

Zia Learning Scope and Sequence and Course Descriptions (Online Courses Provided by Fuel Education)

Subject Area	9th Grade	Description	10th Grade	Description	11th grade	Description	12th grade	Description
English (4)	English 1	<p>The English 9 course includes engaging and interactive instruction about reading, writing, speaking and listening, and language, with a focus on exploring a wide variety of genres and their elements. Students learn how to carefully read, interpret, and analyze literature and nonfiction works of cultural or historical significance appropriate to Grade 9. Throughout the course, students practice narrative, informative, and argument writing. Students also develop and deliver presentations, and participate in discussions with their peers.</p>	English 2	<p>The English 10 course includes engaging and interactive instruction about reading, writing, speaking and listening, and language, with a focus on exploring a wide variety of genres and their elements. Students learn how to carefully read, interpret, and analyze literature and nonfiction works of cultural or historical significance appropriate to Grade 10. Throughout the course, students practice narrative, informative, and argument writing. Students also develop and deliver presentations, and participate in discussions with their peers.</p>	English 3 (Literacy & Composition 1)	<p>In this course, students work on their written and oral communication skills, while strengthening their ability to understand and analyze works of literature, both classic and modern. Literature: Students read short stories, poetry, drama, novels, essays, and informative articles. The course sharpens reading comprehension skills and engages readers in literary analysis as they consider important human issues and challenging ideas. Students also learn to read for information in nonfiction texts. Language Skills: Students learn to express their ideas effectively. They sharpen their composition skills through a focus on writing good paragraphs and essays in a variety of genres, such as persuasive and research essays. Students plan, organize, and revise written works in response to feedback on drafts. In grammar, usage, and mechanics lessons, students expand their understanding of parts of speech, phrases and clauses, sentence analysis and structure, agreement, punctuation, and other conventions. Vocabulary lessons build knowledge of Greek and Latin words that form the roots of many English words. Students use word origins and derivations to determine the meaning of new words as they increase their vocabularies.</p>	English 4 (Literacy & Composition 2)	<p>In this course, students build on their language skills while reading classic and modern works of literature and improving their writing skills. Literature: Students read short stories, poetry, drama, and novels, sharpening their reading comprehension skills and analyzing important human issues. Language Skills: Students continue to work on their oral and written expression skills, writing a variety of essays, including persuasive and research essays. Students plan, organize, and revise their essays in response to feedback. They build on their skills in grammar, usage, and mechanics by studying parts of speech, phrases and clauses, sentence analysis and structure, agreement, punctuation, and other conventions. Thematic units focus on word roots, suffixes and prefixes, context clues, and other strategies to help students strengthen their vocabularies. Prerequisites: Literary Analysis and Composition I (Core) or equivalent</p>

<p>Mathematics (3)</p>	<p>Algebra</p>	<p>The Algebra 1 course is intended to formalize and extend the mathematics that students learned in the middle grades. Because it is built to follow revised middle school math courses, the course covers slightly different ground than previous versions of Algebra. In this course, students deepen their understanding of linear and exponential relationships by contrasting them with each other. Students also apply linear models to data that exhibit a linear trend. The course also covers analyzing, solving, and using quadratic functions.</p>	<p>Geometry</p> <p>Students learn to recognize and work with geometric concepts in various contexts. They build on ideas of inductive and deductive reasoning, logic, concepts, and techniques of Euclidean plane and solid geometry and develop an understanding of mathematical structure, method, and applications of Euclidean plane and solid geometry. Students use visualizations, spatial reasoning, and geometric modeling to solve problems. Topics of study include points, lines, and angles; triangles; right triangles; quadrilaterals and other polygons; circles; coordinate geometry; three-dimensional solids; geometric constructions; symmetry; the use of transformations; and non-Euclidean geometries. Compared to MTH202, this course has a more rigorous pace and more challenging assignments and assessments. MTH203 also covers additional topics such biconditionals, rotations of points in a coordinate plane, creating and interpreting truth tables, parametric equations for lines in three dimensions, finding the equation of a circle from three points, input -output tables for logical gates, and several theorems including the Jordan Curve Theorem, Pappus' Theorem, and Desargues' Theorem. PREREQUISITES: Algebra I (or equivalent)</p>	<p>Advanced Algebra / Trigonometry</p>	<p>In this Algebra 2 course, students build on their work with linear, quadratic, and exponential functions, and extend their repertoire to include polynomial, rational, radical, and trigonometric functions. Students also expand their ability to model situations and solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The course covers sequences and series, probability distributions, and more advanced data analysis techniques.</p>		
<p>Science (3)</p>	<p>Biology</p>	<p>In this course, students focus on the chemistry of living things: the cell, genetics, evolution, the structure and function of living things, and ecology. Students follow a program of online study days alternating with review-and-assessment days. Lessons include extensive animations, hands-on laboratory activities, reference book study, and collaborative activities with virtual classmates.</p>	<p>Chemistry</p> <p>This course surveys all key areas of chemistry, including atomic structure, chemical bonding and reactions, solutions, stoichiometry, thermochemistry, organic chemistry, and nuclear chemistry. The course includes direct online instruction, virtual laboratories, and related assessments, used with a problem-solving book.</p>	<p>Physics</p>	<p>Physics is an advanced level science course that includes the introduction to physics concepts, mathematics as the language of physics, scalar and vector quantities, acceleration, Newton's first law of motion, vectors, universal gravitation, mechanical advantage, thermal energy, types of waves, definition of sound, Snell's Law, atoms, magnets, the unit of charge, Ohm's Law, resistance, combined electrical circuits, how electricity is generated, and a brief review of astronomy.</p>		

<p>Social Science (3)</p>	<p>World Studies</p>	<p>In this survey of world history from prehistoric to modern times, students focus on the key developments and events that have shaped civilization across time. The course is organized chronologically and, within broad eras, regionally. Lessons address developments in religion, philosophy, the arts, science and technology, and political history. The course also introduces geography concepts and skills within the context of the historical narrative. Online lessons and assessments complement World History: Our Human Story, a textbook written and published by K12. Students analyze primary sources and maps, create timelines, and complete other project practicing historical thinking and writing skills as they explore the broad themes and big ideas of human history.</p>	<p>U.S. History (Public Law 195)</p>	<p>Students trace the history of the world from approximately 1870 to the present. They begin with a look back at events leading up to 1914, including the Second Industrial Revolution and the imperialism that accompanied it. Their focus then shifts to the contemporary era, including two world wars, the Great Depression, and global Cold War tensions. Students examine both the staggering problems and astounding accomplishments of the twentieth century, with a focus on political and social history. Students also explore topics in physical and human geography, and investigate issues of concern in the contemporary world. Online lessons help students organize study, explore topics, review in preparation for assessments, and practice skills of historical thinking and analysis. Activities include analyzing primary sources and maps, creating timelines, completing projects and written assignments, and conducting independent research. Public law 195 (Constitution Test)</p>			<p>• Civics (Semester 1) US Government and Politics</p>	<p>This course uses the perspective of political institutions to explore government history, organization, and functions. Students encounter the political culture of our country from the Declaration of Independence to the present day, gaining insight into the challenges faced by presidents, members of Congress, and other political participants. The course also covers the roles of political parties, interest groups, the media, and the Supreme Court. Students learn to use primary historical documents as evidence in evaluating past events and government functions.</p> <p>The world is becoming more complex. How do your beliefs, values, and behavior affect the people around you and the world in which we live? Students examine social problems in our increasingly connected world, and learn how human relationships can strongly influence and impact their lives. Exciting online video journeys to an array of areas in the sociological world are an important component of this relevant and engaging course.</p>
<p>World Language (2)</p>		<p>Through our partnership with Middlebury Interactive we are able to offer students choice of seven different world language tracks including Spanish, Mandarin, French and other world language options. All courses have been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages).</p>		<p>Through our partnership with Middlebury Interactive we are able to offer students choice of seven different world language tracks including Spanish, Mandarin, French and other world language options. All courses have been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages).</p>		<p>Through our partnership with Middlebury Interactive we are able to offer students choice of seven different world language tracks including Spanish, Mandarin, French and other world language options. All courses have been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages).</p>		<p>Through our partnership with Middlebury Interactive we are able to offer students choice of seven different world language tracks including Spanish, Mandarin, French and other world language options. All courses have been carefully aligned to national standards as set forth by ACTFL (the American Council on the Teaching of Foreign Languages).</p>

Fine Arts (2)

This course combines art history, appreciation, and analysis, while engaging students in hands-on creative projects. Lessons introduce major periods and movements in art history while focusing on masterworks and the intellectual, technical, and creative processes behind those works. Studio lessons provide opportunities for drawing, painting, sculpting, and other creative endeavors. Prerequisites: A survey course in World History is recommended as a prerequisite or co-requisite, but not required

Music Appreciation

This course introduces students to the history, theory, and genres of music. The course explores the history of music, from the surviving examples of rudimentary musical forms through to contemporary pieces from around the world. The first semester covers early musical forms, classical music, and American jazz. The second semester presents modern traditions, including gospel, folk, soul, blues, Latin rhythms, rock and roll, and hip hop. The course explores the relationship between music and social movements and reveals how the emergent global society and the prominence of the Internet are making musical forms more accessible worldwide. To comply with certain state standards for the arts, a student "performance practicum" is required for full credit each semester. The performance practicum requirement can be met through participation in supervised instrumental or vocal lessons, church or community choirs, community musical performances, or any other structured program that meets at regular intervals and provides opportunities for students to build vocal and/or instrumental skills. Parents or guardians will be required to present their proposed practicum to the students' teachers for approval, and validate their children's regular participation in the chosen performance practicum

Physical Education (2)	PE 1 Health	<p>In this course, students will be introduced to the various disciplines within the health sciences, including toxicology, clinical medicine, and biotechnology. They will explore the importance of diagnostics and research in the identification and treatment of diseases. The course presents information and terminology for the health sciences and examines the contributions of different health science areas. Prerequisites: None = .5 credit course/One semester course</p>	PE 2 Drivers Education	<p>The Drivers Ed course contains all the valuable information necessary for you to become a safe, responsible driver in Illinois. The course covers a wide variety of topics including: Illinois Traffic Law, Traffic Signs and General Rules of the Road, How to Deal with Hazards on the Road, Effective Defensive Driving Techniques, The Perils of Drunk and/or Distracted Driving, and how to obtain a graduated driver license permit.</p>					
Career Education5 (1)		<p>A progression of high-quality, rigorous courses in 24 distinct career pathways Exam preparation for industry-recognized certifications Career exploration courses for a variety of high-demand Career ClustersSix Essential Career Clusters, 24 Pathways to Follow... Manufacturing, Manufacturing Production, Process Development, Production Information, Technology, Information Support and Services, Programming and IT Support: Java, Programming and IT Support: Python, Programming and IT Support: C++, Programming and IT Support: Web/HTML, Web and Digital Communications: Adobe, Web and Digital, Hospitality and tourism, Food Service and Hospitality, Food Science and Nutrition, Travel and Tourism, Agriculture, Agriscience, Forestry and Natural Resources, Food Products and Processing, Business Management and Administration, Administrative Support, Business Information Management: Accounting, General Management, Health Science, Pharmacy Technician, Nursing Assistant, Medical Assistant, Dental Assistant, Sports Medicine.</p>							

<p>Computer Science (1)</p>					<p>Exploring Computer Science</p>	<p>This course introduces students to computer science concepts such as computer architecture, networks, and the Internet. Students use object-oriented programming, event-driven processes, modular computer programming, and data manipulation algorithms to produce finished software programs. They use the design process to create many programs by determining specifications, designing the software, and testing and improving the product until it meets the specifications. By the end of this course, students will have a solid foundation for further study in computer science. = .5 credit course/One semester course</p>		
<p>Electives (3)</p>	<p>Elective based on student selection and career pathways. Pathways and options listed below.</p>				<p>PE 3</p>	<p>This two -semester course focuses on the fundamental components and principles of fitness. The course examines safety guidelines, proper technique, and exercise principles such as the FITT. Students will assess their current level of fitness in relation to the five components of physical fitness: flexibility, cardiovascular health, muscular strength, muscular endurance, and body composition. Students will also learn strategies to help them begin, design, and maintain an exercise program to keep them fit for life.</p>	<p>• Pre-calculus</p>	<p>Pre-calculus weaves together previous study of algebra, geometry, and functions into a preparatory course for calculus. The course focuses on the mastery of critical skills and exposure to new skills necessary for success in subsequent math courses. Topics include linear, quadratic, exponential, logarithmic, radical, polynomial, and rational functions; systems of equations; and conic sections in the first semester. The second semester covers trigonometric ratios and functions; inverse trigonometric functions; applications of trigonometry, including vectors and laws of cosine and sine; polar functions and notation; and arithmetic of complex numbers. Cross-curricular connections are made throughout the course to calculus, art, history, and a variety of other fields related to mathematics.</p>

						<p>• P.E. IV</p> <p>This course focuses on important skills and knowledge in nutrition; physical activity; the dangers of substance use and abuse; injury prevention and safety; growth and development; and personal health, environmental conservation, and community health resources. The curriculum is designed around topics and situations that engage student discussion and motivate students to analyze internal and external influences on their health-related decisions. The course helps students build the skills they need to protect, enhance, and promote their own health and the health of others.</p>
TOTAL (24)	6	6	6	6	6	

Service Learning Projects (2)	Project #1 continued throughout year 9 & 10
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Civics Project continued throughout year 11 & 12
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District-Wide Assessment (DWA)	In accordance with Illinois State Board of Education Guidelines
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