INGENUITY

Charter School

Course Catalog 2024-2025 School Year

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Middle School Courses

- **English 6**
  This course eases students' transition to middle school with engaging, age-appropriate literary and informational reading selections. Students learn to read critically, analyze texts, and cite evidence to support ideas as they read essential parts of literary and informational texts and explore a full unit on Lewis Carroll's classic novel Through the Looking Glass. Vocabulary, grammar, and listening skills are sharpened through lessons that give students explicit modeling and ample practice. Students also engage in routine, responsive writing based on texts they have read. In extensive, process-based writing lessons, students write topical essays in narrative, informative, analytical, and argumentative formats. In this full-year course, students develop a mastery of reading, writing, and language arts skills.
- **English 7**
  Students grow as readers, writers, and thinkers in this middle school course. With engaging literary and informational texts, students learn to think critically, analyze an author's language, and cite evidence to support ideas. Students complete an in-depth study of Jack London's classic novel White Fang and read excerpts from other stories, poetry, and nonfiction. Explicit modeling and ample opportunities for practice help students sharpen their vocabulary, grammar, and listening skills. Students also respond routinely to texts they have read. In extensive, process-based writing lessons, students write topical essays in narrative, informative, analytical, and argumentative formats. In this full-year course, students develop a mastery of reading, writing, and language arts skills.
- **English 8**
  In this course, students build on their knowledge and blossom as thoughtful readers and clear, effective writers. A balance of literary and informational texts engage students throughout the course in reading critically, analyzing texts, and citing evidence to support claims. Students sharpen their vocabulary, grammar, and listening skills through lessons designed to provide explicit modeling and ample opportunities to practice. Students also routinely write responses to texts they have read, and use more extensive, process-based lessons to produce full-length essays in narrative, informative, analytical, and argumentative formats. In this full-year course, students develop a mastery of reading, writing, and language arts skills.
- **MS Literacy and Comprehension**
  - **Grades: 6-8**

  This course is one of two intervention courses designed to support the development of strategic reading and writing skills. These courses use a thematic and contemporary approach, including high-interest topics to motivate students and expose them to effective instructional principles using diverse content area and real-world texts. Both courses offer an engaging technology-based interface that inspires and challenges students to gain knowledge and proficiency in the following comprehension strategies:

summarizing, questioning, previewing and predicting, recognizing text structure, visualizing, making inferences, and monitoring understanding with metacognition. Aimed at improving fluency and vocabulary, self-evaluation strategies built into these courses inspire students to take control of their learning.

- **Math 6**

  This course begins by connecting ratio and rate to multiplication and division, allowing students to use ratio reasoning to solve a wide variety of problems. Students further apply their understanding of multiplication and division to explain the standard procedure for dividing fractions. This course builds upon previous notions of the number system to now include the entire set of rational numbers. Students begin to understand the use of variables as they write, evaluate, and simplify expressions. They use the idea of equality and properties of operations to solve one-step equations and inequalities. In statistics, students explore different graphical ways to display data. They use data displays, measures of center, and measures of variability to summarize data sets. The course concludes with students reasoning about relationships among shapes to determine area, surface area, and volume.

- **Math 7**

  This course begins with an in-depth study of proportional reasoning during which students utilize concrete models such as bar diagrams and tables to increase and develop conceptual understanding of rates, ratios, proportions, and percentages. Students' number fluency and understanding of the rational number system are extended as they perform operations with signed rational numbers embedded in real-world contexts. In statistics, students develop meanings for representative samples, measures of central tendency, variation, and the ideal representation for comparisons of given data sets. Students develop an understanding of both theoretical and experimental probability. Throughout the course, students build fluency in writing expressions and equations that model real-world scenarios. They apply their understanding of inverse operations to solve multi-step equations and inequalities. Students build on their proportional reasoning to solve problems about scale drawings by relating the corresponding lengths between objects. The course concludes with a geometric analysis of angle relationships, area, and volume of both two- and three-dimensional figures.

- **Math 8**

  The course begins with a unit on input-output relationships that builds a foundation for learning about functions. Students make connections between verbal, numeric, algebraic, and graphical representations of relations and apply this knowledge to create linear functions that can be used to model and solve mathematical and real-world problems. Technology is used to build deeper connections among representations. Students focus on formulating expressions and equations, including modeling an association in bivariate data with a linear equation, and writing and solving linear equations and systems of linear equations. Students develop a deeper understanding of how translations, rotations, reflections, and dilations of distances and angles affect congruency and similarity. Students develop rules of exponents and use them to simplify exponential expressions. Students extend rules of exponents as they perform operations with numbers in scientific notation. Estimating and comparing square roots of nonperfect

squares to perfect squares exposes students to irrational numbers and lays the foundation for applications such as the Pythagorean theorem, distance, and volume

- **MS Earth Science**
  - **Grade: 6**

  Students enrolled in this dynamic course explore the scope of Earth sciences, covering everything from basic structure and rock formation to the incredible and volatile forces that have shaped and changed our planet. As climate change and energy conservation become increasingly prevalent in the national discourse, it will be important for students to understand the concepts and causes of our changing Earth. Earth Science is a two-semester course that provides a solid foundation for understanding the physical characteristics that make the planet Earth unique and examines how these characteristics differ among the planets of our solar system.
- **Integrated Science 6**
  - **Grade: 6**

  This full-year science course focuses on interconnected scientific concepts across disciplines, specifically Earth Science and Biology. The course emphasizes systems thinking, such as understanding the body as a system. Students are encouraged to use practical applications, like designing methods for monitoring and minimizing human impact on the environment. The course also integrates engineering design principles throughout.
- **MS Life Science**
  - **Grade: 7**

  Examining a broad spectrum of the biological sciences, Life Science is a full-year course for middle school students that builds on basic principles of scientific inquiry and translates those skills to more complex, overarching biological themes. The course includes units that help students understand the definitions, forms, and classifications of living organisms and learn to analyze the diversity of each unique group of living organisms. Other units introduce students to the structures and functions of cells, cell theory, and cell reproduction. These larger themes are then applied to other topics, such as genetics, Darwinian theory, and human biology and health. An introduction of ecology draws all of these concepts together to examine the interrelationships that help to maintain life on Earth.
- **Integrated Science 7**
  - **Grade: 7**

  This full-year science course integrates scientific concepts across different disciplines , specifically Earth Science and Biology. The course emphasizes systems thinking, particularly in understanding ecosystems and Earth's systems. Students are encouraged to apply practical applications, like designing solutions for maintaining biodiversity. The course also promotes modeling and analysis in various scientific contexts.
- **MS Physical Science**
  - **Grade: 8**

  This full-year course focuses on basic concepts in chemistry and physics and encourages exploration of new discoveries in the field of physical science. The course includes an overview of scientific principles and procedures and has students examine

the chemical building blocks of our physical world and the composition of matter. Additionally, students explore the properties that affect motion, forces, and energy on Earth. Building on these concepts, the course covers the properties of electricity and magnetism and the effects of these phenomena. As students refine and expand their understanding of physical science, they will apply their knowledge to complete interactive virtual labs that require them to ask questions and create hypotheses. Hands-on wet lab options are also available.

- **Integrated Science 8**
  - **Grade: 8**

  This full-year course focuses on basic concepts in chemistry and physics and encourages exploration of new discoveries in the field of physical science. The course includes an overview of scientific principles and procedures and has students examine the chemical building blocks of our physical world and the composition of matter. Additionally, students explore the properties that affect motion, forces, and energy on Earth. Building on these concepts, the course covers the properties of electricity and magnetism and the effects of these phenomena. As students refine and expand their understanding of physical science, they will apply their knowledge to complete interactive virtual labs that require them to ask questions and create hypotheses. Hands-on wet lab options are also available.
- **MS World History: Ancient Civilizations**
  - **Grade: 6**

  This yearlong course covers ancient peoples, cultures, civilizations, and innovations through approximately 300 CE. Students are introduced to historical inquiry skills for application to studies of ancient civilizations. Students explore physical and human geography to explain how ancient people interacted with the environment and understand how civilizations developed. Students study early economies and how trade relations affected culture and language. In later lessons, students examine how early forms of government and technology have had a lasting influence on modern civilization. Throughout the course, students analyze maps and primary sources to identify patterns and make connections across time and space. Students are exposed to diverse cultures and learn to explore the past with historical empathy
- **MS World History: Medieval and Early Modern Times**
  - **Grade: 7**

  The MS Modern World History course presents a cohesive and comprehensive overview of world history from the Middle Ages to the modern era. This yearlong course examines the role of conflict and cooperation in shaping the modern world. Students will draw upon and further develop historical inquiry skills as they examine the expansion of global economic, political, and social interactions and question the impact they had, and continue to have, on cultures and nations. Students will explore the lasting effects that revolutions in government and technology have had on peoples, nations, and the environment. Students apply historical inquiry skills to studies of civilizations from the Middle Ages to the modern era. Students study economies and the growth of more complex trade systems, the cultures of and conflicts among peoples and places, the development of political institutions, and the rise and fall of governments. In later

lessons, students examine how changes in the arts, technology, and political systems have had a lasting influence on modern civilization. Throughout the course, students analyze maps and primary sources to identify patterns and make connections across time and space. Students are exposed to diverse cultures and learn to explore the past with historical empathy. Students encounter rigorous reading and writing activities for a variety of purposes. These activities allow students to develop literacy and writing skills, as well as critical-thinking and communication skills.

- **MS US History**
  - **Grade: 8**

Offering an interactive and comprehensive overview of American history, this course engages and inspires students to learn about the rich and diverse history of America's native peoples, early European colonization and settlement in America, and the creation of a new nation through the American Revolution. Middle school students enrolled in this course will closely examine major changes brought about by the nation's reconstruction, industrialization, urbanization, and progressive reforms and consider the implications each of these events had on the expansion of the United States' global influence through modern times. Over the course of two semesters, interesting course content encourages students to think carefully about the challenges and opportunities facing the United States in the twenty-first century.

- **Introduction to MS Coding**
  - **Grades: 6, 7, 8**

EDGENUITY COURSE - Intro to Coding covers a basic introduction to the principles of programming, including algorithms and logic. Students engage in hands-on programming tasks in the Python programming language as they write and test their own code using the approaches real programmers use in the field. Students will program with variables, functions and arguments, and lists and loops, providing a solid foundation for more advanced study as well as practical skills they can use immediately.

- **MS Coding**
  - **Grades: 6, 7, 8**

In this course the student will learn how to use the programming languages Blockly and basic C++. They will use the programming languages to create their own animations in the online program Scratch, control a Sphero robot through a maze, build and program their own LEGO Spike robot, and piece together their own Arduino/tinkerkit redboard.

- **MS Cyber Robotics**
  - **Grades: 6, 7, 8**

In this course the student will learn how to use the programming languages Blockly and basic C++. They will use the programming languages to create their own animations in the online program Scratch, control a Sphero robot through a maze, build and program their own LEGO Spike robot, and piece together their own Arduino/tinkerkit redboard.

High School Courses

English Language Arts

- **English 9 (a-g approved)**
  - **Grade: 9**

  This freshman-year English course invites students to explore diverse texts organized into thematic units. Students engage in literary analysis and inferential evaluation of great texts, both classic and contemporary. While critically reading fiction, poetry, drama, and literary nonfiction, students master comprehension and literary-analysis strategies. Interwoven in the lessons across two semesters are activities that encourage students to strengthen their oral language skills and produce clear, coherent writing. Students read a range of classic texts including Homer's The Odyssey, Shakespeare's Romeo and Juliet, and Richard Connell's "The Most Dangerous Game." They also study short but complex texts, including influential speeches by Dr. Martin Luther King Jr. and Ronald Reagan. Contemporary texts by Richard Preston, Julia Alvarez, and Maya Angelou round out the course.
- **English 9 Intensive (a-g approved)**
  - **Grade: 9**

  English Intensive is a reading intervention course designed to advance the academic success of our at-risk students. This course will provide those students with an introduction to rigorous English Language Arts curriculum. The course is structured to provide intensive intervention in a single-period block to meet the requirements of the Common Core English 9 State Standards.
- **English 9 Honors**
  - **Grade: 9**

  This freshman-year honors English course invites students to explore diverse texts organized into thematic units. Students will engage in literary analysis and inferential evaluation of great texts both classic and contemporary. While critically reading fiction, poetry, drama, and literary nonfiction, students will master comprehension and literary-analysis strategies. Interwoven in the lessons across two semesters are activities that encourage students to strengthen their oral language skills and produce clear, coherent writing. In addition to activities offered to students in core courses, honors students are given additional opportunities to create and to participate in project-based learning activities, including writing a Shakespearian sonnet and creating an original interpretation of a Shakespearian play. Honors students will read a range of classic texts, including Homer's The Odyssey, Shakespeare's Romeo and Juliet, as well as contemporary texts by Julia Alvarez and Maya Angelou. The course concludes with the analysis of short but complex texts, including influential speeches by Dr. Martin Luther King Jr., Abraham Lincoln, and Franklin D. Roosevelt.
- **English 10 (a-g approved)**
  - **Grade: 10**

  Focused on application, this sophomore English course reinforces literary analysis and 21st-century skills with superb pieces of literature and literary nonfiction, application

eresources, and educational interactives. Each thematic unit focuses on specific literary analysis skills and allows students to apply them to a range of genres and text structures. As these units meld modeling and application, they also expand on training in media literacy, 21st-century career skills, and the essentials of grammar and vocabulary. Under the guidance of the eWriting software, students will also compose descriptive, persuasive, expository, literary analyses, research, narrative, and compare-contrast essays.

- **English 10 Intensive (a-g approved)**
  - **Grade: 10**

English 10 Intensive is a year-long course that provides a rigorous English Language Arts curriculum as well as support for struggling readers. This University of California A-G approved course fulfills the B requirement. By integrating the California ELA/ELD-aligned READ 180 Universal workshops and the integrated college-preparatory curriculum, English 10 Intensive gives at-risk students the opportunity to further develop strong literacy and communication skills while remaining on track for university admittance.

- **English 10 Honors (a-g approved)**
  - **Grade: 10**

This sophomore-year honors English course provides engaging and rigorous lessons with a focus on academic inquiry to strengthen knowledge of language arts. Honors reading lessons require analyzing complex texts, while concise mini-lessons advance writing and research skills to craft strong, compelling essays and projects. Students will write argumentative and analytical essays based on literary texts, as well as an informative research paper using MLA style. Throughout the course, students read a range of classic and contemporary literary texts including Henrik Ibsen's A Doll's House, George Orwell's Animal Farm, and Marjane Satrapi's Persepolis. In addition to reading a wide range of literary texts, students read and analyze complex informational and argumentative texts including Sonia Sotomayor's "A Latina Judge's Voice," Niccolò Machiavelli's The Prince, and the contemporary informational text Sugar Changed the World: A Story of Magic, Spice, Slavery, Freedom, and Science.

- **English 11 (a-g approved)**
  - **Grade: 11**

This junior-year English course invites students to delve into American literature from early American Indian voices through contemporary works. Students will engage in literary analysis and inferential evaluation of great texts, the centerpieces of this course. While critically reading fiction, poetry, drama, and expository nonfiction, students will master the comprehension and literary analysis strategies that the California Standards require. Interwoven in the lessons across two semesters are tasks that encourage students to strengthen their oral language skills and produce creative, coherent writing. Students will read a range of short but complex texts, including works by Ralph Waldo Emerson, Emily Dickinson, Herman Melville, Nathaniel Hawthorne, Paul Laurence Dunbar, Martin Luther King, Jr., F. Scott Fitzgerald, Sandra Cisneros, Amy Tan, and Dave Eggers.

- **English 11 Honors (a-g approved)**
  - **Grade: 11**

  This junior-year honors English course invites students to delve into American literature from early American Indian voices through contemporary works. Students will engage in literary analysis and inferential evaluation of great texts, including the full length novel The Awakening by Kate Chopin. While critically reading fiction, poetry, drama, and expository nonfiction, honors students will master comprehension, use evidence to conduct in-depth literary analysis, and examine and critique how authors develop ideas in a variety of genres. Interwoven throughout the lessons are activities that encourage students to strengthen their oral language skills, research and critically analyze sources of information, and produce clear, coherent writing. To round out the course, students will read a range of short but complex texts, including Henry David Thoreau's essay "Civil Disobedience," Floyd Dell's drama King Arthur's Socks, and works by Emily Dickinson, Herman Melville, Nathaniel Hawthorne, Paul Laurence Dunbar, Martin Luther King, Jr., F. Scott Fitzgerald, Sandra Cisneros, Amy Tan, and Dave Eggers.
- **English 12 (a-g approved)**
  - **Grade: 12**

  This senior-year English Language Arts course invites students to explore a diverse collection of texts across twenty units. Students engage in literary analysis and inferential evaluation of both classic and contemporary literature. While critically reading fiction, poetry, drama, and expository nonfiction, students learn and apply comprehension and literary-analysis strategies. Tasks encourage students to strengthen their oral language skills and produce creative, coherent writing. Students read a range of classic texts, including the ancient epic Gilgamesh, William Shakespeare's The Tragedy of Hamlet, and Oscar Wilde's The Importance of Being Earnest. They also study short but complex texts, including essays by Jonathan Swift and Mary Wollstonecraft, and influential speeches by Queen Elizabeth I and Franklin D. Roosevelt. Students engage in reading a variety of contemporary texts including texts by Seamus Heaney and Derek Walcott, as well as a variety of informational texts and multimedia.
- **Expository Reading and Writing (a-g approved)**
  - **Grade: 12**

  This elective English course is designed to develop critical reading and writing skills while preparing high school students to meet the demands of college-level work. While students will explore some critical reading skills in fiction, poetry, and drama the focus of this course will be on expository and persuasive texts and the analytical reading skills that are necessary for college success. Students will read a range of short but complex texts, including works by Walt Whitman, Abraham Lincoln, Cesar Chavez, Martin Luther King Jr., Langston Hughes, Julia Alverez, Edna St. Vincent Millay, and Gary Soto.

Mathematics

- **Pre-Algebra**
  - **Grades: 9, 10**

  This full-year course is designed for high school students who have completed a middle school mathematics sequence but are not yet algebra-ready. This course reviews key algebra readiness skills from the middle grades and introduces basic Algebra I work with appropriate support. Students revisit concepts in numbers and operations, expressions and equations, ratios and proportions, and basic functions. By the end of the course, students are ready to begin a more formal high school Algebra I study
- **Algebra I (a-g approved)**
  - **Grades: 9, 10, 11**

  This full-year course focuses on five critical areas: relationships between quantities and reasoning with equations, linear and exponential relationships, descriptive statistics, expressions and equations, and quadratic functions and modeling. This course builds on the foundation set in middle grades by deepening students' understanding of linear and exponential functions and developing fluency in writing and solving one-variable equations and inequalities. Students will interpret, analyze, compare, and contrast functions that are represented numerically, tabularly, graphically, and algebraically. Quantitative reasoning is a common thread throughout the course as students use algebra to represent quantities and the relationships among those quantities in a variety of ways. Standards of mathematical practice and process are embedded throughout the course, as students make sense of problem situations, solve novel problems, reason abstractly, and think critically
- **Geometry (a-g approved)**
  - **Grades: 9, 10, 11, 12**

  This course formalizes what students learned about geometry in the middle grades with a focus on reasoning and making mathematical arguments. Mathematical reasoning is introduced with a study of triangle congruency, including exposure to formal proofs and geometric constructions. Then students extend what they have learned to other essential triangle concepts, including similarity, right-triangle trigonometry, and the laws of sines and cosines. Moving on to other shapes, students justify and derive various formulas for circumference, area, and volume, as well as cross-sections of solids and rotations of two-dimensional objects. Students then make important connections between geometry and algebra, including special triangles, slopes of parallel and perpendicular lines, and parabolas in the coordinate plane, before delving into an in-depth investigation of the geometry of circles. The course closes with a study of set theory and probability, as students apply theoretical and experimental probability to make decisions informed by data analysis.
- **Algebra II (a-g approved)**
  - **Grades: 10, 11, 12**

  This course focuses on functions, polynomials, periodic phenomena, and collecting and analyzing data. The course begins with a review of linear and quadratic functions to solidify a foundation for learning these new functions. Students make connections

between verbal, numeric, algebraic, and graphical representations of functions and apply this knowledge as they create equations and inequalities that can be used to model and solve mathematical and real-world problems. As students refine and expand their algebraic skills, they will draw analogies among the operations and field properties of real numbers and those of complex numbers and algebraic expressions. Mathematical practices and habits of mind are embedded throughout the course, as students solve novel problems, reason abstractly, and think critically.

- **Math I (a-g approved)**
  - **Grades: 9, 10, 11**

  The first in an integrated math series for high school, this course formalizes and extends middle school mathematics, deepening students' understanding of linear relationships. The course begins with a review of relationships between quantities, building from unit conversion to a study of expressions, equations, and inequalities. Students contrast linear and exponential relationships, including a study of sequences, as well as applications such as growth and decay. Students review one-, two-, and multi-step equations, formally reasoning about each step using properties of equality. Students extend this reasoning to systems of linear equations. Students use descriptive statistics to analyze data before turning their attention to transformations and the relationship between algebra and geometry on the coordinate plane.
- **Math II (a-g approved)**
  - **Grades: 9, 10, 11, 12**

  This course begins with a brief exploration of radicals and polynomials before delving into quadratic expressions, equations, and functions, including a derivation of the quadratic formula. Students then embark on a deep study of the applications of probability and develop advanced reasoning skills with a study of similarity, congruence, and proofs of mathematical theorems. Students explore right triangles with an introduction to right-triangle trigonometry before turning their attention into the geometry of circles and making informal arguments to derive formulas for the volumes of various solids.
- **Math III (a-g approved)**
  - **Grades: 10, 11, 12**

  This course synthesizes previous mathematical learning in four focused areas of instruction. First, students relate visual displays and summary statistics to various types of data and to probability distributions with a focus on drawing conclusions from the data. Then, students embark on an in-depth study of polynomial, rational, and radical functions, drawing on concepts of integers and number properties to understand polynomial operations and the combination of functions through operations. This section of instruction builds to the fundamental theorem of algebra. Students then expand the study of right-triangle trigonometry they began in Mathematics II to include non-right triangles and developing the laws of sines and cosines. Finally, students model an array of real-world situations with all the types of functions they have studied, including work with logarithms to solve exponential equations. As they synthesize and generalize what they have learned about a variety of function families, students appreciate the usefulness and relevance of mathematics in the real world.

- **Pre-Calculus (a-g approved)**
  - **Grades: 11, 12**

  With an emphasis on function families and their representations, Precalculus is a thoughtful introduction to advanced studies leading to calculus. The course briefly reviews linear equations, inequalities, and systems and moves purposefully into the study of functions. Students then discover the nature of graphs and deepen their understanding of polynomial, rational, exponential, and logarithmic functions. Scaffolding rigorous content with clear instruction, the course leads students through an advanced study of trigonometric functions, matrices, and vectors. The course concludes with a short study of probability and statistics.

Science

- **Earth and Space Science (a-g approved)**
  - **Grades: 9, 10, 11, 12**

  Students enrolled in this dynamic course explore the scope of Earth sciences, covering everything from basic structure and rock formation to the incredible and volatile forces that have shaped and changed our planet. As climate change and energy conservation become increasingly prevalent in the national discourse, it will be important for students to understand the concepts and causes of our changing Earth. Earth Science is a two-semester course that provides a solid foundation for understanding the physical characteristics that make the planet Earth unique and examines how these characteristics differ among the planets of our solar system.
- **Biology (a-g approved)**
  - **Grades: 9, 10, 11, 12**

  This compelling two-semester course engages students in the study of life and living organisms and examines biology and biochemistry in the real world. This is a yearlong course that encompasses traditional concepts in biology and encourages exploration of new discoveries in this field of science. The components include biochemistry, cell biology, cell processes, heredity and reproduction, the evolution of life, taxonomy, human body systems, and ecology. This course includes both hands-on wet labs and virtual lab options.
- **Biology (Honors) (a-g approved)**
  - **Grades: 9, 10, 11, 12**

  This compelling full-year course engages students in a rigorous honors-level curriculum that emphasizes the study of life and its real-world applications. This course examines biological concepts in more depth than general biology and provides a solid foundation for collegiate level coursework. Course components include biochemistry, cellular structures and functions, genetics and heredity, bioengineering, evolution, structures and functions of the human body, and ecology. Throughout the course, students participate in a variety of interactive and hands-on laboratory activities that enhance concept knowledge and develop scientific process skills, including scientific research and technical writing.

- **The Living Earth (a-g approved)**
  - **Grades: 9, 10, 11, 12**

  Examining a broad spectrum of the biological sciences, this two-semester course builds on basic principles of Life Science and translates those skills to more complex overarching biological themes. The course includes units that help students understand molecules to organisms in structures and processes, ecosystems, heredity, biological evolution, the earth's place in the universe and its systems, and engineering design.
- **Chemistry (a-g approved)**
  - **Grades: 10, 11, 12**

  This rigorous, full-year course engages students in the study of the composition, properties, changes, and interactions of matter. The course covers the basic concepts of chemistry and includes eighteen virtual laboratory experiments that encourage higher-order thinking applications, with wet lab options if preferred. The components of this course include chemistry and its methods, the composition and properties of matter, changes and interactions of matter, factors affecting the interactions of matter, electrochemistry, organic chemistry, biochemistry, nuclear chemistry, mathematical applications, and applications of chemistry in the real world.
- **Chemistry in the Earth System (a-g approved)**
  - **Grades: 10, 11, 12**

  This laboratory science course is aligned to the Next Generation Science Standards for California Public Schools, and is designed to introduce students to collegiate-level principles and concepts of Chemistry across the other sciences. This includes Physical Science, Life Science, Earth and Space Science and Engineering Design. This course includes both hands-on wet labs and virtual lab options.
- **Marine Science (a-g approved)**
  - **Grades: 11, 12**

  In Marine Science you will begin to better understand the aquatic cycles, structures, and processes that generate and sustain life in the sea. Through the use of scientific inquiry, research, measurement, and problem solving, you will conduct various scientific procedures that will lead to an increased level of knowledge about Marine Science. You will also have the opportunity to use technology and laboratory instruments in an academic setting. By recognizing the inherent ethics and safety procedures necessary in advanced experiments, you will become progressively more confident in your abilities as a capable marine scientist.
- **Physics (a-g approved)**
  - **Grades: 10, 11, 12**

  This full-year course acquaints students with topics in classical and modern physics. The course emphasizes conceptual understanding of basic physics principles, including Newtonian mechanics, energy, thermodynamics, waves, electricity, magnetism, and nuclear and modern physics. Throughout the course, students solve mathematical problems, reason abstractly, and learn to think critically about the physical world. The course also includes interactive virtual labs and hands-on lab options, in which students ask questions and create hypotheses.

- **Physics (Honors) (a-g approved)**
  - **Grades: 10, 11, 12**

  This rigorous full-year course provides students with an engaging honors-level curriculum that emphasizes abstract reasoning and applications of physics concepts to real-world scenarios. Topics are examined in greater detail than general physics and provide a solid foundation for collegiate-level coursework. Course components include one- and two-dimensional motion, momentum, energy and thermodynamics, harmonic motion, waves, electricity, magnetism, and nuclear and modern physics. Throughout the course, students participate in a variety of interactive and hands-on laboratory activities that enhance concept knowledge and develop scientific process skills, including scientific research and technical writing.
- **Physics and the Universe (a-g approved)**
  - **Grades: 10, 11, 12**

  This laboratory science course is aligned to the Next Generation Science Standards for California Public Schools, and is designed to introduce students to collegiate-level principles and concepts of Physics across the other sciences. This includes Physical Science, Life Science, Earth and Space Science and Engineering Design. This course includes both hands-on wet labs and virtual lab options.

History/Social Science

- **Economics (a-g approved)**
  - **Grades: 11, 12**

  This semester-long course invites students to broaden their understanding of how economic concepts apply to their everyday lives—including microeconomic and macroeconomic theory and the characteristics of mixed-market economies, the role of government in a free-enterprise system and the global economy, and personal finance strategies. Throughout the course, students apply critical-thinking skills while making practical economic choices. Students also master literacy skills through rigorous reading and writing activities. Students analyze data displays and write routinely and responsively in tasks and assignments that are based on scenarios, texts, activities, and examples. In more extensive, process-based writing lessons, students write full-length essays in informative and argumentative formats.
- **Government (a-g approved)**
  - **Grades: 11, 12**

  This semester-long course provides students with a practical understanding of the principles and procedures of government. The course begins by establishing the origins and founding principles of American government. After a rigorous review of the Constitution and its amendments, students investigate the development and extension of civil rights and liberties. Lessons also introduce influential Supreme Court decisions to demonstrate the impact and importance of constitutional rights. The course builds on this foundation by guiding students through the function of government today and the role of citizens in the civic process and culminates in an examination of public policy and the roles of citizens and organizations in promoting policy changes. Throughout the course,

students examine primary and secondary sources, including political cartoons, essays, and judicial opinions. Students also sharpen their writing skills in shorter tasks and assignments and practice outlining and drafting skills by writing full informative and argumentative essays.

- **World History (a-g approved)**
  - **Grades: 9, 10, 11, 12**

  This yearlong course examines the major events and turning points of world history from ancient times to the present. Students investigate the development of classical civilizations in the Middle East, Africa, Europe, and Asia, and they explore the economic, political, and social revolutions that have transformed human history. At the end of the course, students conduct a rigorous study of modern history, allowing them to draw connections between past events and contemporary issues. The use of recurring themes, such as social history, democratic government, and the relationship between history and the arts, allows students to draw connections between the past and the present, among cultures, and among multiple perspectives. Throughout the course, students use a variety of primary and secondary sources, including legal documents, essays, historical writings, and political cartoons to evaluate the reliability of historical evidence and to draw conclusions about historical events.
- **US History (a-g approved)**
  - **Grades: 10, 11, 12**

  This one-year high school course presents a cohesive and comprehensive overview of the history of the United States, surveying the major events and turning points of U.S. history as it moves from the Era of Exploration through modern times. As students examine each era of history, they will analyze primary sources and carefully research events to gain a clearer understanding of the factors that have shaped U.S. history. In early units, students will assess the foundations of U.S. democracy while examining crucial documents. In later units, students will examine the effects of territorial expansion, the Civil War, and the rise of industrialization. They will also assess the outcomes of economic trends and the connections between culture and government. As the course draws to a close, students will focus their studies on the causes of cultural and political change in the modern age. Throughout the course, students will learn the importance of cultural diversity while examining history from different perspectives.

Fine Art/Foreign Language

- **Digital Photography (a-g approved)**

  Students will learn basic camera and computer technology as well as visual arts: how to look at and critique photos; how to use photography vocabulary; how to use tools such as framing, composition, rule of thirds, light, depth of field, balance, and color; and they will be introduced to many works by well-known photographers. Students will learn photo manipulation using Google Drive, Pixlr Editing, and other programs. They will shoot photo narratives, study and create portraiture, and learn about commercial applications for photography skills. They will be expected to demonstrate an ability to use the equipment competently, using manual settings in both point-and-shoot camera with

manual controls. The main objective of this course is for students to develop their creativity and to engage in thoughtful analysis of artwork.

- **Music Appreciation (a-g approved)**
  Music Appreciation: The Enjoyment of Listening not only will provide a historical perspective on music from the Middle Ages to the 21st century, but it will also teach you the essentials of how to listen and really hear (with a knowledgeable ear) the different music that's all around you.
- **Visual Arts (a-g approved)**
  The first half of the Visual Arts course focuses on building a solid foundation of the basic elements of visual art: line, shape, form, color, value, space, and texture. This course teaches core skills using Inkscape, a free open-source alternative to Adobe® Illustrator®. Topics include learning processes for evaluating artworks, and identifying selected artists' works, styles, and historical periods. Students learn 3D space in a 2D environment; filters, gradients and highlights; and methods of working with color. Students express themselves creatively in original digital drawings and artwork. The second half of the Visual Arts course focuses on the more advanced principles and elements of art and design.
- **Spanish I (a-g approved)**
  Students begin their introduction to Spanish with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Each Unit consists of an ongoing adventure story, a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and multimedia cultural presentations covering major Spanish-speaking areas in Europe and the Americas.
- **Spanish II (a-g approved)**
  - **Prerequisite: Spanish I**

  Students continue their introduction to Spanish with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Each week consists of an ongoing adventure story, a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, cultural presentations covering major Spanish-speaking areas in Europe and the Americas, and assessments.
- **Spanish III (a-g approved)**
  - **Prerequisite: Spanish I, II**

  In this expanding engagement with Spanish, students deepen their focus on four key skills in foreign language acquisition: listening comprehension, speaking, reading, and writing. In addition, students read significant works of literature in Spanish, and respond orally or in writing to these works. Continuing the pattern, and building on what students encountered in the first two years, each week consists of a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and

multimedia cultural presentations covering major Spanish-speaking areas in Europe and the Americas.

- **French I (a-g approved)**

  Students begin their introduction to French with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Each week consists of an ongoing adventure story, a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and multimedia cultural presentations covering major French speaking areas in Europe and across the globe.

- **French II (a-g approved)**
  - **Prerequisite: French I**

  Students continue their introduction to French with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Each week consists of an ongoing adventure story, a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, cultural presentations covering major French-speaking areas across the globe, and assessments.

- **French III (a-g approved)**
  - **Prerequisite: French I, II**
- In this expanding engagement with French, students deepen their focus on four key skills in foreign language acquisition: listening comprehension, speaking, reading, and writing. In addition, students read significant works of literature in French, and respond orally or in writing to these works.
- **American Sign Language (ASL) I (a-g approved)**

  ASL I will introduce you to vocabulary and simple sentences, so that you can start communicating right away. Importantly, you will explore Deaf culture – social beliefs, traditions, history, values and communities influenced by deafness. The course will also introduce you to more of this language and its grammatical structures. You will expand your vocabulary by exploring interesting topics like Deaf education and Deaf arts and culture.

- **American Sign Language (ASL) II (a-g approved)**
  - **Prerequisite: ASL I**

  Building upon the prior prerequisite course, emphasis in this course is placed upon comprehension and signing. Learners will also continue to establish their communication skills and foster their understanding of deaf culture. In addition to learning classifiers, glossing, and mouth morphemes, students will explore vocabulary for descriptions, directions, shopping, making purchases, and dealing with emergencies. Building upon the prior prerequisite course, students will increase their proficiency by learning about sequencing, transitions, role-shifts, and future tenses. Students will learn how to tell a story and ask questions, benefiting with greater exposure to deaf culture. Speed, conversations, signing skills, and cultural awareness are characteristic of this course.

Electives

- **African American History**
  Tracing the accomplishments and obstacles of African Americans from the slave trade through emancipation, and to the modern African diaspora, you will learn about the political, economic, social, religious, and cultural factors that have influenced African American life. In African American History, you'll come face to face with individuals who changed the course of history and learn more about slavery, racism, and the Civil Rights Movement. You will also explore how the history of African Americans influences current events today.
- **Astronomy**
  Astronomy: Exploring the Universe introduces you to the engaging world of astronomy. By using online tools, you will examine such topics as the solar system, space exploration, and the Milky Way and other galaxies. The course also explores the history and evolution of astronomy including those basic scientific laws of motion and gravity that have guided astronomers as they made their incredible discoveries of the universe.
- **Career Explorations**
  This semester-length course prepares middle and high school students to make informed decisions about their future academic and occupational goals. Through direct instruction, interactive skills demonstrations, and practice assignments, students learn how to assess their own skills and interests, explore industry clusters and pathways, and develop plans for career and academic development. This course is designed to provide flexibility for students; any number of units can be selected to comprise a course that meets the specific needs of each student's skills and interests.
- **Career Planning and Development**
  Introducing high school students to the working world, Career Planning and Development provides the knowledge and insight necessary to compete in today's challenging job market. This relevant and timely course helps students investigate careers as they apply to personal interests and abilities, develop skills and job search documents needed to enter the workforce, explore the rights of workers and traits of effective employees, and address the importance of professionalism and responsibility as careers change and evolve. This one-semester course includes lessons in which students create a self-assessment profile, a cover letter, and a résumé that can be used in their educational or career portfolio.
- **Coding**
  Students learn object-oriented programming and enhance their critical thinking and problem-solving skills as they learn to design, code, and debug Python programs.
- **Computer Science**
  Computer Science introduces students to the basics of computer science through a series of Python® programming projects that encourage creativity and experimentation. In its second half, the course advances the student's knowledge of Python software and programming skills through a series of complex programming projects that require creative thinking and problem solving. Students create a diverse portfolio of projects as they learn commands and functions, values and variables, Graphical User Interface,

modular and object-oriented programming, and events and event-driven processes. Students learn loops, debugging techniques, software development processes (including iterative and incremental models), arrays and sets, generators and namespaces, loops, packages and libraries, randomness, and file handling. Students also learn to program simple games. Throughout the course, students explore careers in programming, including profiles from a wide variety of programming professionals.

- **Criminology**
  In Criminology: Inside the Criminal Mind, you will be given the rare opportunity to climb inside the mind of a criminal and examine the ideas and motivations at work. The mental state of a criminal can be affected by many different aspects of life—psychological, biological, sociological—all of which have differing perspectives and influences. You will investigate not only how these variables affect the criminal mind but also how the criminal justice system remains committed to upholding the law through diligence and an uncompromising process.
- **Culinary Arts**
  Learn the fundamentals of a working kitchen, and explore what it takes to develop real talent as a chef. Enhance your knowledge of the endless varieties of food, and discover the possibilities that the many spices can bring. Learning more about food preparation will certainly make everything you prepare taste better while giving you the ability to bring people together through the joy of eating.
- **Cyber Robotics**
  Students have serious fun while learning coding basics. Our highly engaging missions are based on real-world scenarios, allowing students to use text editors or Blockly with ease. Students take coding and robotics to the next level while learning physical concepts, collaboration, and critical thinking skills… all while programming their own virtual robots.
- **Digital Design I A&B**
  Students will develop their creative and technical skills and prepare for careers in design across industries. Students will learn principles of user experience and interface (UX and UI) design, graphic design, photography, and visual storytelling. Students will engage in iterative processes, and work collaboratively to manage projects. They will use industry-standard tools and software to design campaigns, products, services, artwork, environments, websites, marketing kits, publications, and/or experiences for a variety of audiences, and understand the array of opportunities in design fields.

- **Digital Design II A&B**
  Students will refine their creative and technical skills and prepare for careers in design across industries. Students will apply principles of UX and UI design, graphic design, photography, and visual storytelling to creative projects. Students will engage in iterative processes, and work collaboratively to scope and manage projects. They will gain proficiency in industry-standard tools and software to design, edit, and publish campaigns, products, services, artwork, environments, websites, marketing kits, publications, and/or experiences for a variety of audiences and clients. Pathway

completers will develop a professional portfolio and understand the application of skills in workplace environments.

- **Driver Education**
  This course is a semester long class designed to prepare students for their California driver's permit exam. Students need to be at least 15 ½ years old to earn the semester credit, and is designed for students in grades 10 and above. This course fulfills the Education Code requirement for 30 hours of classroom instruction.
- **Fashion Design**
  In this course, you'll explore what it is like to work in the industry by exploring career possibilities and the background that you need to pursue them. Get ready to try your hand at designing as you learn the basics of color and design then test your skills through hands-on projects. In addition, you'll develop the essential communication skills that build success in any business. By the end of the course, you'll be well on your way to developing the portfolio you need to get your stylishly clad foot in the door of this exciting field.
- **Financial Math (a-g approved)**
  Connecting practical mathematical concepts to personal and business settings, this course offers informative and highly useful lessons that challenge students to gain a deeper understanding of financial math. Relevant, project-based learning activities cover stimulating topics such as personal financial planning, budgeting and wise spending, banking, paying taxes, the importance of insurance, long-term investing, buying a house, consumer loans, economic principles, traveling abroad, starting a business, and analyzing business data. Offered as a two-semester course for high school students, this course encourages mastery of math skill sets, including percentages, proportions, data analysis, linear systems, and exponential functions
- **Forensic Science**
  Forensic science applies scientific knowledge to the criminal justice system. This course focuses on some of the techniques and practices used by forensic scientists during a crime scene investigation (CSI). Starting with how clues and data are recorded and preserved, the student will follow evidence trails until the CSI goes to trial, examining how various elements of the crime scene are analyzed and processed.
- **Health Science and Medical Technology (a-g approved)**
  This high school course introduces students to a variety of healthcare careers as they develop the basic skills required in all health and medical sciences. In addition to learning the key elements of the U.S. healthcare system, students will learn terminology, anatomy and physiology, pathologies, diagnostic and clinical procedures, therapeutic interventions, and the fundamentals of medical emergency care. Throughout the course, instructional activities emphasize safety, professionalism, accountability, and efficiency for workers within the healthcare field.
- **Introduction to Business and Finance**
  In this two-semester introductory course, students will learn the principles of business using real world examples—learning what it takes to plan and launch a product or service in today's fast-paced business environment. This course covers an introduction

to economics, costs and profit, and different business types. Students are introduced to techniques for managing money, personally and as a business, and taxes and credit; the basics of financing a business; how a business relates to society both locally and globally; how to identify a business opportunity; and techniques for planning, executing, and marketing a business to respond to that opportunity.

- **Introduction to Coding**
  EDGENUITY COURSE - Intro to Coding covers a basic introduction to the principles of programming, including algorithms and logic. Students engage in hands-on programming tasks in the Python programming language as they write and test their own code using the approaches real programmers use in the field. Students will program with variables, functions and arguments, and lists and loops, providing a solid foundation for more advanced study as well as practical skills they can use immediately.
- **Introduction to Information Technology**
  This course introduces students to the essential technical and professional skills required in the field of Information Technology (IT). Through hands-on projects and written assignments, students gain an understanding of the operation of computers, computer networks, Internet fundamentals, programming, and computer support. Students also learn about the social impact of technological change and the ethical issues related to technology. Throughout the course, instructional activities emphasize safety, professionalism, accountability, and efficiency for workers within the field of IT.
- **Introduction to Entrepreneurship**
  The Introduction to Entrepreneurship course teaches the skills and key business concepts students need to know to plan and launch a business, whether they are interested in creating a money-making business or a nonprofit to help others. Students learn about real-life teen entrepreneurs; characteristics of successful entrepreneurs; pros and cons of self-employment; sales stages, opportunities and strategies; planning and budgeting; and interpersonal communication in the workplace. Students also learn how to generate business ideas; create a business plan, mission, and vision; promote and market a company; attract investors; manage expenses; and set personal visions and goals. Topics include exploring factors of business success and failure; core business concepts; economic systems; competition; production; the global economy; financing a business; costs, pricing, and accounting; bookkeeping and financial reporting; the role of the government in business; regulations and laws; working with others; and successfully managing employees.
- **Online Learning and Digital Citizenship**
  In this one-semester course, students develop essential study skills for academic success, such as staying organized, managing time, taking notes, applying reading strategies, writing strong papers, and researching and properly citing information. Explicit modeling and ample practice are provided for each study skill to support student mastery. Instruction on how to be a responsible online learner is threaded throughout the course, and these skills are directly addressed in lessons on cyberbullying, staying safe online, and learning how to be a digital leader. A basic understanding of software and hardware and how to troubleshoot common technology issues are also taught. By the

end of the course, students will have the tools they need to be academically successful in both traditional and digital learning environments.

- **Personal Finance**
  This one-semester elective prepares students to navigate personal finance with confidence. The course opens with a study of what it means to be financially responsible, engaging students in budgeting, planning, and being a smart consumer. Students learn about the relationship between education, employment, income, and net worth, and they plan for the cost of college. Students then broaden their study to include banking, spending, investing, and other money management concepts before exploring credit and debt. In the final unit of the course, students study microeconomics and entrepreneurship, with an overview of economic systems, supply and demand, consumer behavior and incentives, and profit principles. The course concludes with an in-depth case study about starting a business.
- **Personal Wellness**
  Exploring a combination of health and fitness concepts, Personal Wellness is a comprehensive and cohesive course that explores all aspects of wellness. Offered as a two-semester course designed for high school students, this course uses pedagogical planning to ensure that students explore fitness and physical health and encourages students to learn about the nature of social interactions and how to plan a healthy lifestyle.
- **Psychology (a-g approved)**
  This two-semester course introduces high school students to the study of psychology and helps them master fundamental concepts in research, theory, and human behavior. Students analyze human growth, learning, personality, and behavior from the perspective of major theories within psychology, including the biological, psychosocial, and cognitive perspectives. From a psychological point of view, students investigate the nature of being human as they build a comprehensive understanding of traditional psychological concepts and contemporary perspectives in the field. Course components include an introduction to the history, perspectives, and research of psychology; an understanding of topics such as the biological aspects of psychology, learning, and cognitive development; the stages of human development; aspects of personality and intelligence; the classification and treatment of psychological disorders; and psychological aspects of social interactions.
- **Small Business Entrepreneurship**
  This full-year course, provided in two semesters, is designed to provide the skills needed to effectively organize, develop, create, manage and own a business, while exposing students to the challenges, problems, and issues faced by entrepreneurs. Throughout this course, students explore what kinds of opportunities exist for small business entrepreneurs and become aware of the necessary skills for running a business. Students become familiar with the traits and characteristics that are found in successful entrepreneurs, and see how research, planning, operations, and regulations can affect small businesses. Students also learn how to develop plans for having effective business management, financing and marketing strategies.

- **Sociology (a-g approved)**
  Providing insight into the human dynamics of our diverse society, this is an engaging one-semester course that delves into the fundamental concepts of sociology. This interactive course, designed for high school students, covers cultural diversity and conformity, basic structures of society, individuals and socialization, stages of human development as they relate to sociology, deviance from social norms, social stratification, racial and ethnic interactions, gender roles, family structure, the economic and political aspects of sociology, the sociology of public institutions, and collective human behavior, both historically and in modern times.

Physical Education (PE)

- **Independent Study PE 1**
  - **Grades: 9, 10, 11, 12**

  This is a semester-long course in which students complete 40 hours of physical education activities, as well as complete daily workout logs, periodic reflections, and other specified activities to earn credit for the course.
- **Independent Study PE 2**
  - **Grades: 9, 10, 11, 12**

  This is a semester-long course in which students complete 40 hours of physical education activities, as well as complete daily workout logs, periodic reflections, and other specified activities to earn credit for the course.
- **Independent Study PE 3**
  - **Grades: 9, 10, 11, 12**

  This is a semester-long course in which students complete 40 hours of physical education activities, as well as complete daily workout logs, periodic reflections, and other specified activities to earn credit for the course.
- **Independent Study PE 4**
  - **Grades: 9, 10, 11, 12**

  This is a semester-long course in which students complete 40 hours of physical education activities, as well as complete daily workout logs, periodic reflections, and other specified activities to earn credit for the course.