		
			SS.8.G.4.1	Interpret population growth and other demographic data for any given place in the United States throughout its history.
			SS.8.G.4.2	Use geographic terms and tools to analyze the effects throughout American history of migration to and within the United States, both on the place of origin and destination.
			SS.8.G.4.3	Use geographic terms and tools to explain cultural diffusion throughout the United States as it expanded its territory.
			SS.8.G.4.4	Interpret databases, case studies, and maps to describe the role that regions play in influencing trade, migration patterns, and cultural/political interaction in the United States throughout time.
			SS.8.G.4.5	Use geographic terms and tools to analyze case studies of the development, growth, and changing nature of cities and urban centers in the United States over time.

			SS.8.G.4.6	Use political maps to describe changes in boundaries and governance throughout American history.
	SS.8.G.5	Understand how human actions can impact the environment.		
			SS.8.G.5.1	Describe human dependence on the physical environment and natural resources to satisfy basic needs in local environments in the United States.
			SS.8.G.5.2	Describe the impact of human modifications on the physical environment and ecosystems of the United States throughout history.
	SS.8.G.6	Understand how to apply geography to interpret the past and present and plan for the future.		
			SS.8.G.6.1	Use appropriate maps and other graphic representations to analyze geographic problems and changes over time throughout American history.
			SS.8.G.6.2	Illustrate places and events in U.S. history through the use of narratives and graphic representations.

**Social Studies/History 7<sup>th</sup>-12<sup>th</sup> Grade Catholic Integrated Faith Standards**

SS.712.IF	7th-12th Grade Integration of Faith- Catholic Curricular Standards and Dispositions in History		
	SS.712.IF.1	History - General Standards	
			SS.712.IF.1.1
			SS.712.IF.1.2
			SS.712.IF.1.3
			SS.712.IF.1.4
			SS.712.IF.1.5
	SS.712.IF.2	History - Intellectual Property	
			SS.712.IF.2.1
			SS.712.IF.2.2
			SS.712.IF.2.3
			SS.712.IF.2.4
			SS.712.IF.2.5
			SS.712.IF.2.6

				developmental timeline, but also within the larger story of historical, cultural, and intellectual development.
			SS.712.IF.2.7	Identify, from the Catholic perspective, the motivating values, philosophies, and theologies that have informed particular societies (e.g., Mexico, Canada, early colonies in the U.S.).
			SS.712.IF.2.8	Demonstrate the ways men and societies change and/or persist over time to better understand the human condition.
			SS.712.IF.2.9	Evaluate how societies provide a sense of coherence and meaning to human life, shaping and forming human culture and events.
			SS.712.IF.2.10	Analyze great figures and events in history using the systematic frameworks of Western philosophical tradition and Catholic moral norms and virtue to better understand both those people and events.
			SS.712.IF.2.11	Compare the actions of peoples according to their historical and cultural norms to the expectations of current Catholic moral norms and virtues.
			SS.712.IF.2.12	Demonstrate how historical events and patterns of change help predict and plan for future events.
			SS.712.IF.2.13	Describe how the moral qualities of a citizenry naturally give rise to the nature of the government and influence societal outcomes and destinies.
			SS.712.IF.2.14	Relate how the development of a broader viewpoint of history and events affects individual experiences and deepens a sense of being and the world.
			SS.712.IF.2.15	Analyze the thoughts and deeds of great men and women of the past.
			SS.712.IF.2.16	Analyze and exhibit mastery of essential dates, persons, places, and facts, relevant to the Western tradition and the Catholic Church.
			SS.712.IF.2.17	Examine texts for historical truths, recognizing bias or distortion by the author and overcoming a relativistic viewpoint.
			SS.712.IF.2.18	Analyze historical events, especially those involving critical human experiences of good and evil, so as to enlarge understanding of self and others.

			SS.712.IF.2.19	Distinguish the basic elements of Christian social ethics within historical events.
			SS.712.IF.2.20	Evaluate how Christian social ethics extend to questions of politics, economy, and social institutions and not just personal moral decision-making.
			SS.712.IF.2.21	Evaluate the concept of subsidiarity and its role in Catholic social doctrine.
			SS.712.IF.2.22	Analyze the concept of solidarity and describe its effect on a local, regional, and global level.
			SS.712.IF.2.23	Compare the right to own private property with the universal distribution of goods and the distribution of goods in a socialist society.
			SS.712.IF.2.24	Summarize the case for the dignity of work and the rights of workers.
			SS.712.IF.2.25	Examine the Church's position on freedom and man's right to participate in the building up of society and contributing to the common good.
			SS.712.IF.2.26	Articulate the tension and distinction between religious freedom and social cohesion.
			SS.712.IF.2.27	Identify the dangers of relativism present in the notion that one culture cannot critique another, and that truth is simply culturally created.
	SS.712.IF.3	History - Dispositional Standards		
			SS.712.IF.3.1	Select and describe beautiful artifacts from different times and cultures.
			SS.712.IF.3.2	Exhibit love for the common good and a shared humanity with those present, those who have gone before, and those who will come after.
			SS.712.IF.3.3	Evaluate the aesthetics (idea of beauty) of different cultures and times to better appreciate the purpose and power of both cultural and transcendent notions of the beautiful.
			SS.712.IF.3.4	Share Catholic virtues and values (i.e., prudence and wisdom) gleaned from the study of human history to better evaluate personal

				behaviors, trends of contemporary society, and prevalent social pressures and norms.
			SS.712.IF.3.5	Justify how history, as a medium, can assist in recognizing and rejecting contemporary cultural values that threaten human dignity and are contrary to the Gospel message.
			SS.712.IF.3.6	Demonstrate respect and appreciation for the qualities and characteristics of different cultures in order to pursue peace and understanding, knowledge and truth.



**9<sup>th</sup>-12<sup>th</sup> Grade Social Studies / History**

**American History**

SS.912.A	Grades 9-12 American History				
		SS.912.A.1	Use research and inquiry skills to analyze American History using primary and secondary sources.		
				SS.912.A.1.1	Describe the importance of historiography, which includes how historical knowledge is obtained and transmitted, when interpreting events in history.
				SS.912.A.1.2	Utilize a variety of primary and secondary sources to identify author, historical significance, audience, and authenticity to understand a historical period.
				SS.912.A.1.3	Utilize timelines to identify the time sequence of historical data.
				SS.912.A.1.4	Analyze how images, symbols, objects, cartoons, graphs, charts, maps, and artwork may be used to interpret the significance of time periods and events from the past.
				SS.912.A.1.5	Evaluate the validity, reliability, bias, and authenticity of current events and Internet resources.
				SS.912.A.1.6	Use case studies to explore social, political, legal, and economic relationships in history.
				SS.912.A.1.7	Describe various socio-cultural aspects of American life including arts, artifacts, literature, education, and publications.
		SS.912.A.2	Understand the causes, course, and consequences of the Civil War and Reconstruction and its effects on the American people.		

				SS.912.A.2.1	Review causes and consequences of the Civil War.
				SS.912.A.2.2	Assess the influence of significant people or groups on Reconstruction.
				SS.912.A.2.3	Describe the issues that divided Republicans during the early Reconstruction era.
				SS.912.A.2.4	Distinguish the freedoms guaranteed to African Americans and other groups with the 13th, 14th, and 15th Amendments to the Constitution.
				SS.912.A.2.5	Assess how Jim Crow Laws influenced life for African Americans and other racial/ethnic minority groups.
				SS.912.A.2.6	Compare the effects of the Black Codes and the Nadir on freed people, and analyze the sharecropping system and debt peonage as practiced in the United States.
				SS.912.A.2.7	Review the Native American experience.
		SS.912.A.3	Analyze the transformation of the American economy and the changing social and political conditions in response to the Industrial Revolution.		
				SS.912.A.3.1	Analyze the economic challenges to American farmers and farmers' responses to these challenges in the mid to late 1800s.
				SS.912.A.3.2	Examine the social, political, and economic causes, course, and consequences of the second Industrial Revolution that began in the late 19th century.
				SS.912.A.3.3	Compare the first and second Industrial Revolutions in the United States.

				SS.912.A.3.4	Determine how the development of steel, oil, transportation, communication, and business practices affected the United States economy.
				SS.912.A.3.5	Identify significant inventors of the Industrial Revolution including African Americans and women.
				SS.912.A.3.6	Analyze changes that occurred as the United States shifted from agrarian to an industrial society.
				SS.912.A.3.7	Compare the experience of European immigrants in the east to that of Asian immigrants in the west (the Chinese Exclusion Act, Gentlemen's Agreement with Japan).
				SS.912.A.3.8	Examine the importance of social change and reform in the late 19th and early 20th centuries (class system, migration from farms to cities, Social Gospel movement, role of settlement houses and churches in providing services to the poor).
				SS.912.A.3.9	Examine causes, course, and consequences of the labor movement in the late 19th and early 20th centuries.
				SS.912.A.3.10	Review different economic and philosophic ideologies.
				SS.912.A.3.11	Analyze the impact of political machines in United States cities in the late 19th and early 20th centuries.
				SS.912.A.3.12	Compare how different nongovernmental organizations and progressives worked to shape public policy, restore economic opportunities, and correct injustices in American life.
				SS.912.A.3.13	Examine key events and peoples in Florida history as they relate to United States history.
		SS.912.A.4	Demonstrate an understanding of the changing role of the United States in world affairs		

			through the end of World War I.		
				SS.912.A.4.1	Analyze the major factors that drove United States imperialism.
				SS.912.A.4.2	Explain the motives of the United States acquisition of the territories.
				SS.912.A.4.3	Examine causes, course, and consequences of the Spanish American War.
				SS.912.A.4.4	Analyze the economic, military, and security motivations of the United States to complete the Panama Canal as well as major obstacles involved in its construction.
				SS.912.A.4.5	Examine causes, course, and consequences of United States involvement in World War I.
				SS.912.A.4.6	Examine how the United States government prepared the nation for war with war measures (Selective Service Act, War Industries Board, war bonds, Espionage Act, Sedition Act, Committee of Public Information).
				SS.912.A.4.7	Examine the impact of airplanes, battleships, new weaponry and chemical warfare in creating new war strategies (trench warfare, convoys).
				SS.912.A.4.8	Compare the experiences Americans (African Americans, Hispanics, Asians, women, conscientious objectors) had while serving in Europe.
				SS.912.A.4.9	Compare how the war impacted German Americans, Asian Americans, African Americans, Hispanic Americans, Jewish Americans, Native Americans, women and dissenters in the United States.
				SS.912.A.4.10	Examine the provisions of the Treaty of Versailles and the failure of the United States to support the League of Nations.

				SS.912.A.4.11	Examine key events and peoples in Florida history as they relate to United States history.
		SS.912.A.5	Analyze the effects of the changing social, political, and economic conditions of the Roaring Twenties and the Great Depression.		
				SS.912.A.5.1	Discuss the economic outcomes of demobilization.
				SS.912.A.5.2	Explain the causes of the public reaction(Sacco and Vanzetti, labor, racial unrest) associated with the Red Scare.
				SS.912.A.5.3	Examine the impact of United States foreign economic policy during the 1920s.
				SS.912.A.5.4	Evaluate how the economic boom during the Roaring Twenties changed consumers, businesses, manufacturing, and marketing practices.
				SS.912.A.5.5	Describe efforts by the United States and other world powers to avoid future wars.
				SS.912.A.5.6	Analyze the influence that Hollywood, the Harlem Renaissance, the Fundamentalist movement, and prohibition had in changing American society in the 1920s.
				SS.912.A.5.7	Examine the freedom movements that advocated civil rights for African Americans, Latinos, Asians, and women.
				SS.912.A.5.8	Compare the views of Booker T. Washington, W.E.B. DuBois, and Marcus Garvey relating to the African American experience.
				SS.912.A.5.9	Explain why support for the Ku Klux Klan varied in the 1920s with respect to issues such as anti-immigration, anti-African American, anti-Catholic, anti-Jewish, anti-women, and anti-union ideas.

				SS.912.A.5.10	Analyze support for and resistance to civil rights for women, African Americans, Native Americans, and other minorities.
				SS.912.A.5.11	Examine causes, course, and consequences of the Great Depression and the New Deal.
				SS.912.A.5.12	Examine key events and people in Florida history as they relate to United States history.
		SS.912.A.6	Understand the causes and course of World War II, the character of the war at home and abroad, and its reshaping of the United States role in the post-war world.		
				SS.912.A.6.1	Examine causes, course, and consequences of World War II on the United States and the world.
				SS.912.A.6.2	Describe the United States response in the early years of World War II (Neutrality Acts, Cash and Carry, Lend Lease Act).
				SS.912.A.6.3	Analyze the impact of the Holocaust during World War II on Jews as well as other groups.
				SS.912.A.6.4	Examine efforts to expand or contract rights for various populations during World War II.
				SS.912.A.6.5	Explain the impact of World War II on domestic government policy.
				SS.912.A.6.6	Analyze the use of atomic weapons during World War II and the aftermath of the bombings.
				SS.912.A.6.7	Describe the attempts to promote international justice through the Nuremberg Trials.
				SS.912.A.6.8	Analyze the effects of the Red Scare on domestic United States policy.
				SS.912.A.6.9	Describe the rationale for the formation of the United Nations, including the contribution of Mary McLeod Bethune.

				SS.912.A.6.10	Examine causes, course, and consequences of the early years of the Cold War (Truman Doctrine, Marshall Plan, NATO, Warsaw Pact).
				SS.912.A.6.11	Examine the controversy surrounding the proliferation of nuclear technology in the United States and the world.
				SS.912.A.6.12	Examine causes, course, and consequences of the Korean War.
				SS.912.A.6.13	Analyze significant foreign policy events during the Truman, Eisenhower, Kennedy, Johnson, and Nixon administrations.
				SS.912.A.6.14	Analyze causes, course, and consequences of the Vietnam War.
				SS.912.A.6.15	Examine key events and peoples in Florida history as they relate to United States history.
		SS.912.A.7	Understand the rise and continuing international influence of the United States as a world leader and the impact of contemporary social and political movements on American life.		
				SS.912.A.7.1	Identify causes for Post-World War II prosperity and its effects on American society.
				SS.912.A.7.2	Compare the relative prosperity between different ethnic groups and social classes in the post-World War II period.
				SS.912.A.7.3	Examine the changing status of women in the United States from post-World War II to present.
				SS.912.A.7.4	Evaluate the success of 1960s era presidents' foreign and domestic policies.

				SS.912.A.7.5	Compare nonviolent and violent approaches utilized by groups (African Americans, women, Native Americans, Hispanics) to achieve civil rights.
				SS.912.A.7.6	Assess key figures and organizations in shaping the Civil Rights Movement and Black Power Movement.
				SS.912.A.7.7	Assess the building of coalitions between African Americans, whites, and other groups in achieving integration and equal rights.
				SS.912.A.7.8	Analyze significant Supreme Court decisions relating to integration, busing, affirmative action, the rights of the accused, and reproductive rights.
				SS.912.A.7.9	Examine the similarities of social movements (Native Americans, Hispanics, women, anti-war protesters) of the 1960s and 1970s.
				SS.912.A.7.10	Analyze the significance of Vietnam and Watergate on the government and people of the United States.
				SS.912.A.7.11	Analyze the foreign policy of the United States as it relates to Africa, Asia, the Caribbean, Latin America, and the Middle East.
				SS.912.A.7.12	Analyze political, economic, and social concerns that emerged at the end of the 20th century and into the 21st century.
				SS.912.A.7.13	Analyze the attempts to extend New Deal legislation through the Great Society and the successes and failures of these programs to promote social and economic stability.
				SS.912.A.7.14	Review the role of the United States as a participant in the global economy (trade agreements, international competition, impact on American labor, environmental concerns).
				SS.912.A.7.15	Analyze the effects of foreign and domestic terrorism on the American people.



				SS.912.A.7.16	Examine changes in immigration policy and attitudes toward immigration since 1950.
				SS.912.A.7.17	Examine key events and key people in Florida history as they relate to United States history.
<b>Civics and Government</b>					
SS.912.C	Grades 9-12 Civics and Government				
		SS.912.C.1	Demonstrate an understanding of the origins and purposes of government, law, and the American political system.		
				SS.912.C.1.1	Evaluate, take, and defend positions on the founding ideals and principles in American Constitutional government.
				SS.912.C.1.2	Explain how the Declaration of Independence reflected the political principles of popular sovereignty, social contract, natural rights, and individual rights.
				SS.912.C.1.3	Evaluate the ideals and principles of the founding documents (Declaration of Independence, Articles of Confederation, Federalist Papers) that shaped American Democracy.
				SS.912.C.1.4	Analyze and categorize the diverse viewpoints presented by the Federalists and the Anti-Federalists concerning ratification of the Constitution and inclusion of a bill of rights.
				SS.912.C.1.5	Evaluate how the Constitution and its amendments reflect the political principles of rule of law, checks and balances, separation of powers, republicanism, democracy, and federalism.
		SS.912.C.2	Evaluate the roles, rights, and responsibilities of United		

			States citizens and determine methods of active participation in society, government, and the political system.		
				SS.912.C.2.1	Evaluate the constitutional provisions establishing citizenship, and assess the criteria among citizens by birth, naturalized citizens, and non-citizens.
				SS.912.C.2.2	Evaluate the importance of political participation and civic participation.
				SS.912.C.2.3	Experience the responsibilities of citizens at the local, state, or federal levels.
				SS.912.C.2.4	Evaluate, take, and defend positions on issues that cause the government to balance the interests of individuals with the public good.
				SS.912.C.2.5	Conduct a service project to further the public good.
				SS.912.C.2.6	Evaluate, take, and defend positions about rights protected by the Constitution and Bill of Rights.
				SS.912.C.2.7	Explain why rights have limits and are not absolute.
				SS.912.C.2.8	Analyze the impact of citizen participation as a means of achieving political and social change.
				SS.912.C.2.9	Identify the expansion of civil rights and liberties by examining the principles contained in primary documents.
				SS.912.C.2.10	Monitor current public issues in Florida.
				SS.912.C.2.11	Analyze public policy solutions or courses of action to resolve a local, state, or federal issue.
				SS.912.C.2.12	Explain the changing roles of television, radio, press, and Internet in political communication.
				SS.912.C.2.13	Analyze various forms of political communication and evaluate for bias, factual accuracy, omission, and emotional appeal.

				SS.912.C.2.14	Evaluate the processes and results of an election at the state or federal level.
				SS.912.C.2.15	Evaluate the origins and roles of political parties, interest groups, media, and individuals in determining and shaping public policy.
				SS.912.C.2.16	Analyze trends in voter turnout.
		SS.912.C.3	Demonstrate an understanding of the principles, functions, and organization of government.		
				SS.912.C.3.1	Examine the constitutional principles of representative government, limited government, consent of the governed, rule of law, and individual rights.
				SS.912.C.3.2	Define federalism, and identify examples of the powers granted and denied to states and the national government in the American federal system of government.
				SS.912.C.3.3	Analyze the structures, functions, and processes of the legislative branch as described in Article I of the Constitution.
				SS.912.C.3.4	Analyze the structures, functions, and processes of the executive branch as described in Article II of the Constitution.
				SS.912.C.3.5	Identify the impact of independent regulatory agencies in the federal bureaucracy.
				SS.912.C.3.6	Analyze the structures, functions, and processes of the judicial branch as described in Article III of the Constitution.
				SS.912.C.3.7	Describe the role of judicial review in American constitutional government.
				SS.912.C.3.8	Compare the role of judges on the state and federal level with other elected officials.

				SS.912.C.3.9	Analyze the various levels and responsibilities of courts in the federal and state judicial system and the relationships among them.
				SS.912.C.3.10	Evaluate the significance and outcomes of landmark Supreme Court cases.
				SS.912.C.3.11	Contrast how the Constitution safeguards and limits individual rights.
				SS.912.C.3.12	Simulate the judicial decision-making process in interpreting law at the state and federal level.
				SS.912.C.3.13	Illustrate examples of how government affects the daily lives of citizens at the local, state, and national levels.
				SS.912.C.3.14	Examine constitutional powers (expressed, implied, concurrent, reserved).
				SS.912.C.3.15	Examine how power and responsibility are distributed, shared, and limited by the Constitution.
		SS.912.C.4	Demonstrate an understanding of contemporary issues in world affairs, and evaluate the role and impact of United States foreign policy.		
				SS.912.C.4.1	Explain how the world's nations are governed differently.
				SS.912.C.4.2	Evaluate the influence of American foreign policy on other nations and the influences of other nations on American policies and society.
				SS.912.C.4.3	Assess human rights policies of the United States and other countries.
				SS.912.C.4.4	Compare indicators of democratization in multiple countries.

**Economics**

SS.912.E	Grades 9-12 Economics				
		SS.912.E.1	Understand the fundamental concepts relevant to the development of a market economy.		
				SS.912.E.1.1	Identify the factors of production and why they are necessary for the production of goods and services.
				SS.912.E.1.2	Analyze production possibilities curves to explain choice, scarcity, and opportunity costs.
				SS.912.E.1.3	Compare how the various economic systems (traditional, market, command, mixed) answer the questions: (1) What to produce?; (2) How to produce?; and (3) For whom to produce?
				SS.912.E.1.4	Define supply, demand, quantity supplied, and quantity demanded; graphically illustrate situations that would cause changes in each, and demonstrate how the equilibrium price of a product is determined by the interaction of supply and demand in the market place.
				SS.912.E.1.5	Compare different forms of business organizations.
				SS.912.E.1.6	Compare the basic characteristics of the four market structures (monopoly, oligopoly, monopolistic competition, pure competition).
				SS.912.E.1.7	Graph and explain how firms determine price and output through marginal cost analysis.
				SS.912.E.1.8	Explain ways firms engage in price and nonprice competition.
				SS.912.E.1.9	Describe how the earnings of workers are determined.
				SS.912.E.1.10	Explain the use of fiscal policy (taxation, spending) to promote price stability, full employment, and economic growth.

				SS.912.E.1.11	Explain how the Federal Reserve uses the tools of monetary policy (discount rate, reserve requirement, open market operations) to promote price stability, full employment, and economic growth.
				SS.912.E.1.12	Examine the four phases of the business cycle (peak, contraction - unemployment, trough, expansion - inflation).
				SS.912.E.1.13	Explain the basic functions and characteristics of money, and describe the composition of the money supply in the United States.
				SS.912.E.1.14	Compare credit, savings, and investment services available to the consumer from financial institutions.
				SS.912.E.1.15	Describe the risk and return profiles of various investment vehicles and the importance of diversification.
				SS.912.E.1.16	Construct a one-year budget plan for a specific career path including expenses and construction of a credit plan for purchasing a major item.
		SS.912.E.2	Understand the fundamental concepts relevant to the institutions, structure, and functions of a national economy.		
				SS.912.E.2.1	Identify and explain broad economic goals.
				SS.912.E.2.2	Use a decision-making model to analyze a public policy issue affecting the student's community that incorporates defining a problem, analyzing the potential consequences, and considering the alternatives.
				SS.912.E.2.3	Research contributions of entrepreneurs, inventors, and other key individuals from various gender, social, and ethnic backgrounds in the development of the United States.

				SS.912.E.2.4	Diagram and explain the problems that occur when government institutes wage and price controls, and explain the rationale for these controls.
				SS.912.E.2.5	Analyze how capital investments may impact productivity and economic growth.
				SS.912.E.2.6	Examine the benefits of natural monopolies and the purposes of government regulation of these monopolies.
				SS.912.E.2.7	Identify the impact of inflation on society.
				SS.912.E.2.8	Differentiate between direct and indirect taxes, and describe the progressivity of taxes (progressive, proportional, regressive).
				SS.912.E.2.9	Analyze how changes in federal spending and taxation affect budget deficits and surpluses and the national debt.
				SS.912.E.2.10	Describe the organization and functions of the Federal Reserve System.
				SS.912.E.2.11	Assess the economic impact of negative and positive externalities on the local, state, and national environment.
				SS.912.E.2.12	Construct a circular flow diagram for an open-market economy including elements of households, firms, government, financial institutions, product and factor markets, and international trade.
		SS.912.E.3	Understand the fundamental concepts and interrelationships of the United States economy in the international marketplace.		
				SS.912.E.3.1	Demonstrate the impact of inflation on world economies.

				SS.912.E.3.2	Examine absolute and comparative advantage, and explain why most trade occurs because of comparative advantage.
				SS.912.E.3.3	Discuss the effect of barriers to trade and why nations sometimes erect barriers to trade or establish free trade zones.
				SS.912.E.3.4	Assess the economic impact of negative and positive externalities on the international environment.
				SS.912.E.3.5	Compare the current United States economy with other developed and developing nations.
				SS.912.E.3.6	Differentiate and draw conclusions about historical economic thought theorized by economists.
<b>Financial Literacy</b>					
SS.912.FL	Grades 9-12 Financial Literacy				
		SS.912.FL.1	Earning Income		
				SS.912.FL.1.1	Discuss that people choose jobs or careers for which they are qualified based on non-income factors, such as job satisfaction, independence, risk, family, or location.
				SS.912.FL.1.2	Explain that people vary in their willingness to obtain more education or training because these decisions involve incurring immediate costs to obtain possible future benefits. Describe how discounting the future benefits of education and training may lead some people to pass up potentially high rates of return that more education and training may offer.
				SS.912.FL.1.3	Evaluate ways people can make more informed education, job, or career decisions by evaluating the benefits and costs of different choices.



				SS.912.FL.1.4	Analyze the reasons why the wage or salary paid to workers in jobs is usually determined by the labor market and that businesses are generally willing to pay more productive workers higher wages or salaries than less productive workers.
				SS.912.FL.1.5	Discuss reasons why changes in economic conditions or the labor market can cause changes in a worker's income or may cause unemployment.
				SS.912.FL.1.6	Explain that taxes are paid to federal, state, and local governments to fund government goods and services and transfer payments from government to individuals and that the major types of taxes are income taxes, payroll (Social Security) taxes, property taxes, and sales taxes.
				SS.912.FL.1.7	Discuss how people's sources of income, amount of income, as well as the amount and type of spending affect the types and amounts of taxes paid.
		SS.912.FL.2	Buying Goods and Services		
				SS.912.FL.2.1	Compare consumer decisions as they are influenced by the price of a good or service, the price of alternatives, and the consumer's income as well as his or her preferences.
				SS.912.FL.2.2	Analyze situations in which when people consume goods and services, their consumption can have positive and negative effects on others.
				SS.912.FL.2.3	Discuss that when buying a good, consumers may consider various aspects of the product including the product's features. Explain why for goods that last for a longer period of time, the consumer should consider the product's durability and maintenance costs.
				SS.912.FL.2.4	Describe ways that consumers may be influenced by how the price of a good is expressed.

				SS.912.FL.2.5	Discuss ways people incur costs and realize benefits when searching for information related to their purchases of goods and services and describe how the amount of information people should gather depends on the benefits and costs of the information.
				SS.912.FL.2.6	Explain that people may choose to donate money to charitable organizations and other not-for-profits because they gain satisfaction from donating.
				SS.912.FL.2.7	Examine governments establishing laws and institutions to provide consumers with information about goods or services being purchased and to protect consumers from fraud.
		SS.912.FL.3	Saving		
				SS.912.FL.3.1	Discuss the reasons why some people have a tendency to be impatient and choose immediate spending over saving for the future.
				SS.912.FL.3.2	Examine the ideas that inflation reduces the value of money, including savings, that the real interest rate expresses the rate of return on savings, taking into account the effect of inflation and that the real interest rate is calculated as the nominal interest rate minus the rate of inflation.
				SS.912.FL.3.3	Compare the difference between the nominal interest rate which tells savers how the dollar value of their savings or investments will grow, and the real interest rate which tells savers how the purchasing power of their savings or investments will grow.
				SS.912.FL.3.4	Describe ways that money received (or paid) in the future can be compared to money held today by discounting the future value based on the rate of interest.
				SS.912.FL.3.5	Explain ways that government agencies supervise and regulate financial institutions to help protect the

					safety, soundness, and legal compliance of the nation’s banking and financial system.
				SS.912.FL.3.6	Describe government policies that create incentives and disincentives for people to save.
				SS.912.FL.3.7	Explain how employer benefit programs create incentives and disincentives to save and how an employee’s decision to save can depend on how the alternatives are presented by the employer.
		SS.912.FL.4	Using Credit		
				SS.912.FL.4.1	Discuss ways that consumers can compare the cost of credit by using the annual percentage rate (APR), initial fees charged, and fees charged for late payment or missed payments.
				SS.912.FL.4.2	Discuss that banks and financial institutions sometimes compete by offering credit at low introductory rates, which increase after a set period of time or when the borrower misses a payment or makes a late payment.
				SS.912.FL.4.3	Explain that loans can be unsecured or secured with collateral, that collateral is a piece of property that can be sold by the lender to recover all or part of a loan if the borrower fails to repay. Explain why secured loans are viewed as having less risk and why lenders charge a lower interest rate than they charge for unsecured loans.
				SS.912.FL.4.4	Describe why people often make a cash payment to the seller of a good, is called a down payment in order to reduce the amount they need to borrow. Describe why lenders may consider loans made with a down payment to have less risk because the down payment gives the borrower some equity or ownership right away and why these loans may carry a lower interest rate.

				SS.912.FL.4.5	Explain that lenders make credit decisions based in part on consumer payment history. Credit bureaus record borrowers credit and payment histories and provide that information to lenders in credit reports.
				SS.912.FL.4.6	Discuss that lenders can pay to receive a borrower's credit score from a credit bureau and that a credit score is a number based on information in a credit report and assesses a person's credit risk.
				SS.912.FL.4.7	Describe that, in addition to assessing a person's credit risk, credit reports and scores may be requested and used by employers in hiring decisions, landlords in deciding whether to rent apartments, and insurance companies in charging premiums.
				SS.912.FL.4.8	Examine the fact that failure to repay a loan has significant consequences for borrowers such as negative entries on their credit report, repossession of property (collateral), garnishment of wages, and the inability to obtain loans in the future.
				SS.912.FL.4.9	Explain that consumers who have difficulty repaying debt can seek assistance through credit counseling services and by negotiating directly with creditors.
				SS.912.FL.4.10	Analyze the fact that, in extreme cases, bankruptcy may be an option for consumers who are unable to repay debt, and although bankruptcy provides some benefits, filing for bankruptcy also entails considerable costs, including having notice of the bankruptcy appear on a consumer's credit report for up to 10 years.
				SS.912.FL.4.11	Explain that people often apply for a mortgage to purchase a home and identify a mortgage is a type of loan that is secured by real estate property as collateral.

				SS.912.FL.4.12	Discuss that consumers who use credit should be aware of laws that are in place to protect them and that these include requirements to provide full disclosure of credit terms such as APR and fees, as well as protection against discrimination and abusive marketing or collection practices.
				SS.912.FL.4.13	Explain that consumers are entitled to a free copy of their credit report annually so that they can verify that no errors were made that might increase their cost of credit.
		SS.912.FL.5	Financial Literacy		
				SS.912.FL.5.1	Compare the ways that federal, state, and local tax rates vary on different types of investments. Describe the taxes effect on the after-tax rate of return of an investment.
				SS.912.FL.5.2	Explain how the expenses of buying, selling, and holding financial assets decrease the rate of return from an investment.
				SS.912.FL.5.3	Discuss that buyers and sellers in financial markets determine prices of financial assets and therefore influence the rates of return on those assets.
				SS.912.FL.5.4	Explain that an investment with greater risk than another investment will commonly have a lower market price, and therefore a higher rate of return, than the other investment.
				SS.912.FL.5.5	Explain that shorter-term investments will likely have lower rates of return than longer-term investments.
				SS.912.FL.5.6	Describe how diversifying investments in different types of financial assets can lower investment risk.
				SS.912.FL.5.7	Describe how financial markets adjust to new financial news and that prices in those markets reflect what is known about those financial assets.

				SS.912.FL.5.8	Discuss ways that the prices of financial assets are affected by interest rates and explain that the prices of financial assets are also affected by changes in domestic and international economic conditions, monetary policy, and fiscal policy.
				SS.912.FL.5.9	Examine why investors should be aware of tendencies that people have that may result in poor choices, which may include avoiding selling assets at a loss because they weigh losses more than they weigh gains and investing in financial assets with which they are familiar, such as their own employer's stock or domestic rather than international stocks.
				SS.912.FL.5.10	Explain that people vary in their willingness to take risks because the willingness to take risks depends on factors such as personality, income, and family situation.
				SS.912.FL.5.11	Describe why an economic role for a government may exist if individuals do not have complete information about the nature of alternative investments or access to competitive financial markets.
				SS.912.FL.5.12	Compare the Securities and Exchange Commission (SEC), the Federal Reserve, and other government agencies that regulate financial markets.
		SS.912.FL.6	Protecting and Insuring		
				SS.912.FL.6.1	Describe how individuals vary with respect to their willingness to accept risk and why most people are willing to pay a small cost now if it means they can avoid a possible larger loss later.
				SS.912.FL.6.2	Analyze how judgment regarding risky events is subject to errors because people tend to overestimate

					the probability of infrequent events, often because they've heard of or seen a recent example.
				SS.912.FL.6.3	Describe why people choose different amounts of insurance coverage based on their willingness to accept risk, as well as their occupation, lifestyle, age, financial profile, and the price of insurance.
				SS.912.FL.6.4	Explain that people may be required by governments or by certain types of contracts (e.g., home mortgages) to purchase some types of insurance.
				SS.912.FL.6.5	Describe how an insurance contract can increase the probability or size of a potential loss because having the insurance results in the person taking more risks, and that policy features such as deductibles and copayments are cost-sharing features that encourage the policyholder to take steps to reduce the potential size of a loss (claim).
				SS.912.FL.6.6	Explain that people can lower insurance premiums by behaving in ways that show they pose a lower risk.
				SS.912.FL.6.7	Compare the purposes of various types of insurance, including that health insurance provides for funds to pay for health care in the event of illness and may also pay for the cost of preventative care; disability insurance is income insurance that provides funds to replace income lost while an individual is ill or injured and unable to work; property and casualty insurance pays for damage or loss to the insured's property; life insurance benefits are paid to the insured's beneficiaries in the event of the policyholder's death.
				SS.912.FL.6.8	Discuss the fact that, in addition to privately purchased insurance, some government benefit programs provide a social safety net to protect

					individuals from economic hardship created by unexpected events.
				SS.912.FL.6.9	Explain that loss of assets, wealth, and future opportunities can occur if an individual’s personal information is obtained by others through identity theft and then used fraudulently, and that by managing their personal information and choosing the environment in which it is revealed, individuals can accept, reduce, and insure against the risk of loss due to identity theft.
				SS.912.FL.6.10	Compare federal and state regulations that provide some remedies and assistance for victims of identity theft.
<b>Geography</b>					
SS.912.G	Grades 9-12 Geography				
		SS.912.G.1	Understand how to use maps and other geographic representations, tools and technology to report information.		
				SS.912.G.1.1	Design maps using a variety of technologies based on descriptive data to explain physical and cultural attributes of major world regions.
				SS.912.G.1.2	Use spatial perspective and appropriate geographic terms and tools, including the Six Essential Elements, as organizational schema to describe any given place.
				SS.912.G.1.3	Employ applicable units of measurement and scale to solve simple locational problems using maps and globes.
				SS.912.G.1.4	Analyze geographic information from a variety of sources including primary sources, atlases, computer,



					and digital sources, Geographic Information Systems (GIS), and a broad variety of maps.
		SS.912.G.2	Understand physical and cultural characteristics of places.		
				SS.912.G.2.1	Identify the physical characteristics and the human characteristics that define and differentiate regions.
				SS.912.G.2.2	Describe the factors and processes that contribute to the differences between developing and developed regions of the world.
				SS.912.G.2.3	Use geographic terms and tools to analyze case studies of regional issues in different parts of the world that have critical economic, physical, or political ramifications.
				SS.912.G.2.4	Use geographic terms and tools to analyze case studies of how selected regions change over time.
				SS.912.G.2.5	Use geographic terms and tools to analyze case studies of debates over how human actions modify a selected region.
		SS.912.G.3	Understand the relationships between the Earth's ecosystems and the populations that dwell within them.		
				SS.912.G.3.1	Use geographic terms to locate and describe major ecosystems of Earth.
				SS.912.G.3.2	Use geographic terms and tools to explain how weather and climate influence the natural character of a place.
				SS.912.G.3.3	Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in Florida, the United States, and the world.

				SS.912.G.3.4	Use geographic terms and tools to explain how the Earth's internal changes and external changes influence the character of places.
				SS.912.G.3.5	Use geographic terms and tools to explain how hydrology influences the physical character of a place.
		SS.912.G.4	Understand the characteristics, distribution, and migration of human populations.		
				SS.912.G.4.1	Interpret population growth and other demographic data for any given place.
				SS.912.G.4.2	Use geographic terms and tools to analyze the push/pull factors contributing to human migration within and among places.
				SS.912.G.4.3	Use geographic terms and tools to analyze the effects of migration both on the place of origin and destination, including border areas.
				SS.912.G.4.4	Use geographic terms and tools to analyze case studies of issues in globalization.
				SS.912.G.4.5	Use geographic terms and tools to analyze case studies of the development, growth, and changing nature of cities and urban centers.
				SS.912.G.4.6	Use geographic terms and tools to predict the effect of a change in a specific characteristic of a place on the human population of that place.
				SS.912.G.4.7	Use geographic terms and tools to explain cultural diffusion throughout places, regions, and the world.
				SS.912.G.4.8	Use geographic concepts to analyze spatial phenomena and to discuss economic, political, and social factors that define and interpret space.

				SS.912.G.4.9	Use political maps to describe the change in boundaries and governments within continents over time.
		SS.912.G.5	Understand how human actions can impact the environment.		
				SS.912.G.5.1	Analyze case studies of how the Earth's physical systems affect humans.
				SS.912.G.5.2	Analyze case studies of how changes in the physical environment of a place can increase or diminish its capacity to support human activity.
				SS.912.G.5.3	Analyze case studies of the effects of human use of technology on the environment of places.
				SS.912.G.5.4	Analyze case studies of how humans impact the diversity and productivity of ecosystems.
				SS.912.G.5.5	Use geographic terms and tools to analyze case studies of policies and programs for resource use and management.
				SS.912.G.5.6	Analyze case studies to predict how a change to an environmental factor can affect an ecosystem.
		SS.912.G.6	Understand how to apply geography to interpret the past and present and plan for the future.		
				SS.912.G.6.1	Use appropriate maps and other graphic representations to analyze geographic problems and changes over time.
				SS.912.G.6.2	Develop databases about specific places and provide a simple analysis about their importance.
				SS.912.G.6.3	Formulate hypotheses and test geographic models that demonstrate complex relationships between physical and cultural phenomena.

				SS.912.G.6.4	Translate narratives about places and events into graphic representations.
				SS.912.G.6.5	Develop criteria for assessing issues relating to human spatial organization and environmental stability to identify solutions.
<b>Humanities</b>					
SS.912.H	Grades 9-12 Humanities				
		SS.912.H.1	Identify and analyze the historical, social, and cultural contexts of the arts.		
				SS.912.H.1.1	Relate works in the arts (architecture, dance, music, theatre, and visual arts) of varying styles and genre according to the periods in which they were created.
				SS.912.H.1.2	Describe how historical events, social context, and culture impact forms, techniques, and purposes of works in the arts, including the relationship between a government and its citizens.
				SS.912.H.1.3	Relate works in the arts to various cultures.
				SS.912.H.1.4	Explain philosophical beliefs as they relate to works in the arts.
				SS.912.H.1.5	Examine artistic response to social issues and new ideas in various cultures.
				SS.912.H.1.6	Analyze how current events are explained by artistic and cultural trends of the past.
				SS.912.H.1.7	Know terminology of art forms (narthex, apse, triforium of Gothic cathedral) within cultures and use appropriately in oral and written references.
		SS.912.H.2	Respond critically and aesthetically to various works in the arts.		

				SS.912.H.2.1	Identify specific characteristics of works within various art forms (architecture, dance, film, literature, music, theatre, and visual arts).
				SS.912.H.2.2	Classify styles, forms, types, and genres within art forms.
				SS.912.H.2.3	Apply various types of critical analysis (contextual, formal, and intuitive criticism) to works in the arts, including the types and use of symbolism within art forms and their philosophical implications.
				SS.912.H.2.4	Examine the effects that works in the arts have on groups, individuals, and cultures.
				SS.912.H.2.5	Describe how historical, social, cultural, and physical settings influence an audience's aesthetic response.
		SS.912.H.3	Understand how transportation, trade, communication, science, and technology influence the progression and regression of cultures.		
				SS.912.H.3.1	Analyze the effects of transportation, trade, communication, science, and technology on the preservation and diffusion of culture.
				SS.912.H.3.2	Identify social, moral, ethical, religious, and legal issues arising from technological and scientific developments, and examine their influence on works of arts within a culture.
				SS.912.H.3.3	Identify contributions made by various world cultures through trade and communication, and form a hypothesis on future contributions and changes.
SS.912.P	Grades 9-12 Psychology				

		SS.912.P.1	Scientific Inquiry Domain/Perspectives in Psychological Science		
				SS.912.P.1.1	Define psychology as a discipline and identify its goals as a science.
				SS.912.P.1.2	Describe the emergence of psychology as a scientific discipline.
				SS.912.P.1.3	Describe perspectives employed to understand behavior and mental processes.
				SS.912.P.1.4	Discuss the value of both basic and applied psychological research with human and non-human animals.
				SS.912.P.1.5	Describe the major subfields of psychology.
				SS.912.P.1.6	Identify the important role psychology plays in benefiting society and improving peoples lives.
		SS.912.P.2	Scientific Inquiry Domain/Research Methods, Measurement, and Statistics		
				SS.912.P.2.1	Describe the scientific method and its role in psychology.
				SS.912.P.2.2	Describe and compare a variety of quantitative (e.g., surveys, correlations, experiments) and qualitative (e.g., interviews, narratives, focus groups) research methods.
				SS.912.P.2.3	Define systematic procedures used to improve the validity of research findings, such as external validity.
				SS.912.P.2.4	Discuss how and why psychologists use non-human animals in research.
				SS.912.P.2.5	Identify ethical standards psychologists must address regarding research with human participants.

				SS.912.P.2.6	Identify ethical guidelines psychologists must address regarding research with non-human animals.
				SS.912.P.2.7	Define descriptive statistics and explain how they are used by psychological scientists.
				SS.912.P.2.8	Define forms of qualitative data and explain how they are used by psychological scientists.
				SS.912.P.2.9	Define correlation coefficients and explain their appropriate interpretation.
				SS.912.P.2.10	Interpret graphical representations of data as used in both quantitative and qualitative methods.
				SS.912.P.2.11	Explain other statistical concepts, such as statistical significance and effect size.
				SS.912.P.2.12	Explain how validity and reliability of observations and measurements relate to data analysis.
		SS.912.P.3	Biopsychology Domain/Biological Bases of Behavior		
				SS.912.P.3.1	Identify the major divisions and subdivisions of the human nervous system.
				SS.912.P.3.2	Identify the parts of the neuron and describe the basic process of neural transmission.
				SS.912.P.3.3	Differentiate between the structures and functions of the various parts of the central nervous system.
				SS.912.P.3.4	Describe lateralization of brain functions.
				SS.912.P.3.5	Discuss the mechanisms and the importance of plasticity of the nervous system.
				SS.912.P.3.6	Describe how the endocrine glands are linked to the nervous system.
				SS.912.P.3.7	Describe the effects of hormones on behavior and mental processes.
				SS.912.P.3.8	Describe hormone effects on the immune system.
				SS.912.P.3.9	Describe concepts in genetic transmission.

				SS.912.P.3.10	Describe the interactive effects of heredity and environment.
				SS.912.P.3.11	Explain how evolved tendencies influence behavior.
				SS.912.P.3.12	Identify tools used to study the nervous system.
				SS.912.P.3.13	Describe advances made in neuroscience.
				SS.912.P.3.14	Discuss issues related to scientific advances in neuroscience and genetics.
		SS.912.P.4	Biopsychology Domain/Sensation and Perception		
				SS.912.P.4.1	Discuss processes of sensation and perception and how they interact
				SS.912.P.4.2	Explain the concepts of threshold and adaptation.
				SS.912.P.4.3	List forms of physical energy for which humans and non-human animals do and do not have sensory receptors.
				SS.912.P.4.4	Describe the visual sensory system.
				SS.912.P.4.5	Describe the auditory sensory system.
				SS.912.P.4.6	Describe other sensory systems, such as olfaction, gustation, and some touch (e.g., skin senses, kinesthesia, and vestibular sense).
				SS.912.P.4.7	Explain Gestalt principles of perception.
				SS.912.P.4.8	Describe binocular and monocular depth cues.
				SS.912.P.4.9	Describe the importance of perceptual constancies.
				SS.912.P.4.10	Describe perceptual illusions.
				SS.912.P.4.11	Describe the nature of attention.
				SS.912.P.4.12	Explain how experiences and expectations influence perception.
		SS.912.P.5	Biopsychology Domain/Consciousness		
				SS.912.P.5.1	Identify states of consciousness.



				SS.912.P.5.2	Distinguish between processing that is conscious (i.e., explicit) and other processing that happens without conscious awareness (i.e., implicit).
				SS.912.P.5.3	Describe the circadian rhythm and its relation to sleep.
				SS.912.P.5.4	Describe the sleep cycle.
				SS.912.P.5.5	Compare theories about the functions of sleep.
				SS.912.P.5.6	Describe types of sleep disorders.
				SS.912.P.5.7	Compare theories about the functions of dreams.
				SS.912.P.5.8	Characterize the major categories of psychoactive drugs and their effects.
				SS.912.P.5.9	Describe how psychoactive drugs act at the synaptic level.
				SS.912.P.5.10	Evaluate the biological and psychological effects of psychoactive drugs.
				SS.912.P.5.11	Explain how culture and expectations influence the use and experience of drugs.
				SS.912.P.5.12	Describe meditation and relaxation and their effects.
				SS.912.P.5.13	Describe hypnosis and controversies surrounding its nature and use.
				SS.912.P.5.14	Describe flow states.
		SS.912.P.6	Development and Learning Domain/Life Span Development		
				SS.912.P.6.1	Explain the interaction of environmental and biological factors in development, including the role of the brain in all aspects of development.
				SS.912.P.6.2	Explain issues of continuity/discontinuity and stability/change.
				SS.912.P.6.3	Distinguish methods used to study development.

				SS.912.P.6.4	Describe the role of sensitive and critical periods in development.
				SS.912.P.6.5	Discuss issues related to the end of life.
				SS.912.P.6.6	Discuss theories of cognitive development.
				SS.912.P.6.7	Discuss theories of moral development.
				SS.912.P.6.8	Discuss theories of social development.
				SS.912.P.6.9	Describe physical development from conception through birth and identify influences on prenatal development.
				SS.912.P.6.10	Describe newborns reflexes, temperament, and abilities.
				SS.912.P.6.11	Describe physical and motor development in infancy.
				SS.912.P.6.12	Describe how infant perceptual abilities and intelligence develop.
				SS.912.P.6.13	Describe the development of attachment and the role of the caregiver.
				SS.912.P.6.14	Describe the development of communication and language in infancy.
				SS.912.P.6.15	Describe physical and motor development in childhood.
				SS.912.P.6.16	Describe how memory and thinking ability develops in childhood.
				SS.912.P.6.17	Describe social, cultural, and emotional development through childhood.
				SS.912.P.6.18	Identify major physical changes in adolescence.
				SS.912.P.6.19	Describe the development of reasoning and morality in adolescence.
				SS.912.P.6.20	Describe identity formation in adolescence.
				SS.912.P.6.21	Discuss the role of family and peers in adolescent development.

				SS.912.P.6.22	Identify major physical changes associated with adulthood and aging.
				SS.912.P.6.23	Describe cognitive changes in adulthood and aging.
				SS.912.P.6.24	Discuss social, cultural, and emotional issues in aging.
		SS.912.P.7	Development and Learning domain/Learning		
				SS.912.P.7.1	Describe the principles of classical conditioning.
				SS.912.P.7.2	Describe clinical and experimental examples of classical conditioning.
				SS.912.P.7.3	Apply classical conditioning to everyday life.
				SS.912.P.7.4	Describe the Law of Effect.
				SS.912.P.7.5	Describe the principles of operant conditioning.
				SS.912.P.7.6	Describe clinical and experimental examples of operant conditioning.
				SS.912.P.7.7	Apply operant conditioning to everyday life.
				SS.912.P.7.8	Describe the principles of observational and cognitive learning.
				SS.912.P.7.9	Apply observational and cognitive learning to everyday life.
		SS.912.P.8	Development and Learning Domain/Language Development		
				SS.912.P.8.1	Describe the structure and function of language.
				SS.912.P.8.1	Discuss the relationship between language and thought.
				SS.912.P.8.3	Explain the process of language acquisition.
				SS.912.P.8.4	Discuss how acquisition of a second language can affect language development and possibly other cognitive processes.
				SS.912.P.8.5	Evaluate the theories of language acquisition.

				SS.912.P.8.6	Identify the brain structures associated with language.
				SS.912.P.8.7	Discuss how damage to the brain may affect language.
		SS.912.P.9	Sociocultural Context Domain/Social Interactions		
				SS.912.P.9.1	Describe attributional explanations of behavior.
				SS.912.P.9.2	Describe the relationship between attitudes (implicit and explicit) and behavior.
				SS.912.P.9.3	Identify persuasive methods used to change attitudes.
				SS.912.P.9.4	Describe the power of the situation.
				SS.912.P.9.5	Describe effects of others presence on individuals behavior.
				SS.912.P.9.6	Describe how group dynamics influence behavior.
				SS.912.P.9.7	Discuss how an individual influences group behavior.
				SS.912.P.9.8	Discuss the nature and effects of stereotyping, prejudice, and discrimination.
				SS.912.P.9.9	Describe determinants of prosocial behavior.
				SS.912.P.9.10	Discuss influences upon aggression and conflict.
				SS.912.P.9.11	Discuss factors influencing attraction and relationships.
		SS.912.P.10	Sociocultural Context Domain/Sociocultural Diversity		
				SS.912.P.10.1	Define culture and diversity.
				SS.912.P.10.2	Identify how cultures change over time and vary within nations and internationally.
				SS.912.P.10.3	Discuss the relationship between culture and conceptions of self and identity.

				SS.912.P.10.4	Discuss psychological research examining race and ethnicity.
				SS.912.P.10.5	Discuss psychological research examining socioeconomic status.
				SS.912.P.10.6	Discuss how privilege and social power structures relate to stereotypes, prejudice, and discrimination.
				SS.912.P.10.7	Discuss psychological research examining gender identity.
				SS.912.P.10.8	Discuss psychological research examining diversity in sexual orientation.
				SS.912.P.10.9	Compare and contrast gender identity and sexual orientation.
				SS.912.P.10.10	Discuss psychological research examining gender similarities and differences and the impact of gender discrimination.
				SS.912.P.10.11	Discuss the psychological research on gender and how the roles of women and men in societies are perceived.
				SS.912.P.10.12	Examine how perspectives affect stereotypes and treatment of minority and majority groups in society.
				SS.912.P.10.13	Discuss psychological research examining differences in individual cognitive and physical abilities.
				SS.912.P.10.14	Examine societal treatment of people with disabilities and the effect of treatment by others on individual identity/status.
		SS.912.P.11	Cognition Domain/Memory		
				SS.912.P.11.1	Identify factors that influence encoding.
				SS.912.P.11.2	Characterize the difference between shallow (surface) and deep (elaborate) processing.
				SS.912.P.11.3	Discuss strategies for improving the encoding of memory.

				SS.912.P.11.4	Describe the differences between working memory and long-term memory.
				SS.912.P.11.5	Identify and explain biological processes related to how memory is stored.
				SS.912.P.11.6	Discuss types of memory and memory disorders (e.g., amnesias, dementias).
				SS.912.P.11.7	Discuss strategies for improving the storage of memories.
				SS.912.P.11.8	Analyze the importance of retrieval cues in memory.
				SS.912.P.11.9	Explain the role that interference plays in retrieval.
				SS.912.P.11.10	Discuss the factors influencing how memories are retrieved.
				SS.912.P.11.11	Explain how memories can be malleable.
				SS.912.P.11.12	Discuss strategies for improving the retrieval of memories.
		SS.912.P.12	Cognition Domain/Thinking		
				SS.912.P.12.1	Define cognitive processes involved in understanding information.
				SS.912.P.12.2	Define processes involved in problem solving and decision making.
				SS.912.P.12.3	Discuss non-human problem-solving abilities.
				SS.912.P.12.4	Describe obstacles to problem solving.
				SS.912.P.12.5	Describe obstacles to decision making.
				SS.912.P.12.6	Describe obstacles to making good judgments.
		SS.912.P.13	Cognition Domain/Intelligence		
				SS.912.P.13.1	Discuss intelligences a general factor.
				SS.912.P.13.2	Discuss alternative conceptualizations of intelligence.
				SS.912.P.13.3	Describe the extremes of intelligence.

				SS.912.P.13.4	Discuss the history of intelligence testing, including historical use and misuse in the context of fairness.
				SS.912.P.13.5	Identify current methods of assessing human abilities.
				SS.912.P.13.6	Identify measures of and data on reliability and validity for intelligence test scores.
				SS.912.P.13.7	Discuss issues related to the consequences of intelligence testing.
				SS.912.P.13.8	Discuss the influences of biological, cultural, and environmental factors on intelligence.
		SS.912.P.14	Individual Variations Domain/Motivation		
				SS.912.P.14.1	Explain biologically based theories of motivation.
				SS.912.P.14.2	Explain cognitively based theories of motivation.
				SS.912.P.14.3	Explain humanistic theories of motivation.
				SS.912.P.14.4	Explain the role of culture in human motivation.
				SS.912.P.14.5	Discuss eating behavior.
				SS.912.P.14.6	Discuss sexual behavior and orientation.
				SS.912.P.14.7	Discuss achievement motivation.
				SS.912.P.14.8	Discuss other ways in which humans and non-human animals are motivated.
		SS.912.P.15	Individual Variations Domain/Emotion		
				SS.912.P.15.1	Explain the biological and cognitive components of emotion.
				SS.912.P.15.2	Discuss psychological research on basic human emotions.
				SS.912.P.15.3	Differentiate among theories of emotional experience.
				SS.912.P.15.4	Explain how biological factors influence emotional interpretation and expression.

				SS.912.P.15.5	Explain how culture and gender influence emotional interpretation and expression.
				SS.912.P.15.6	Explain how other environmental factors influence emotional interpretation and expression.
				SS.912.P.15.7	Identify biological and environmental influences on the expression experience of negative emotions, such as fear.
				SS.912.P.15.8	Identify biological and environmental influences on the expression and experience of positive emotions, such as happiness.
		SS.912.P.16	Individual Variations Domain/Personality		
				SS.912.P.16.1	Evaluate psychodynamic theories.
				SS.912.P.16.2	Evaluate trait theories.
				SS.912.P.16.3	Evaluate humanistic theories.
				SS.912.P.16.4	Evaluate social-cognitive theories.
				SS.912.P.16.5	Differentiate personality assessment techniques.
				SS.912.P.16.6	Discuss the reliability and validity of personality assessment techniques.
				SS.912.P.16.7	Discuss biological and situational influences.
				SS.912.P.16.8	Discuss stability and change.
				SS.912.P.16.9	Discuss connection to health and work on personality.
				SS.912.P.16.10	Discuss self-concept.
				SS.912.P.16.11	Analyze how individualistic and collectivistic cultural perspectives relate to personality.
		SS.912.P.17	Individual Variations Domain/Psychological Disorders		
				SS.912.P.17.1	Define psychologically abnormal behavior.



				SS.912.P.17.2	Describe historical and cross-cultural views of abnormality.
				SS.912.P.17.3	Describe major models of abnormality.
				SS.912.P.17.4	Discuss how stigma relates to abnormal behavior.
				SS.912.P.17.5	Discuss the impact of psychological disorders on the individual, family, and society.
				SS.912.P.17.6	Describe the classification of psychological disorders.
				SS.912.P.17.7	Discuss the challenges associated with diagnosis.
				SS.912.P.17.8	Describe symptoms and causes of major categories of psychological disorders (including schizophrenic, mood, anxiety, and personality disorders).
				SS.912.P.17.9	Evaluate how different factors influence an individuals experience of psychological disorders.
		SS.912.P.18	Applications of Psychological Science Domain/Treatment of Psychological Disorders		
				SS.912.P.18.1	Explain how psychological treatments have changed over time and among cultures.
				SS.912.P.18.2	Match methods of treatment to psychological perspectives.
				SS.912.P.18.3	Explain why psychologists use a variety of treatment options.
				SS.912.P.18.4	Identify biomedical treatments.
				SS.912.P.18.5	Identify psychological treatments.
				SS.912.P.18.6	Describe appropriate treatments for different age groups.
				SS.912.P.18.7	Evaluate the efficacy of treatments for particular disorders.
				SS.912.P.18.8	Identify other factors that improve the efficacy of treatment.

				SS.912.P.18.9	Identify treatment providers for psychological disorders and the training required for each.
				SS.912.P.18.10	Identify ethical challenges involved in delivery of treatment.
				SS.912.P.18.11	Identify national and local resources available to support individuals with psychological disorders and their families (e.g., NAMI and support groups).
		SS.912.P.19	Applications of Psychological Science Domain/Health		
				SS.912.P.19.1	Define stress as a psychophysiological reaction.
				SS.912.P.19.2	Identify and explain potential sources of stress.
				SS.912.P.19.3	Explain physiological and psychological consequences of stress for health.
				SS.912.P.19.4	Identify and explain physiological, cognitive, and behavioral strategies to deal with stress.
				SS.912.P.19.5	Identify ways to promote mental health and physical fitness.
				SS.912.P.19.6	Describe the characteristics of and factors that promote resilience and optimism.
				SS.912.P.19.7	Distinguish between effective and ineffective means of dealing with stressors and other health issues.
		SS.912.P.20	Applications of Psychological Science Domain/Vocational Applications		
				SS.912.P.20.1	Identify careers in psychological science and practice.
				SS.912.P.20.2	Identify resources to help select psychology programs for further study.
				SS.912.P.20.3	Identify degree requirements for psychologists and psychology-related careers.

				SS.912.P.20.4	Identify careers related to psychology.
				SS.912.P.20.5	Discuss ways in which psychological science addresses domestic and global issues.
				SS.912.P.20.6	Identify careers in psychological science that have evolved as a result of domestic and global issues.
<b>Sociology</b>					
SS.912.S	Grades 9-12 Sociology				
		SS.912.S.1	Foundations of Sociology as a Social Science/Identify methods and strategies of research and examine the contributions of sociology to the understanding of social issues.		
				SS.912.S.1.1	Discuss the development of the field of sociology as a social science.
				SS.912.S.1.2	Identify early leading theorists within social science.
				SS.912.S.1.3	Compare sociology with other social science disciplines.
				SS.912.S.1.4	Examine changing points of view of social issues, such as poverty, crime and discrimination.
				SS.912.S.1.5	Evaluate various types of sociologic research methods.
				SS.912.S.1.6	Distinguish fact from opinion in data sources to analyze various points of view about a social issue.
				SS.912.S.1.7	Determine cause-and-effect relationship issues among events as they relate to sociology.
				SS.912.S.1.8	Identify, evaluate and use appropriate reference materials and technology to interpret information about cultural life in the United States and other world cultures, both in the past and today.

				SS.912.S.1.9	Develop a working definition of sociology that has personal application.
		SS.912.S.2	Culture/Examine the influence on the individual and the way cultural transmission is accomplished.		
				SS.912.S.2.1	Define the key components of a culture, such as knowledge, language and communication, customs, values, norms, and physical objects.
				SS.912.S.2.2	Explain the differences between a culture and a society.
				SS.912.S.2.3	Recognize the influences of genetic inheritance and culture on human behavior.
				SS.912.S.2.4	Give examples of subcultures and describe what makes them unique.
				SS.912.S.2.5	Compare social norms among various subcultures.
				SS.912.S.2.6	Identify the factors that promote cultural diversity within the United States.
				SS.912.S.2.7	Explain how various practices of the culture create differences within group behavior.
				SS.912.S.2.8	Compare and contrast different types of societies, such as hunting and gathering, agrarian, industrial, and post-industrial.
				SS.912.S.2.9	Prepare original written and oral reports and presentations on specific events, people or historical eras.
				SS.912.S.2.10	Identify both rights and responsibilities the individual has to the group.
				SS.912.S.2.11	Demonstrate democratic approaches to managing disagreements and resolving conflicts within a culture.

				SS.912.S.2.12	Compare and contrast ideas about citizenship and cultural participation from the past with those of the present community.
		SS.912.S.3	Social Status/Identify how social status influences individual and group behaviors and how that status relates to the position a person occupies within a social group.		
				SS.912.S.3.1	Describe how social status affects social order.
				SS.912.S.3.2	Explain how roles and role expectations can lead to role conflict.
				SS.912.S.3.3	Examine and analyze various points of view relating to historical and current events.
		SS.912.S.4	Social Groups/Explore the impacts of social groups on individual and group behavior.		
				SS.912.S.4.1	Describe how individuals are affected by the different social groups to which they belong.
				SS.912.S.4.2	Identify major characteristics of social groups familiar to the students.
				SS.912.S.4.3	Examine the ways that groups function, such as roles, interactions and leadership.
				SS.912.S.4.4	Discuss the social norms of at least two groups to which the student belongs.
				SS.912.S.4.5	Analyze what can occur when the rules of behavior are broken and analyze the possible consequences for unacceptable behavior.
				SS.912.S.4.6	Identify the various types of norms (folkways, mores, laws, and taboos) and explain why these rules of behavior are considered important to society.

				SS.912.S.4.7	Discuss the concept of deviance and how society discourages deviant behavior using social control.
				SS.912.S.4.8	Explain how students are members of primary and secondary groups and how those group memberships influence students' behavior.
				SS.912.S.4.9	Discuss how formal organizations influence behavior of their members.
				SS.912.S.4.10	Distinguish the degree of assimilation that ethnic, cultural, and social groups achieve with the United States culture.
				SS.912.S.4.11	Discuss how humans interact in a variety of social settings.
				SS.912.S.4.12	Determine the cultural patterns of behavior within such social groups as rural/urban or rich/poor.
				SS.912.S.4.13	Investigate and compare the ideas about citizenship and cultural participation of social groups from the past with those of the present community.
		SS.912.S.5	Social Institutions/Identify the effects of social institutions on individual and group behavior.		
				SS.912.S.5.1	Identify basic social institutions and explain their impact on individuals, groups and organizations within society and how they transmit the values of society.
				SS.912.S.5.2	Discuss the concept of political power and factors that influence political power.
				SS.912.S.5.3	Discuss how societies recognize rites of passage.
				SS.912.S.5.4	Investigate stereotypes of the various United States subcultures, such as: American Indian, American cowboys, teenagers, Americans, gangs, and hippies, from a world perspective.

				SS.912.S.5.5	Define ethnocentrism and explain how it can be beneficial or destructive to a culture.
				SS.912.S.5.6	Identify the factors that influence change in social norms over time.
				SS.912.S.5.7	Use various resources to interpret information about cultural life in the United States and other world cultures, both in the past and today.
				SS.912.S.5.8	Analyze the primary and secondary groups common to different age groups in society.
				SS.912.S.5.9	Conduct research and analysis on an issue associated with social structure or social institutions.
				SS.912.S.5.10	Identify both rights and responsibilities the individual has to primary and secondary groups.
				SS.912.S.5.11	Demonstrate democratic approaches to managing disagreements and solving conflicts within a social institution.
				SS.912.S.5.12	Explain how roles and role expectations can lead to role conflict.
		SS.912.S.6	Social Change/Examine the changing nature of society.		
				SS.912.S.6.1	Describe how and why societies change over time.
				SS.912.S.6.2	Examine various social influences that can lead to immediate and long-term changes.
				SS.912.S.6.3	Describe how collective behavior can influence and change society.
				SS.912.S.6.4	Examine how technological innovations and scientific discoveries have influenced major social institutions.
				SS.912.S.6.5	Discuss how social interactions and culture could be affected in the future due to innovations in science and technological change.

				SS.912.S.6.6	Describe how the role of the mass media has changed over time and project what changes might occur in the future.
				SS.912.S.6.7	Distinguish major differences between social movements and collective behavior with examples from history and the contemporary world.
				SS.912.S.6.8	Investigate the consequences in society as result of changes.
				SS.912.S.6.9	Trace the development of the use of a specific type of technology in the community.
				SS.912.S.6.10	Propose a plan to improve a social structure, and design the means needed to implement the change.
				SS.912.S.6.11	Cite examples of the use of technology in social research.
				SS.912.S.6.12	Evaluate a current issue that has resulted from scientific discoveries and/or technological innovations.
		SS.912.S.7	Social Problems/Analyze a range of social problems in today's world.		
				SS.912.S.7.1	Identify characteristics of a social problem, as opposed to an individual problem.
				SS.912.S.7.2	Describe how social problems have changed over time.
				SS.912.S.7.3	Explain how patterns of behavior are found with certain social problems.
				SS.912.S.7.4	Discuss the implications of social problems for society.
				SS.912.S.7.5	Examine how individual and group responses are often associated with social problems.
				SS.912.S.7.6	Evaluate possible solutions to resolving social problems and the consequences that might result from those solutions.



				SS.912.S.7.7	Survey local agencies involved in addressing social problems to determine the extent of the problems in the local community.
				SS.912.S.7.8	Design and carry out school- and community-based projects to address a local aspect of a social problem.
		SS.912.S.8	Individual and Community/Examine the role of the individual as a member of the community; explore both individual and collective behavior.		
				SS.912.S.8.1	Describe traditions, roles, and expectations necessary for a community to continue.
				SS.912.S.8.2	Describe how collective behavior (working in groups) can influence and change society. Use historical and contemporary examples to define collective behavior.
				SS.912.S.8.3	Discuss theories that attempt to explain collective behavior.
				SS.912.S.8.4	Define a social issue to be analyzed.
				SS.912.S.8.5	Examine factors that could lead to the breakdown and disruption of an existing community.
				SS.912.S.8.6	Discuss the impact of leaders of different social movements.
				SS.912.S.8.7	Define propaganda and discuss the methods of propaganda and discuss the methods of propaganda used to influence social behavior.
				SS.912.S.8.8	Discuss both the benefits and social costs of collective behavior in society.
				SS.912.S.8.9	Identify a community social problem and discuss appropriate actions to address the problem.
				SS.912.S.8.10	Investigate how incorrect communications, such as rumors or gossip, can influence group behavior.

**World History**

SS.912.W	Grades 9-12 World History				
		SS.912.W.1	Utilize historical inquiry skills and analytical processes.		
				SS.912.W.1.1	Use timelines to establish cause and effect relationships of historical events.
				SS.912.W.1.2	Compare time measurement systems used by different cultures.
				SS.912.W.1.3	Interpret and evaluate primary and secondary sources.
				SS.912.W.1.4	Explain how historians use historical inquiry and other sciences to understand the past.
				SS.912.W.1.5	Compare conflicting interpretations or schools of thought about world events and individual contributions to history (historiography).
				SS.912.W.1.6	Evaluate the role of history in shaping identity and character.
		SS.912.W.2	Recognize significant events, figures, and contributions of medieval civilizations (Byzantine Empire, Western Europe, Japan).		
				SS.912.W.2.1	Locate the extent of Byzantine territory at the height of the empire.
				SS.912.W.2.2	Describe the impact of Constantine the Great's establishment of "New Rome" (Constantinople) and his recognition of Christianity as a legal religion.
				SS.912.W.2.3	Analyze the extent to which the Byzantine Empire was a continuation of the old Roman Empire and in what ways it was a departure.

				SS.912.W.2.4	Identify key figures associated with the Byzantine Empire.
				SS.912.W.2.5	Explain the contributions of the Byzantine Empire.
				SS.912.W.2.6	Describe the causes and effects of the Iconoclast controversy of the 8th and 9th centuries and the 11th century Christian schism between the churches of Constantinople and Rome.
				SS.912.W.2.7	Analyze causes (Justinian's Plague, ongoing attacks from the "barbarians," the Crusades, and internal political turmoil) of the decline of the Byzantine Empire.
				SS.912.W.2.8	Describe the rise of the Ottoman Turks, the conquest of Constantinople in 1453, and the subsequent growth of the Ottoman empire under the sultanate including Mehmet the Conqueror and Suleyman the Magnificent.
				SS.912.W.2.9	Analyze the impact of the collapse of the Western Roman Empire on Europe.
				SS.912.W.2.10	Describe the orders of medieval social hierarchy, the changing role of the Church, the emergence of feudalism, and the development of private property as a distinguishing feature of Western Civilization.
				SS.912.W.2.11	Describe the rise and achievements of significant rulers in medieval Europe.
				SS.912.W.2.12	Recognize the importance of Christian monasteries and convents as centers of education, charitable and missionary activity, economic productivity, and political power.
				SS.912.W.2.13	Explain how Western civilization arose from a synthesis of classical Greco-Roman civilization, Judeo-Christian influence, and the cultures of northern European peoples promoting a cultural unity in Europe.

				SS.912.W.2.14	Describe the causes and effects of the Great Famine of 1315-1316, The Black Death, The Great Schism of 1378, and the Hundred Years War on Western Europe.
				SS.912.W.2.15	Determine the factors that contributed to the growth of a modern economy.
				SS.912.W.2.16	Trace the growth and development of a national identity in the countries of England, France, and Spain.
				SS.912.W.2.17	Identify key figures, artistic, and intellectual achievements of the medieval period in Western Europe.
				SS.912.W.2.18	Describe developments in medieval English legal and constitutional history and their importance to the rise of modern democratic institutions and procedures.
				SS.912.W.2.19	Describe the impact of Japan's physiography on its economic and political development.
				SS.912.W.2.20	Summarize the major cultural, economic, political, and religious developments in medieval Japan.
				SS.912.W.2.21	Compare Japanese feudalism with Western European feudalism during the Middle Ages.
				SS.912.W.2.22	Describe Japan's cultural and economic relationship to China and Korea.
		SS.912.W.3	Recognize significant events, figures, and contributions of Islamic, Meso and South American, and Sub-Saharan African civilizations.		
				SS.912.W.3.1	Discuss significant people and beliefs associated with Islam.
				SS.912.W.3.2	Compare the major beliefs and principles of Judaism, Christianity, and Islam.

				SS.912.W.3.3	Determine the causes, effects, and extent of Islamic military expansion through Central Asia, North Africa, and the Iberian Peninsula.
				SS.912.W.3.4	Describe the expansion of Islam into India and the relationship between Muslims and Hindus.
				SS.912.W.3.5	Describe the achievements, contributions, and key figures associated with the Islamic Golden Age.
				SS.912.W.3.6	Describe key economic, political, and social developments in Islamic history.
				SS.912.W.3.7	Analyze the causes, key events, and effects of the European response to Islamic expansion beginning in the 7th century.
				SS.912.W.3.8	Identify important figures associated with the Crusades.
				SS.912.W.3.9	Trace the growth of major sub-Saharan African kingdoms and empires.
				SS.912.W.3.10	Identify key significant economic, political, and social characteristics of Ghana.
				SS.912.W.3.11	Identify key figures and significant economic, political, and social characteristics associated with Mali.
				SS.912.W.3.12	Identify key figures and significant economic, political, and social characteristics associated with Songhai.
				SS.912.W.3.13	Compare economic, political, and social developments in East, West, and South Africa.
				SS.912.W.3.14	Examine the internal and external factors that led to the fall of the empires of Ghana, Mali, and Songhai.
				SS.912.W.3.15	Analyze the legacies of the Olmec, Zapotec, and Chavin on later Meso and South American civilizations.
				SS.912.W.3.16	Locate major civilizations of Mesoamerica and Andean South America.

				SS.912.W.3.17	Describe the roles of people in the Maya, Inca, and Aztec societies.
				SS.912.W.3.18	Compare the key economic, cultural, and political characteristics of the major civilizations of Meso and South America.
				SS.912.W.3.19	Determine the impact of significant Meso and South American rulers such as Pacal the Great, Moctezuma I, and Huayna Capac.
		SS.912.W.4	Analyze the causes, events, and effects of the Renaissance, Reformation, Scientific Revolution, and Age of Exploration.		
				SS.912.W.4.1	Identify the economic and political causes for the rise of the Italian city-states (Florence, Milan, Naples, Rome, Venice).
				SS.912.W.4.2	Recognize major influences on the architectural, artistic, and literary developments of Renaissance Italy (Classical, Byzantine, Islamic, Western European).
				SS.912.W.4.3	Identify the major artistic, literary, and technological contributions of individuals during the Renaissance.
				SS.912.W.4.4	Identify characteristics of Renaissance humanism in works of art.
				SS.912.W.4.5	Describe how ideas from the Middle Ages and Renaissance led to the Scientific Revolution.
				SS.912.W.4.6	Describe how scientific theories and methods of the Scientific Revolution challenged those of the early classical and medieval periods.
				SS.912.W.4.7	Identify criticisms of the Roman Catholic Church by individuals such as Wycliffe, Hus and Erasmus and their impact on later reformers.

				SS.912.W.4.8	Summarize religious reforms associated with Luther, Calvin, Zwingli, Henry VIII, and John of Leyden and the effects of the Reformation on Europe.
				SS.912.W.4.9	Analyze the Roman Catholic Church's response to the Protestant Reformation in the forms of the Counter and Catholic Reformation.
				SS.912.W.4.10	Identify the major contributions of individuals associated with the Scientific Revolution.
				SS.912.W.4.11	Summarize the causes that led to the Age of Exploration, and identify major voyages and sponsors.
				SS.912.W.4.12	Evaluate the scope and impact of the Columbian Exchange on Europe, Africa, Asia, and the Americas.
				SS.912.W.4.13	Examine the various economic and political systems of Portugal, Spain, the Netherlands, France, and England in the Americas.
				SS.912.W.4.14	Recognize the practice of slavery and other forms of forced labor experienced during the 13th through 17th centuries in East Africa, West Africa, Europe, Southwest Asia, and the Americas.
				SS.912.W.4.15	Explain the origins, developments, and impact of the trans-Atlantic slave trade between West Africa and the Americas.
		SS.912.W.5	Analyze the causes, events, and effects of the Enlightenment and its impact on the American, French and other Revolutions.		
				SS.912.W.5.1	Compare the causes and effects of the development of constitutional monarchy in England with those of the development of absolute monarchy in France, Spain, and Russia.
				SS.912.W.5.1	Identify major causes of the Enlightenment.

				SS.912.W.5.3	Summarize the major ideas of Enlightenment philosophers.
				SS.912.W.5.4	Evaluate the impact of Enlightenment ideals on the development of economic, political, and religious structures in the Western world.
				SS.912.W.5.5	Analyze the extent to which the Enlightenment impacted the American and French Revolutions.
				SS.912.W.5.5	Summarize the important causes, events, and effects of the French Revolution including the rise and rule of Napoleon.
				SS.912.W.5.6	Describe the causes and effects of 19th Latin American and Caribbean independence movements led by people including Bolivar, de San Martin, and L' Ouverture.
		SS.912.W.6	Understand the development of Western and non-Western nationalism, industrialization and imperialism, and the significant processes and consequences of each.		
				SS.912.W.6.1	Describe the agricultural and technological innovations that led to industrialization in Great Britain and its subsequent spread to continental Europe, the United States, and Japan.
				SS.912.W.6.2	Summarize the social and economic effects of the Industrial Revolution.
				SS.912.W.6.3	Compare the philosophies of capitalism, socialism, and communism as described by Adam Smith, Robert Owen, and Karl Marx.
				SS.912.W.6.4	Describe the 19th and early 20th century social and political reforms and reform movements and their effects in Africa, Asia, Europe, the United States, the Caribbean, and Latin America.



				SS.912.W.6.5	Summarize the causes, key events, and effects of the unification of Italy and Germany.
				SS.912.W.6.6	Analyze the causes and effects of imperialism.
				SS.912.W.6.7	Identify major events in China during the 19th and early 20th centuries related to imperialism.
		SS.912.W.7	Recognize significant causes, events, figures, and consequences of the Great War period and the impact on worldwide balance of power.		
				SS.912.W.7.1	Analyze the causes of World War I including the formation of European alliances and the roles of imperialism, nationalism, and militarism.
				SS.912.W.7.2	Describe the changing nature of warfare during World War I.
				SS.912.W.7.3	Summarize significant effects of World War I.
				SS.912.W.7.4	Describe the causes and effects of the German economic crisis of the 1920s and the global depression of the 1930s, and analyze how governments responded to the Great Depression.
				SS.912.W.7.5	Describe the rise of authoritarian governments in the Soviet Union, Italy, Germany, and Spain, and analyze the policies and main ideas of Vladimir Lenin, Joseph Stalin, Benito Mussolini, Adolf Hitler, and Francisco Franco.
				SS.912.W.7.6	Analyze the restriction of individual rights and the use of mass terror against populations in the Soviet Union, Nazi Germany, and occupied territories.
				SS.912.W.7.7	Trace the causes and key events related to World War II.

				SS.912.W.7.8	Explain the causes, events, and effects of the Holocaust (1933-1945) including its roots in the long tradition of anti-Semitism, 19th century ideas about race and nation, and Nazi dehumanization of the Jews and other victims.
				SS.912.W.7.9	Identify the wartime strategy and post-war plans of the Allied leaders.
				SS.912.W.7.10	Summarize the causes and effects of President Truman's decision to drop the atomic bombs on Japan.
				SS.912.W.7.11	Describe the effects of World War II.
		SS.912.W.8	Recognize significant events and people from the post World War II and Cold War eras.		
				SS.912.W.8.1	Identify the United States and Soviet aligned states of Europe, and contrast their political and economic characteristics.
				SS.912.W.8.2	Describe characteristics of the early Cold War.
				SS.912.W.8.3	Summarize key developments in post-war China.
				SS.912.W.8.4	Summarize the causes and effects of the arms race and proxy wars in Africa, Asia, Latin America, and the Middle East.
				SS.912.W.8.5	Identify the factors that led to the decline and fall of communism in the Soviet Union and Eastern Europe.
				SS.912.W.8.6	Explain the 20th century background for the establishment of the modern state of Israel in 1948 and the ongoing military and political conflicts between Israel and the Arab-Muslim world.
				SS.912.W.8.7	Compare post-war independence movements in African, Asian, and Caribbean countries.

				SS.912.W.8.8	Describe the rise and goals of nationalist leaders in the post-war era and the impact of their rule on their societies.
				SS.912.W.8.9	Analyze the successes and failures of democratic reform movements in Africa, Asia, the Caribbean, and Latin America.
				SS.912.W.8.10	Explain the impact of religious fundamentalism in the last half of the 20th century, and identify related events and forces in the Middle East over the last several decades.
		SS.912.W.9	Identify major economic, political, social, and technological trends beginning in the 20th century.		
				SS.912.W.9.1	Identify major scientific figures and breakthroughs of the 20th century, and assess their impact on contemporary life.
				SS.912.W.9.2	Describe the causes and effects of post-World War II economic and demographic changes.
				SS.912.W.9.3	Explain cultural, historical, and economic factors and governmental policies that created the opportunities for ethnic cleansing or genocide in Cambodia, the Balkans, Rwanda, and Darfur, and describe various governmental and non-governmental responses to them.
				SS.912.W.9.4	Describe the causes and effects of twentieth century nationalist conflicts.
				SS.912.W.9.5	Assess the social and economic impact of pandemics on a global scale, particularly within the developing and under-developed world.
				SS.912.W.9.6	Analyze the rise of regional trade blocs such as the European Union and NAFTA, and predict the impact

					of increased globalization in the 20th and 21st centuries.
				SS.912.W.9.7	Describe the impact of and global response to international terrorism.
APWH	World History				
		ENV	Humans and the Environment: The environment shapes human societies, and as populations grow and change, these populations in turn shape their environments.		
				ENV.1	Explain the role of environmental factors in the development of networks of exchange in the period from c. 1200 to c. 1450.
				ENV.2	Explain the environmental effects of the various networks of exchange in Afro-Eurasia from c. 1200 to c. 1450
				ENV.3	Explain the similarities and differences among the various networks of exchange in the period from c. 1200 to c. 1450.
				ENV.4	Explain the causes of the Columbian Exchange and its effects on the Eastern and Western Hemispheres.
				ENV.5	Explain how environmental factors contributed to industrialization from 1750 to 1900.
				ENV.6	Explain how various environmental factors contributed to the development of the global economy from 1750 to 1900.
				ENV.7	Explain how various environmental factors contributed to the development of varied patterns of migration from 1750 to 1900.

				ENV.8	Explain how environmental factors affected human populations over time
				ENV.9	Explain the causes and effects of environmental changes in the period from 1900 to present.
		CDI	Cultural Developments and Interactions: The development of ideas, beliefs, and religions illustrates how groups in society view themselves, and the interactions of societies and their beliefs often have political, social, and cultural implications.		
				CDI.1	Explain the effects of Chinese cultural traditions on East Asia over time
				CDI.2	Explain how systems of belief and their practices affected society in the period from c. 1200 to c. 1450.
				CDI.3	Explain how the beliefs and practices of the predominant religions in Europe affected European society.
				CDI.4	Explain the significance of the Mongol Empire in larger patterns of continuity and change.
				CDI.5	Explain the effects of the growth of networks of exchange after 1200.
				CDI.6	Explain the intellectual and cultural effects of the various networks of exchange in Afro-Eurasia from c. 1200 to c. 1450.
				CDI.7	Explain continuity and change within the various belief systems during the period from 1450 to 1750.
				CDI.8	Compare the methods by which various empires increased their influence from 1450 to 1750.

				CDI.9	Explain the similarities and differences in how various belief systems affected societies from 1450 to 1750.
				CDI.10	Explain the intellectual and ideological context in which revolutions swept the Atlantic world from 1750 to 1900.
				CDI.11	Explain how ideologies contributed to the development of imperialism from 1750 to 1900.
				CDI.12	Explain the causes and effects of the ideological struggle of the Cold War.
				CDI.13	Explain various reactions to existing power structures in the period after 1900.
				CDI.14	Explain how and why globalization changed culture over time.
				CDI.15	Explain the various responses to increasing globalization from 1900 to present.
		GOV	Governance: A variety of internal and external factors contribute to state formation, expansion, and decline. Governments maintain order through a variety of administrative institutions, policies, and procedures, and governments obtain, retain, and exercise power in different ways and for different purposes		
				GOV.1	Explain the systems of government employed by Chinese dynasties and how they developed over time.
				GOV.2	Explain the causes and effects of the rise of Islamic states over time.

				GOV.3	Explain how the various belief systems and practices of South and Southeast Asia affected society over time.
				GOV.4	Explain how and why various states of South and Southeast Asia developed and maintained power over time.
				GOV.5	Explain how and why states in the Americas developed and changed over time.
				GOV.6	Explain how and why states in Africa developed and changed over time.
				GOV.7	Explain the causes and consequences of political decentralization in Europe from c. 1200 to c. 1450.
				GOV.8	Explain the process of state building and decline in Eurasia over time.
				GOV.9	Explain how the expansion of empires influenced trade and communication over time.
				GOV.10	Explain how and why various land-based empires developed and expanded from 1450 to 1750.
				GOV.11	Explain how rulers used a variety of methods to legitimize and consolidate their power in land-based empires from 1450 to 1750.
				GOV.12	Describe the role of states in the expansion of maritime exploration from 1450 to 1750.
				GOV.13	Explain the process of state building and expansion among various empires and states in the period from 1450 to 1750.
				GOV.14	Explain the effects of the development of state power from 1450 to 1750.
				GOV.15	Explain causes and effects of the various revolutions in the period from 1750 to 1900.
				GOV.16	Explain the causes and effects of economic strategies of different states and empires.

				GOV.17	Compare processes by which state power shifted in various parts of the world from 1750 to 1900.
				GOV.18	Explain how and why internal and external factors have influenced the process of state building from 1750 to 1900.
				GOV.19	Explain how internal and external factors contributed to change in various states after 1900.
				GOV.20	Explain the causes and consequences of World War I.
				GOV.21	Explain the continuities and changes in territorial holdings from 1900 to the present.
				GOV.22	Explain the causes and consequences of World War II.
				GOV.23	Explain similarities and differences in how governments used a variety of methods to conduct war.
				GOV.24	Compare the ways in which the United States and the Soviet Union sought to maintain influence over the course of the Cold War.
				GOV.25	Compare the processes by which various peoples pursued independence after 1900.
				GOV.26	Explain how political changes in the period from c. 1900 to the present led to territorial, demographic, and nationalist developments.
				GOV.27	Explain the causes of the end of the Cold War.
				GOV.28	Explain the extent to which the effects of the Cold War were similar in the Eastern and Western Hemispheres.
				GOV.29	Explain how and why globalization changed international interactions among states



				GOV.30	Explain the extent to which science and technology brought change in the period from 1900 to the present.
		ENC	Economic Systems: As societies develop, they affect and are affected by the ways that they produce, exchange, and consume goods and services.		
				ENC.1	Explain the effects of innovation on the Chinese economy over time.
				ENC.2	Explain the causes and effects of growth of networks of exchange after 1200
				ENC.3	Explain how the expansion of empires influenced trade and communication over time.
				ENC.4	Explain the causes of the growth of networks of exchange after 1200
				ENC.5	Explain the economic causes and effects of maritime exploration by the various European states.
				ENC.6	Explain the continuities and changes in economic systems and labor systems from 1450 to 1750.
				ENC.7	Explain the continuities and changes in networks of exchange from 1450 to 1750
				ENC.8	Explain the development of economic systems, ideologies, and institutions and how they contributed to change in the period from 1750 to 1900.
				ENC.9	Explain how various economic factors contributed to the development of the global economy from 1750 to 1900.
				ENC.10	Explain how various economic factors contributed to the development of varied patterns of migration from 1750 to 1900.

				ENC.11	Explain how different governments responded to economic crisis after 1900.
				ENC.12	Explain the historical context of the Cold War after 1945.
				ENC.13	Explain the causes and consequences of China's adoption of communism.
				ENC.14	Explain the economic changes and continuities resulting from the process of decolonization.
				ENC.15	Explain the continuities and changes in the global economy from 1900 to present.
		SIO	Social Interactions and Organization: The process by which societies group their members and the norms that govern the interactions between these groups and between individuals influence political, economic, and cultural institutions and organization.		
				SIO.1	Explain the effects of agriculture on social organization in Europe from c. 1200 to c. 1450.
				SIO.2	Explain the similarities and differences in the processes of state formation from c. 1200 to c. 1450.
				SIO.3	Explain changes and continuities in systems of slavery in the period from 1450 to 1750
				SIO.4	Explain how rulers employed economic strategies to consolidate and maintain power throughout the period from 1450 to 1750.
				SIO.5	Explain how political, economic, and cultural factors affected society from 1450 to 1750.
				SIO.6	Explain how social categories, roles, and practices have been maintained or have changed over time.

				SIO.7	Explain how economic developments from 1450 to 1750 affected social structures over time.
				SIO.8	Explain how the Enlightenment affected societies over time.
				SIO.9	Explain the causes and effects of calls for changes in industrial societies from 1750 to 1900.
				SIO.10	Explain the extent to which industrialization brought change from 1750 to 1900.
				SIO.11	Explain how industrialization caused change in existing social hierarchies and standards of living.
				SIO.12	Explain how and why new patterns of migration affected society from 1750 to 1900.
				SIO.13	Explain the relative significance of the effects of imperialism from 1750 to 1900.
				SIO.14	Explain the various causes and consequences of mass atrocities in the period from 1900 to the present.
				SIO.15	Explain the relative significance of the causes of global conflict in the period 1900 to the present.
				SIO.16	Explain the causes and effects of movements to redistribute economic resources.
				SIO.17	Explain how social categories, roles, and practices have been maintained and challenged over time.
		TEC	Technology and Innovation: Human adaptation and innovation have resulted in increased efficiency, comfort, and security, and technological advances have shaped human development and interactions with both intended and unintended consequences.		

				TEC.1	Explain the effects of intellectual innovation in Dar al-Islam.
				TEC.2	Explain the causes and effects of the growth of trans-Saharan trade.
				TEC.3	Explain how cross-cultural interactions resulted in the diffusion of technology and facilitated changes in patterns of trade and travel from 1450 to 1750
				TEC.4	Explain how different modes and locations of production have developed and changed over time and locations of production have developed and changed over time
				TEC.5	Explain how technology shaped economic production over time.
				TEC.6	Explain how governments used a variety of methods to conduct war.
				TEC.7	Explain how the development of new technologies changed the world from 1900 to present.

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<sup>i</sup> *The Catholic School, 1977, #36, 47, 49. Gravissimum Educationis, 1965, #1, par. 1; USCCB. Seven themes of Catholic social teaching.*

<sup>ii</sup> *The Religious Dimension of Education in a Catholic School, 1988, #52, 56; The Catholic School, 1977, #55.*

<sup>iii</sup> *The Religious Dimension of Education in a Catholic School, 1988, #71, 74-77; The Catholic School, 1977, #50*

<sup>iv</sup> *The Religious Dimension of Education in a Catholic School, 1988, #52; The Catholic School, #37.*