

Learning Across a Lifetime™

Core and Elective eCourse Catalog 2021-2022



Digital Learning Solutions

eCourses[™]

In both high school and middle school core lessons, students will always encounter lesson content, videos, and an assessment. Other activities will vary depending on the grade level, course structure, and subject area.

Middle School (Grades 6-8)

Lesson Video – The video contains information that will help to strengthen knowledge of the lesson content and focuses on key subject-specific information.

Essential Instruction – The main content of the lesson is found here. Students are encouraged to complete the embedded exercises by using interactive drawing and text tools.

Reteach – The Reteach page clarifies and further explains the information found in the Essential Instruction area.

Enrichment – The Enrichment page encourages students to take their thinking beyond the content of the lesson.

Hear More, See More, Do More – Students are directed to resources that address the content using different modalities.

Activities Workbook & Answer Key – Workbooks contain foundational activities and puzzles such as word searches, crosswords, and matching exercises related to the lesson's content.

Assessments – Students are delivered their daily assessments in an interactive, visually stimulating game format. Summative assessments, such as quizzes and exams, are given in a conventional test format.

Instructor Guide – Designed for the teacher, this document reviews all of the lesson elements and provides teachers with extended activities to complete with students.

High School (Grades 9-12)

Need to Know – The Need to Know presents prerequisite information and/or summarizes information related to the given lesson.

Essential Instruction – The Essential Instruction delivers direct instruction of the concepts.

Textbook & Answer Key – The Textbook provides supplementary information related to the concepts covered in the Essential Instruction.

Reteach – The Reteach page reviews the concepts covered in the Essential Instruction.

Instructional Video – The Instructional Video presents the concepts from the Essential Instruction through a different mode of learning.

Extension – The Extension presents enrichment activities related to the Essential Instruction concepts, to extend the students' thinking.

Assessment – The concepts covered in the course are assessed through a variety of assessment types, including lesson assessments, quizzes, writing assignments, speaking assignments, project assignments, and exams.

Gizmos® – Some math and science lessons contain additional interactive simulations that power inquiry and understanding of the concepts in the lesson. Each Gizmo includes both a manipulative activity and corresponding formative assessment items.

Reading Guides – Reading Guides provide a combination of comprehension and critical thinking questions that guide students through the assigned reading in a lesson.

Content Delivery Systems

- Course Player This engaging and interactive content delivery system is used for the majority of our high school eCourses™. The Course Player requires that students interact with content and assessments in a personalized forced progression of learning objects. Mastery settings ensure that a student has succeeded with the objectives of a lesson before the next lesson is unlocked. Students are provided with additional learning objects when needed.
- MyDay This content delivery system was designed as the result of targeted research with middle school students. As with Course Player, students are provided with a personalized forced progression of learning objects through their daily task lists. Mastery settings are available at an institution and student level to ensure that students have demonstrated success with the objectives of each lesson before moving on to the next. Students are assessed regularly through a variety of games and traditional summative assessments.
- Traditional This basic user interface allows students to guide themselves through lesson content and assignments. Any eCourse™ can be delivered in this view. A performance alert system is available to indicate when academic interventions are needed based on lesson and cumulative assessments.

High School Course Types

- Competency-Based Students must demonstrate mastery of the concepts of a lesson before they are able to progress to the next lesson. These courses provide a self-remediating performance monitoring system. Competency-Based courses are self-paced and are available for all high school courses.
- Credit Recovery In this course type, students are able to recover credit for a course they have previously taken, but not been successful in. Credit Recovery eCourses™ are developed as truncated versions of their corresponding Competency Based eCourses™. Students must still demonstrate mastery of the concepts addressed in a lesson before progressing to the next set of objectives. Comprehensive quizzes and unit exams ensure that students are rigorously assessed on all concepts in the course.

- Foundation Each course is designed to ensure that students master the foundational skills and knowledge that are critical building blocks for upper-level courses. Foundation eCourses™ contain fewer lessons than both the Traditional and Competency-Based eCourses™. There are over 30 Foundation eCourse™ offerings in the core subject areas of English Language Arts, Math, Science, and Social Studies. This type of course prepares students to control their own learning.
- Honors In this course type, students are pushed to apply their understanding of the concepts in each lesson to rigorous performance–based assessments, projects, and conceptual activities. These courses are the perfect fit for students wishing to extend their understanding of a particular subject.
- NEW! Critical Concepts This course type is designed to address key skills. The content meets students where they are, offering skills reinforcement, remediation on essentials concepts they haven't yet mastered, or a subject matter refresher before students enter a higher level math or ELA course. This course type is perfect for boot-camps or intensive remediation.

Middle School eCourses™

Developed for students in grades 6–8, MyDay eCourses encourage students to interact with and respond to lesson content. Students can access drawing tools to underline, highlight, and circle key terms and important concepts. They can also respond to questions posed within lessons. Lesson assessments are delivered as games to reduce test anxiety. Supplemental materials, such as workbooks, offer students opportunities to synthesize material from the lessons via fun, low-stress puzzles and activities. (Credit Recovery available.)





- EdisonLearning is also accredited as a Learning Service Provider by the Middle States Association Commission on Elementary and Secondary Schools (MSA-CESS).
- EdisonLearning has received approval for NCAA initial eligibility for many courses. Please see the following table for details.

Course Options

- NEW! eDiagnostics and Benchmarks Our eDiagnostic uses a criterion-referenced test paired with benchmarks rather than a norm-referenced test to determine areas for learning growth. What's the difference? When evaluating a student's area for learning growth, we seek to identify the objectives of a particular course that have not been met. Our goal is to accelerate learning for each student in their personalized area of need.
- Mastery Pre-Test A diagnostic test can be assigned during a course enrollment to allow the student to test out of lessons so that they will only be required to complete the portions of the curriculum they have not yet mastered. Diagnostics are available for all high school core courses except English Language Arts.
- **Progress Tests** Students can be assigned a "preand post-test per eCourse part. The test scores can be monitored and evaluated for student knowledge growth, or they can be used to determine if a student has not fully grasped the content of a specific course part. Based on this knowledge, a student can be moved on to the next eCourse™ part, or interventions or remediation can be put in place to assist the student.
- Adaptations eCourse[™] assessments can be automatically modified on a per-course enrollment basis so that multiple-choice answers can be reduced by half (answer adaptation), or the number of questions can be reduced by half (question adaptation). These adaptations abilities exist for all eCourses[™], including middle school.

Course Customization

In addition to the full listing of preconfigured courses available, EdisonLearning's Custom Course Builder application allows schools and districts to build their own courses by choosing specific lessons from any of our existing off-the-shelf courses to match their desired scope and sequence. This allows the flexible content of eCourses to be adjusted to meet specific requirements of the learning environment.

Teachers and curriculum designers can search, view, preview, and select course components based on their specific achievement objectives to assemble custom courses easily and efficiently.

- Searching and selecting lessons can be done using lesson title, objectives, or location in other courses.
- The drag-and-drop interface allows the course creator to quickly and easily reorder the lessons to match the desired scope and sequence.
- EdisonLearning's repository of content, which includes pools of assessment items mapped to each lesson, contains tens of thousands of learning objects available for use in a custom course.
- The entire course structure can be customized, including creating the assessments and gradebook point values.

Standard High School *eCourses*™ Options & Details

Course Name			Course Types				Available Options	
		Length	Comp Based	Credit Recovery	Foundation	Honors	Diagnostic Test	Progress Test
English	English1	Year	~	•	•	~		•
	English 2	Year	~	•	•	~		•
	English 3	Year	>	•	•	~		•
	English 4	Year	~	•	•	~		•
	Informational and Persuasive Writing (Critical Concepts)	9-Week					•	•
	SAT® Critical Reading and Writing	9-Week	•					
	American History	Year	~	•	•	~	•	•
	Early American History	9-Week	>				•	•
	Early World History	9-Week	>				•	•
S	Economics	Year	>					
Social Studies	Macroeconomics	Semester	>					
al Stu	Microeconomics	Semester	>					
ocia	Psychology	Semester	>					
	Sociology	Semester	~					
	US Government	Year	~	•	•		•	•
	World Geography	Year	~	•			•	•
	World History	Year	~	•	•		•	•
	Anatomy and Physiology	Year	~	•				
	Application of Genetics	Semester	~					
	Astronomy	9-Week	~					
	Biology	Year	~	•	•	~	•	•
a.	Biotechnology	9-Week	~					
Science	Chemical Engineering	9-Week	~					
Scie	Chemistry	Year	~	•	•	~	•	•
	Earth Science	Year	~	•	•		•	•
	Electrical Engineering	9-Week	~					
	Environmental Science	Semester	~					
	Epidemiology	9-Week	•					
	Forensics	9-Week	~					

Starradia in Sir Stirroof				Course Types			Available Options	
	Course Name	Length	Comp Based	Credit Recovery	Foundation	Honors	Diagnostic Test	Progress Test
	Foundations of Engineering	Year	> Duscu	necovery			rest	rest
	Genetics	9-Week	~					
	Introduction to Technological Sciences	9-Week	•					
	Life Science	Semester	~					
	Mechanical Engineering	9-Week	~					
	Natural Disasters	9-Week	~					
nce	Physical Science	Year	~	•			•	•
Science	Physics	Year	~	•			•	•
	Sports Medicine	9-Week	•					
	Sports Science	9-Week	•					
	Sports Science and Medicine	Semester	~					
	Stem Cells	9-Week	~					
	Superstars of Science	9-Week	•					
	Technologies in Medicine	Semester	~					
	Algebra 1	Year	~	•	•	~	•	•
	Algebra 1 (Critical Concepts)	9-Week					•	•
	Algebra 2	Year	>	•	•	~	•	•
	Calculus	Year	>	•			•	•
	General Math	Year	•	•			•	•
	Geometry	Year	>	•	•	•	•	•
S	Integrated Math 1	Year	~	•			•	•
Mathematics	Integrated Math 2	Year	~	•			•	•
athe	Integrated Math 3	Year	~	•			•	•
×	Integrated Math 4	Year	~	•			•	•
	Pre-Algebra	Year	•	•	•		•	•
	Pre-Calculus	Year	~	•			•	•
	Probability	9-Week	~					
	SAT® Mathematics	9-Week	•					
	Statistics	9-Week	~					
	Trigonometry	Semester	>				•	•

			Course Types				Available Options	
	Course Name	Length	Comp Based	Credit Recovery	Foundation	Honors	Diagnostic Test	Progress Test
World Languages	French 1	Year	~					
	French 2	Year	~					
	French 3	Year	>					
	French 4	Year	>					
	German1	Year	>					
d La	German 2	Year	~					
Vorl	Spanish 1	Year	~	•	•			
>	Spanish 2	Year	>	•	•			
	Spanish 3	Year	>					
	Spanish 4	Year	>					
	Advanced Music Theory	Semester	•					
	Art History & Appreciation	Semester	•					
	Career Explorations	9-Week	•					
	Computer Engineering	Semester	•					
	Computer Skills for Academic Success	Semester	•					
10	Fitness	Semester	•					
ctives	Health	Semester	•					
Elect	Health and Wellness	Year	•					
	Internet Safety	9-Week	•					
	Life Skills	Semester	•					
	Music Theory and Appreciation	Semester	•					
	Personal Finance	9-Week	•					
	Physical Education	Year	•					
	Science of Computing	9-Week	•					

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Middle School—Language Arts



Language Arts 6th Grade Students read to enhance their understanding of different genres and to enhance their own writing. Students practice the writing process in each part of the course as they plan, organize, compose, and edit four projects: a brief narrative essay about a personal hero, a piece of creative fiction, an essay analyzing a poem, and a research project. As they read the coming-of-age novel Roll of Thunder, Hear My Cry, by Mildred D. Taylor, students focus on the elements of fiction and examine elements of the author's craft. In a tour of folktales, students embark on a journey to South America, Africa, Asia, the Middle East, and even ancient Greece and Rome. Students are introduced to several types of poetry, learn to recognize poetic devices, evaluate the effectiveness of a poet's message, and, ultimately, compose their own poetry. As they explore nonfiction and informational texts, students build on concepts they learned in the elementary grades to develop higher-level critical thinking skills. A study of advertising and persuasive techniques helps students become more informed consumers. Students strengthen speaking and listening skills through predicting, questioning, summarizing, clarifying, and synthesizing. Students learn to work collaboratively, incorporate multimedia in their presentations, and present their findings in unique, effective ways.

Prerequisite: None

>> Credit Recovery Available <<

Length: Year



Language Arts 7th Grade Students read and analyze literature from poetry to novels and folklore to myth, using what they learn to enhance their own writing. The course begins with the steps of the writing process, which includes identifying parts of speech and using them correctly and effectively. A study of writing style focuses on slang, sentence variety, and transitions. Students learn how characters, setting, and plot contribute to literary fiction as they identify and explain these components and use them creatively in their own narrative essays. Reading poetry allows students to focus on figurative and descriptive language, which they apply to writing descriptive essays. Students also learn about the themes and characteristics of myth and folklore. A study of nonfiction focuses on research and organization as students produce objective informational essays. Students learn active reading and research skills that enable them to recognize bias and the techniques of persuasion in different genres, including biographical writing, then write persuasive essays based on their own beliefs or opinions.

Prerequisite: None

>> Credit Recovery Available <<

Length: Year



Language Arts 8th Grade Students continue their exploration of various genres, using active reading techniques such as note-taking and drawing conclusions from texts. Students review the steps of the writing process, making connections between the stages of writing, the genre they are studying, and a well-formed final product. To prepare students for writing narrative essays, lessons focus on plot, theme, and historical setting. Writing reflective and persuasive essays based on their own thoughts and ideas allows students to demonstrate their individuality. Solid research and understanding of organizational methods and visual features provide the foundation for writing informational essays. After improving their ability to recognize biased language, students write persuasive essays to express their own opinions. Students then look at the unique characteristics of poetry, myth, and folklore, and discover the conventions of playwriting and how drama employs the elements of fiction.

Prerequisite: None

>> Credit Recovery Available <<

Middle School—Social Studies



Social Studies 6th Grade Making sense of the unique and fascinating places in the world requires a broad range of knowledge and skills. Students explore how Earth's geography has affected human life and culture as they learn about the development of early civilizations in Asia and the Mediterranean. Students examine the great religious traditions born during this time, witness the growth of dynasties in the Far East, and learn about the ideas that spawned the Renaissance. As the world became caught up in the excitement of the Age of Exploration, the Americas were "discovered," although vibrant and thriving civilizations had existed there for thousands of years. Students learn about the struggles of these native civilizations, the slaves who were brought to build a new nation, and independence movements in the western world. The issues addressing modern nations include trade, migration, urbanization, and human rights. In an exploration of recent history, students learn about dictators and witness revolutions in Europe, the Middle East, and the Americas. In the final section of the course, students study the impact of globalization and the technology driving it.

Prerequisite: None

>>> Credit Recovery Available <<<

Length: Year



Social Studies 7th Grade History, government, economics, sociology, geography, and anthropology all come together to show how modern culture arose from ancient and classical civilizations. Beginning with the New Kingdom of Egypt, students witness the growth of ancient civilizations into the classical empires that gave rise to medieval Europe. They discover how feudal Europe moved toward the Renaissance, and how its ideals of humanism and constitutional government ignited the scientific revolution and the Protestant Reformation. Students study the development of spirituality in the Middle East, the growth of dynasties in the Far East, and the formation of Mesoamerican civilization. As students learn about the development of modern nations and their quest for overseas colonies, they see how the competition for colonies and extreme nationalism led to international conflicts, including the Seven Years War and the Cold War. Students discover how the American political identity has evolved through developments including the Industrial Revolution, the labor and progressive movements, the struggle for civil rights, the economics of a modern society, and the dawn of the Information Age.

Prerequisite: None

>>> Credit Recovery Available <<<

Length: Year



Social Studies 8th Grade Students focus on the history of North America and, in particular, the history of the United States. Before Europeans knew that North America existed, indigenous civilizations thrived throughout the continent. Students learn how colonial life led to early attempts at self-government and how European influence continues to this day. As they witness the expansion of US borders, students discover how the desire for land and resources led to the removal of native populations, wars with neighbors, and annexations. Students see the impact of civil war and witness the struggle of slavery and America's emergence as an industrial powerhouse. In their study of the twentieth century, students trace the reasons for and outcomes of the civil rights movement and consider the role of the United States as a world power.

Prerequisite: None

>>> Credit Recovery Available <<<

Middle School—Science



Science 6th Grade Scientists make exciting observations and learn amazing facts about the world. Harnessing students' natural curiosity and ability to observe, Science 6th Grade surveys the physical and life sciences through engaging, interactive activities and media-rich content. Students begin by surveying the branches of science, noting important milestones in the development of scientific study, and discovering the contributions of some influential scientists. They examine the matter that makes up the world, the laws that govern the movement of matter, and how matter is affected by contact and noncontact forces. Students investigate energy, its sources, and methods of energy generation and transfer. As they examine the structure of Earth, students learn about natural resources and the impact of human populations on the balance of nature. Students also study weather, wind, storm formation, and ways data is used to predict the weather. Students begin learning about life science through the discoveries Robert Hooke made using his microscope. The vital relationship between structure and function is examined as students learn about the components of cells and the organ systems of the human body. The study of living things continues as students learn about the major groups of organisms and scientists who contributed to current knowledge about each group. The relationships among these groups, called kingdoms, and among living and nonliving things are revealed as students learn about biogeochemical cycles. This course concludes with a section on ecology, which discusses water quality, conservation efforts, and recycling.

Prerequisite: None

>>> Credit Recovery Available <<<

Length: Year



Science 7th Grade brings together some of the most fascinating sciences—general, physical, earth, and life sciences—essential for investigating the world. After learning common measurement systems and the essentials of lab safety, students are ready to apply the scientific method to everyday situations such as a broken lamp or a hungry dog. Students learn about matter and energy, and about electromagnetic waves and the electromagnetic spectrum, focusing on the properties of visible light. Earth itself becomes the focus as students study the different geologic eras in Earth's history, the parts of the planet, and phenomena including earthquakes and volcanoes. Delving into Earth's past, students examine the fossil record and discover the clues it provides about the histories of numerous species and how they adapted to their environments. Students learn how species change over time through mutation and natural selection. Finally, students explore food webs, the roles of different organisms in an ecosystem, and the reasons that preserving Earth's limited natural resources through conservation efforts are imperative.

Prerequisite: None

>>> Credit Recovery Available <<<

Length: Year



Science 8th Grade focuses on both the large and small: the smallest structures – the atoms and cells that make up the living and nonliving world around us; and the largest systems – the cycles of the natural world, the interaction of energy and matter, classical mechanics, and the celestial objects throughout the universe. Beginning with classification systems, students learn about the elements and the structure of atoms. Students apply what they learn about temperature scales, the difference between temperature and heat, and chemical reactions to the study of energy and ways matter can change. This understanding of chemistry helps students in their next phase of study: cell function, the life-giving functions of photosynthesis and respiration, the biology of their own bodies, and the genetics that make each living being unique. The focus widens again as students explore classical mechanics: Newton's Three Laws of Motion and the Law of Universal Gravitation. Students then apply classical mechanics to planetary motion, the effects of the Moon, travel beyond Earth, and the most up-to-date discoveries about the universe.

Prerequisite: None

>>> Credit Recovery Available <<<

Middle School—Science



Earth Science explores how a number of sciences affect the processes on Earth and in space. In this interactive and engaging course, students study air, water, and the processes that shape the physical world, as well as how human civilization has impacted the balance of nature. Students will begin by learning the method of studying the natural world called the scientific method. Students learn about the modern science behind topics such as continental drift, fossil dating, the cause of the seasons, natural disasters, ocean ecosystems, and alternative energy sources. Students will also examine how human activity affects natural processes and the ways that impact can be reduced. At the end of this course, students have an understanding of and appreciation for earth science and a solid foundation for future science studies.

Prerequisite: None Length: Year



Life Science introduces students to the subject of biology and the structures and functions of living things. The course begins with instruction in the scientific method and the tools used to study tiny living things. The cell is the basic building block of life, so students will examine unicellular organisms and how the structures of the cell carry out the functions of life, including photosynthesis and respiration. The cells combine into tissues, organs, and systems. Students will discover the systems of the human body. The course then moves into a discussion of the basics of genetics. Finally, students learn about the various forms of life on Earth and how they interact in ecosystems.

Prerequisite: None Length: Year



Physical Science is an interactive and engaging course that introduces students to the sciences of chemistry and physics. The course begins with a unit on the nature of science and a review of measurement. Students will explore the principles of experimental design. Students apply these skills to the science of physics by describing the concepts of motion, force, work, and energy. Students apply their knowledge of these topics through problems, explanations, graphs, and virtual lab activities. The course proceeds with the study of chemical principles, exposing students to topics such as the properties of matter, the structure of the atom, the formation of bonds, and the properties of solutions. They will examine how humans apply these processes in using resources and the pollution that often results.

Prerequisite: None Length: Year



Middle School—Mathematics



Mathematics 6th Grade Each skill provides a stepping stone to the next. Students learn how to find the prime factors of composite numbers, then use this ability to work with fractions. They use ratios and rates in a number of applications, including converting between English and metric measurements, determining unit rates, and finding unit prices. To build a foundation for learning algebra, students study the properties of addition and multiplication and the order of operations. Students then use these concepts as they write, evaluate, and factor algebraic expressions. After they learn to solve single-variable one- and two-step equations and inequalities, students extend their knowledge by graphing the solutions on number lines and the coordinate plane. The exploration of two dimensions continues as students work with plane polygons, classify shapes, and solve for shapes' perimeters and areas. Students learn to transform two-dimensional figures by translating, rotating, and reflecting both figures and graphs of equations, then move on to solid figures. Finally, students delve into statistics as they identify, interpret, and construct various data; solve for and interpret measures of center including mean, median, and mode; and use those measures to analyze data and construct appropriate data displays, which they can apply to a wide range of situations in other subject areas.

Prerequisite: None

>>> Credit Recovery Available <<<

Length: Year



Mathematics 7th Grade teaches skills essential to adult life and lays the groundwork for future mathematics classes. Students learn to apply their work with rational numbers and integers to everyday situations. Students convert words to expressions and vice versa, using equations and inequalities as problem-solving tools. They compute tax, percentage of error, commission, and interest by using rates, ratios, and proportions; graph ordered pairs; and graph and write linear equations. Their work with simple figures—triangles, angles, circles, quadrilaterals, and polygons—focuses on finding areas and perimeters. Students then move on to scale drawings and composite figures composed of simple figures, and compute the volumes and surface areas of solids including prisms, cylinders, pyramids, cones, and spheres. Students collect data and use graphs, charts, and diagrams to read, interpret, and display the data—and they also learn how graphs can be misleading. Students apply the study of sampling and populations to applications involving probability, likely and unlikely outcomes, permutations, combinations, and compound events. Students learn to represent these concepts by using Venn diagrams and charts, tools they will encounter in other courses.

Prerequisite: None

>>> Credit Recovery Available <<<

Length: Year



Mathematics 8th Grade helps students see the power of mathematics in everyday life. The course begins with a review of percentages and proportions, applying these concepts to conversion factors and emphasizing English and metric measurements. Work with linear equations includes computing rates of change, finding intercepts, graphing linear functions, and describing the action of a line. Number patterns and sequences foster a study of arithmetic and geometric means as students learn to find missing terms in sequences. An investigation of the Cartesian plane teaches students how to work with scale drawings, dilations, and graphs. Students learn about the properties of triangles, the Pythagorean theorem, and the properties of parallel lines cut by a transversal. With pie charts, bar graphs, histograms, scatter plots, and other linear models, students explore probability and make predictions and correlations. Students apply the concepts of independent and dependent events, odds, combinations, permutations, and factorials to situations from playing cards to determining the number of different outfits they have in their closets.

Prerequisite: None

>>> Credit Recovery Available <<<

Length: Year



Middle School Algebra How do you write, simplify, and solve equations? How can you display data so it can be easily interpreted and understood? In Algebra, students learn how to translate phrases into expressions, and sentences into equations and inequalities, expressing them in their simplest forms. Students find solutions to equations by graphing them on number lines or on the coordinate plane. Students learn the value of finding the best tool for the job as they acquire different strategies to use in various situations, such as finding the slope of a line, solving a system of equations or inequalities, or factoring polynomials. Building on this knowledge, students apply transformations to polynomial functions, explore inverses and one-to-one functions, and examine exponential and logarithmic functions. Work in statistics includes organizing and analyzing data; making stem-and-leaf plots; finding mean, mode, and median; making box-and-whisker plots; and recognizing misleading graphs. At the completion of this course, students are prepared for additional math courses in middle and high school.

Prerequisite: None

Middle School—Electives



Art History and Appreciation Where do artists find their inspiration? How can you tell a Rembrandt from a Renoir? Art History and Appreciation surveys artwork and architecture from different periods in human history. Students learn how artists use their abilities to observe and interpret reality and create unique artistic styles and works. Part 1 focuses on the art and architecture in Europe, Africa, and the Americas, while Part 2 moves east to Asia and Oceania. In each part of the course, students note the development of different art movements, the variation in artistic techniques, and the influence of significant artists and designers. Lessons explain the tools, skills, and techniques artists use to create their works. Students also learn how to differentiate between art movements in significant periods of history. At the end of this course, students can recognize different artistic styles, movements, and techniques, and identify specific pieces of artwork by period and origin.

Prerequisite: None

Length: Semester



Health and Fitness What does it mean to be healthy? What are the steps for creating or improving a healthy lifestyle? This course helps students take charge of their own well-being by providing up-to-date information about physical activity, nutrition, and overall health. Students learn the importance of setting goals, recognizing peer pressure, making good decisions, and resolving conflicts. Students learn about the benefits of exercise and physical activity, and how to avoid unhealthy behaviors. Activities are designed to help students understand nutrition, analyze food labels, and develop an appropriate exercise plan. Students learn how physical activity affects different body systems and about key exercise concepts including cross-training, overload, and flexibility. Students become more familiar with the systems of their bodies, learn about common ailments, and examine the importance of self-esteem and emotional well-being in creating overall health.

Prerequisite: None

Length: Semester



Internet Safety Why take safety measures when using the Internet? What are the differences between interacting in the real world and interacting in a virtual world? In Internet Safety, students think critically about what constitutes appropriate behavior online and expand the range of their online interactions. This course begins by identifying safety precautions for communicating online, sharing content responsibly, keeping accounts safe, and preventing identify theft and viruses. Students learn to identify appropriate online behavior and compare and contrast real and virtual citizenship. The course defines cyberbullying and encourages students to consider its consequences, and to report those who engage in the behavior. Lessons also include explanations of phishing, plagiarism, copyright terms, and fair use. The course ends by explaining how to recognize quality websites for research, safely use social networking sites, and buy and sell items online.

Prerequisite: None

Length: 9-week



Music Theory and Appreciation Have you ever wondered why some notes sound great together and others don't? Or how musicians translate the symbols of sheet music into the music you hear? Music theory—the study of how music works—is essential to any aspiring composer or performer. Students develop their knowledge through listening exercises, drawing and identifying notation, creating basic compositions, and analyzing music samples. In the second part of the course, students focus on music appreciation as they survey the development of music, beginning in ancient Greece and ending with modern western music. Students learn how to distinguish music from different periods and describe how music relates to its historical, cultural, and social context. By the completion of this course, students have a strong foundational understanding of music, preparing them to learn how to play an instrument or continue to more advanced music studies.

Prerequisite: None

Length: Semester

Middle School—Electives



Physical Education This course combines online instruction and student participation in daily physical activities. Students will learn how to engage in warm-up, aerobic, and cool down activities. They will learn how to set goals and fitness plans to reach those goals. Students will be empowered to make positive choices, along with encouragement to develop positive habits in fitness, wellness, and movement. The students will learn many aspects of individual and team sports. They will learn about injury prevention, nutrition, diet and stress management. This course will help the student understand the value of a lifetime of physical activities.

Prerequisite: None

Length: Year



Problem Solving Provides students with a fundamental overview of problem solving. Students learn George Pólya's four steps to problem solving and identify the best strategies for solving particular problems, such as determining how long it will take to save enough money for a new video game system, how to choose the best transportation option, or what to do when the computer crashes and a term paper is due. The course also covers advanced concepts such as finding patterns and using inductive reasoning — even using algebraic techniques for solving real-world problems. After completing this course, students will have the confidence to tackle any type of problem, from a challenging math activity to losing a set of keys.

Prerequisite: None

Length: 9-week



Study Skills Why are study skills important? What methods and techniques can students use to support studying, limit distractions, and prevent procrastination? The Study Skills course helps students develop a program to manage their study time, enhance their concentration, and accomplish their goals. Topics include identifying causes of study-related stress; techniques for relieving stress; the pros and cons of studying alone and in study groups; and improving reading comprehension, reading fluency, writing, and note-taking. The course concludes with strategies for preparing for tests and reducing test anxiety, leaving students well-prepared to meet their academic challenges.

Prerequisite: None

Length: 9-week

High School—English



English 1 How do writers and speakers effectively communicate to their audiences? When is it appropriate to use formal or informal English? When writing or speaking, why are smooth transitions from one idea, event, or concept to another important? Learning to become an effective communicator includes knowing how to receive, evaluate, comprehend, and respond to verbal and nonverbal communication. Students learn effective communication in the context of fiction and nonfiction writing as well as in one-on-one and group discussions. Students strengthen their writing skills by varying syntax and sentence types, and through the correct use of colons, semicolons, and conjunctive adverbs. Students learn to keep their audience, task, and purpose in mind while maintaining a formal style and objective tone, and use style manuals and reference materials to appropriately cite sources and ensure that their writing meets the conventions of formal English.

Prerequisite: None

Foundation Course Available



English 2 How can the written language be changed according to context, audience, and purpose? In this course, students explore the evolution of language in fiction and nonfiction, assess rhetorical and narrative techniques, identify and refine claims and counterclaims, and ask and answer questions to aid in their research. Students also evaluate and employ vocabulary and comprehension strategies to determine the literal, figurative, and connotative meanings of technical and content-area words and phrases.

Prerequisite: None

Foundation Course Available

Length: Year



English 3 This course gives students the opportunity to explore the American identity by reading American texts that span the period from the late eighteenth century through the late twentieth century. During this journey through American literature, students will examine a variety of texts, including documents, speeches, poems, short stories, and novels. As they read these texts, students learn about the themes, characteristics, and concepts that delineate the American identity and examine how literature both reflects and defines these ideas. This work culminates in a project in which students research the American literary canon throughout history and then choose a modern text that they believe should be part of the literary canon. By the end of the course, students should be able to describe the defining characteristics of American literature and explain how those characteristics have evolved over time.

Prerequisite: None

Foundation Course Available

Length: Year



English 4 Students look critically at the world around them by reading a range of texts that explore past and present social, political, and cultural issues. As they read, students are challenged to analyze how central ideas and themes are crafted and presented, assess the author's purpose for writing, and consider how to break down and evaluate information in a thoughtful manner. Throughout this course, students will think about how people see the world from different perspectives while also considering the common themes, hardships, and triumphs that unite humanity.

Prerequisite: None

Foundation Course Available

Length: Year



Informational and Persuasive Writing (Critical Concepts) Writing is a foundational skill that is used not only in English classes, but across all subject areas. In this course, students will hone their writing skills as they study and practice the writing process and writing skills related to expository and persuasive writing. For each type of writing, students will learn how to choose appropriate topics, generate ideas and research questions, find and evaluate credible sources, outline their papers, compose a first draft, and revise and edit their writing to create polished final products. They will also apply general writing skills, such as creating a formal style and objective tone, utilizing transitions, and applying the rules of MLA formatting. This course is designed to help students refine and practice the expository and persuasive writing skills they will need to be successful in their high school English courses.

Prerequisite: None

Foundation Course Available

Length: 9-week



SAT® Critical Reading and Writing This course is designed to help students prepare for the critical reading and writing portions of the SAT. In addition to test-taking strategies, students learn reading comprehension strategies, including inferring ideas, understanding tone and intention, and identifying the meaning and crucial elements in a piece of writing. Students also learn about comma usage, case, identifying and creating complete sentences, and writing concise sentences with subject-verb agreement. Finally, students learn how to apply correct grammatical structure to sentences, recognize and understand modifiers and idioms, and develop a piece of writing in response to an essay question.

Prerequisite: None

Length: 9-week

High School—Social Studies



American History takes students on a journey through the key events that have shaped America as a nation, from the end of the Civil War in 1865 to the height of the Cold War in 1980. The journey begins with Reconstruction, a period of great transition and opportunity to heal a broken nation. Students witness the great migration westward and explore how the Industrial Revolution and waves of immigration fueled the flames of the American spirit. The course details the challenges America faced and how equality was elusive for populations of Native Americans, African Americans, immigrants, and women. Students learn how the core values of the founding fathers eventually prevailed and led to the women's suffrage and civil rights movements. The course closely examines the impact of war, with units covering the role of the United States in World War I, World War II, the Korean War, and the Vietnam War. Throughout their journey, students encounter the great political, industrial, military, and human rights leaders who shaped America into a beacon of hope.

Prerequisite: None

Foundation Course Available

Length: Year



Early American History provides students with a comprehensive and engaging look at early American history from the impact of the early Spanish explorers through the Civil War. Students learn about key events of European exploration and colonization of the Americas. Students learn about the establishment of the United States as an independent country, the importance of the US Constitution, and the impact of the Constitution on the continued development of the country. At the completion of this course, students have both a knowledge of and appreciation for the early history of the United States.

Prerequisite: None

Length: 9-week



Early World History Starting at the dawn of civilization and arriving at the doorstep of the Renaissance, Early World History introduces students to the major events that laid the foundations of the modern world. This course exposes students to the development of the world's early civilizations and the cultures that created them. Students experience the rituals of the Aztecs, the might of the Roman legions, and the building of the Great Wall of China. From these ancient beginnings, students trace the development of empires, the emergence of the world's major religions, and the mechanisms of trade and conflict that brought cultures together. Thematically, the course focuses on how empires have interacted to spread goods, ideas, and technological innovations such as silk and gunpowder. The course traces major events from ancient Mesopotamia through the Black Death of the fourteenth century, preparing students to explore more recent world history in future courses.

Prerequisite: None

Length: 9-week



Economics is a comprehensive survey of the ways in which human decisions impact the world every day. Microeconomic concepts including supply and demand, business transactions, the fundamentals of work, and others offer students a glimpse into the effect of personal economic decisions upon the world. Macroeconomic concepts such as the fiscal policy of governments, trade, natural resource use, and other big picture topics offer a more broad view of the world's economic systems. In its entirety, this course illuminates the ways in which people from around the world are connected to one another and their natural surroundings every day.

Prerequisite: None



Economics with Financial Literacy examines elements of personal finance through the lens of economic principles. Students explore financial concepts and processes that they will encounter throughout their lives such as personal credit, debt management, budgeting, taxes, and other essential aspects of personal financial wellness. While working through these concepts and others, students gain an understanding of their own role in an ever-changing economy.

Prerequisite: None

Length: Semester



Macroeconomics deals with the economies of nations and regions. Students will learn how these economies function and measure up against one another by exploring concepts including gross domestic product (GDP), unemployment rates, and price indices. At the end of this course, students will be able to understand the world economy and recognize the events and people who have contributed to the understanding of macroeconomics.

Prerequisite: None

Length: Semester



Microeconomics gives students the ability to learn about the structure of economics and how it affects world events and people's everyday lives. Upon completing this course, students have a better understanding of personal finance, the role and process of taxation, and the risks and rewards of investment. The course discusses the need for economic systems, examines the concepts of supply and demand and consumer theory, and evaluates past and present occupation trends. Students compare the mixed economies of various nations; learn about traditional, command, and market economies; and examine the role of government in regulating the economy.

Prerequisite: None Length: Semester



Psychology In this course, students discover how their senses, perceptions, emotions, and intelligence influence the way they think, feel, and learn. In this course, students learn about the field of psychology, including the concepts and tools used to assess intelligence, sensation and perception, memory, motivation and emotion, and learning. At the end of this course, students gain both knowledge of and appreciation for psychology and how it affects everyone.

Prerequisite: None Length: Semester



Sociology The field of sociology explores the development, dynamics, and structure of societies and society's connections to human behavior. Sociology examines the ways in which groups, organizations, communities, social categories (such as class, sex, age, or race), and various social institutions (such as kinship, economic, political, or religious) affect human attitudes, actions, and opportunities. In this course, students learn about the concepts and tools used to understand individuality, social structure, inequality, family structure, education, economics, politics, and social change.

Prerequisite: None

Length: Semester



US Government This stimulating course offers students a comprehensive examination of the US government. Students explore the evolution of American democracy, from its birth in the eighteenth century to the expansive role of federal, state, and local governments today. The course covers topics such as changes to the Constitution, the function of the Supreme Court, the structure of Congress, and the importance of the media. The course explores the relationship between the political parties and lobbyists, and the process of monitoring and funding federal elections. Students investigate the roles of state and local governments and their impact on citizens' daily lives. At the end of this course, students have a knowledge of and appreciation for the workings and history of the US government and its impact on American society.

Prerequisite: None

Foundation Course Available

Length: Year



World Geography This course explores the world's geographical divisions and the differences between Earth and the other planets in the solar system. In addition to Earth's geographical divide, the course explores how the cultural divide between countries impacts international relations. Through the study of geography, students analyze energy usage and explore ways to make the most of the planet without abusing its resources. The study of world geography through historical, cultural, physical, and economic lenses offers students a different perspective and understanding of the world.

Prerequisite: None Length: Year



World History In World History, students will explore the changes created by the events and people of the past, and understand how these changes impacted modern times. The material is organized sequentially, exploring history from 1400 CE to the present day. Starting with the Renaissance and Reformation, the course will highlight the cultural, economic, political, and social impact of innovation and intellectual thought. Further changes will be uncovered with the French Revolution, the Industrial Revolution, and the rise of imperialism and nationalism. The closing topics emphasize global conflicts and diplomacy, as seen in World War I, World War II, and the Cold War. Upon completion of the course, students have an appreciation for the patterns of historical change and the impact upon modern society.

Prerequisite: None

Foundation Course Available



High School—Science



Anatomy and Physiology Why is the human body so complex? How do all the different structures of the body work together? In Anatomy and Physiology, students survey the different systems of the human body, with an emphasis on the relationship between structure and function. The course begins by teaching the language of anatomy and familiarizing students with the building blocks of the human body: cells and tissues that combine to create the complex organs and support structures of the body. Students get to know their bodies inside and out, from the skin that covers and protects the entire body to the skeleton and the attached muscles that provide support and create movement. Moving deeper inside, students explore the cardiovascular, respiratory, urinary, and digestive systems, which work together to supply the body with nutrients and rid it of wastes. Students also learn how the nervous and endocrine systems respond to the environment and maintain a state of balance. Students study the reproductive system as they follow the development of a human from a single-celled zygote to a mature adult. Interwoven throughout many lessons is information about genetic diseases, dysfunctions, and ailments, such as diabetes, HIV, and arthritis. By the end of this course, students will feel as if they have read the owner's manual for their bodies.

Prerequisite: Biology

Length: Year



Application of Genetics This course introduces the students to the field of genetics, where they learn about the theories of Mendel, Darwin, and Wallace. They will learn how traits are passed down from one generation to another. They will explore concepts of adaptation, genotype, and phenotype; and basic concepts related to cells, DNA, and RNA. Students see how the basic concepts are applied in various techniques, including metagenomics, genetically modified organisms, DNA technologies, genetic testing, and other clinical and nonclinical applications of genetics. Students will also examine how the genetic code present in all cells can be used to treat conditions. They will study the ongoing research into the usage of stem cells.

Prerequisite: None

Length: Semester



Astronomy In this course, students take a fascinating journey through the cosmos and learn basic concepts in the study of astronomy. The course begins with the celestial objects closest to home, scanning the solar system to provide students with an overview of the planets, moons, asteroids, and comets that revolve around the Sun. The course then moves beyond the solar system to cover the characteristics of our galaxy, the Milky Way. Students may be amazed to learn about the sheer size of this system and other galaxies nearby, and about the formation and death of stars, supernovas, black holes, and theoretical wormholes. Finally, the course reaches to the edges of time and space to investigate the properties of the universe as a whole, as students learn about theories explaining the beginning of existence and the expansion of the universe. Students also learn about Einstein's theory of relativity, time travel, and the search for extra-solar planets.

Prerequisite: None

Length: 9-week



Biology The science of Biology is large, complex, and constantly changing. This course provides students with a broad and interactive experience covering the main topics of biological science. Topics range from cell reproduction to the diversity of life. Students also learn about the chemical components of life, the process of energy conversion, and life's functions. The course explores genetics and evolution, incorporating the latest scientific research. Finally, the course covers ecology to raise students' awareness of the many challenges and opportunities in the modern biological world. Throughout the course, students complete lab activities that reinforce the material and provide the opportunity to apply their knowledge through interactive experiments and activities.

Prerequisite: None

Foundation Course Available



Biotechnology This course provides students with a comprehensive and engaging look at the field of biotechnology. Students explore the history of biotechnology and advances in the field, as well as basic information about biotechnology laboratories and careers. Students learn about chemistry; the units of measurement used in biotechnology; and the biology of the cell, DNA, RNA, and proteins. The course concludes with a survey of the applications of biotechnology in the research lab and in industry, including enzymes, techniques, and plasmids.

Prerequisite: None Length: 9-week



Chemical Engineering This course offers students a comprehensive and engaging look at the field of chemical engineering. Students learn the basic concepts used in chemical engineering, including systems of units, the periodic table of the elements, molecules, compounds, bonding, temperature, and pressure. Students explore chemical systems and reactions, including stoichiometry, open and closed systems, multiple-component systems, and chemical reactions. Finally, students study gases and gas laws, pressure, systems, energy, and enthalpy. At the end of this course, students have gained a knowledge of and appreciation for chemical engineering and its growing importance in today's society.

Prerequisite: None Length: 9-week



Chemistry This course shows the importance of science and challenges students to apply their studies in previous sciences to new theories, models, and problems. The course begins with a discussion of the history and importance of chemical principles; moves through the various models of the atom and chemical reactions; explores relationships among liquids, gases, and solids; and investigates the role of energy in these relationships. The course ends with a unit on organic chemistry, a branch of the science that focuses on the molecules that are important to living things. Lab activities throughout the course reinforce the material and provide an opportunity for students to apply their knowledge through hands-on experiments and activities.

Prerequisite: Algebra 1 Foundation Course Available Length: Year



Earth Science This course explores how a number of sciences, including geology, physics, chemistry, and biology impact the world and universe around us. In this interactive and engaging course, students study air, water, and the physical processes that shape the physical world, and how human civilization has affected the balance of nature. Students learn about the modern science behind topics from the Earth's history, such as continental drift, ice ages, fossil dating, and geological timescale. Students will also look at processes that affect life today, such as weathering and erosion, the rock cycle, weather patterns, and climate. They will explore regular phenomena, the cause of the seasons and natural disasters. The students will examine the formation, acquisition and use of natural resources, as well as alternative energy sources. The students will also look at Earth as a small part of a larger universe in an exploration of astronomy. They will examine the Solar System and the stars and galaxies beyond it.

Prerequisite: None Foundation Course Available Length: Year



Electrical Engineering In this introduction to electrical engineering, students learn about electrical engineering concepts including electricity, circuits, energy, work, power, the components of circuits, and some simple applications of electricity. Students explore basic circuit concepts, including series and parallel circuits, laws of electricity, and how circuits are used. At the end of this course, students have a knowledge of and appreciation for the field of electrical engineering and its many applications.

Prerequisite: None Length: 9-week



Environmental Science is sometimes referred to as Ecology and is the study of the relationships and interdependence of organisms and their connection to the nonliving, or abiotic, factors in the natural world. This course provides students with a profile of the living relationships, abiotic factors, human influences, and current state of Earth's ecosystems. The course begins with a review of science as a process and the general components of Earth's structure that impact life. It then progresses through a study of the living groups and their relationships to one another, focusing on the balance achieved by nature through these relationships. The course explores populations and provides examples of unchecked growth and rapid extinction in the context of their effects on ecosystems. The course dedicates a unit to aquatic ecosystems and organisms, and the results of human impact. After covering the influence of energy extraction, production, and use, the course ends by examining the positive influence humans can have on the environment through conservation and sound management practices.

Prerequisite: None

Length: Semester



Epidemiology Epidemiologists investigate the causes of disease and other public health problems in an effort to prevent them from spreading. This course introduces students to the field of epidemiology, including the basic concepts related to infectious diseases, specializations in epidemiology, and study design. Students learn about the specific parts of an epidemiology study and their importance, including types of sampling, selection bias, standardization, confidence intervals, and evidence-based research.

Prerequisite: None

Length: 9-week



Forensics This engaging course introduces students to the field of forensics through a comprehensive look at related careers, laboratories, crime scene processing, evidence, and the impact of media on criminal investigations and trials. Students learn about specific techniques used in crime scene investigations, including autopsy, fingerprint analysis, DNA fingerprinting, and other types of evidence and analysis important to solving crimes. At the end of the course, students are introduced to a variety of specialized forensic sciences, analyze specific case studies, and learn about the Innocence Project and Freedom Project.

Prerequisite: None

Length: 9-week



Foundations of Engineering Science provides the world with knowledge of the natural world. Scientists determine many principles that explain how the world works. Engineering on the other hand is more concerned with solving problems faced by society. Engineers develop products, machinery, or devices that society needs for their daily life, or create the processes that make those products. In the Foundations of Engineering course, the student will learn the basic principles of four fields of engineering, chemical, mechanical, electrical, and computer engineering. Chemical engineering focuses on the creation of processes used to make foods, health and beauty aids, etc. Mechanical engineering deals with the creation of machinery that make work easier, or that support heavy loads. Electrical engineering covers the creation of products that use electricity to function. Computer engineering is one of the newest engineering fields and develops new hardware and software used in computers.

Prerequisite: None

Length: Year



Genetics Through this introduction to the field of genetics, students learn about the theories of Darwin and Wallace; the concepts of adaptation, genotype, and phenotype; and basic concepts related to cells, DNA, and RNA. Students study Gregor Mendel's pioneering work in genetic variation and the basic concepts that have been developed as a result of his findings. Finally, students explore applications of genetics, including metagenomics, genetically modified organisms, DNA technologies, genetic testing, and other clinical and nonclinical applications of genetics.

Prerequisite: None

Length: 9-week



Introduction to Technological Sciences In this course, students learn about three main fields of technological science: engineering, biotechnology, and information technology. The first unit of the course surveys 15 distinct sub-fields of engineering, exploring the science background, real-world applications, and career opportunities in fields including aerospace, nuclear, and software engineering. In the second unit, students study cutting-edge biotechnology topics such as gene therapy, bioengineered crops, and biodegradation. The final unit focuses on the study of informational technology, covering computer networking, data storage, and data encryption for secure communications.

Prerequisite: None Length: 9-week



Life Science This survey of the biological sciences introduces students to the structure and function of living things and the natural relationships that exist on Earth. The course begins with the definition of life and a discussion of how living things are classified and organized by scientists. Students then work through material that presents the molecular building blocks of organisms, both microscopic and macroscopic views of life, the diversity and universality of species, and the characteristics of various groups of life. The course culminates with a unit on evolution, asking students to apply what they have learned about the natural world to the complex relationships and environmental factors that have shaped the ever-changing species sharing the world today.

Prerequisite: None Length: Semester



Mechanical Engineering This course introduces students to the field of mechanical engineering and its many applications in the world today. Students learn basic mechanical engineering concepts, including systems of units, vectors, forces, moments, force systems, couples, and equilibrium problems. Students explore the methods of joints and sections, define centroids, explain distributed loads and centers of mass and axes, and state the Pappus–Guldinus theorems. The course concludes with lessons about dry friction, beams, cables, load distribution, pressure, and potential energy. At the end of this course, students have a knowledge of and appreciation for the field of mechanical engineering and its importance in today's society.

Prerequisite: None Length: 9-week



Natural Disasters Natural disasters can strike almost anywhere, at nearly any time. This course provides an overview of the different types of catastrophic forces of nature and their impact on the populations that they strike. The course gives students a greater understanding of the causes and effects of natural disasters; students also investigate what can be done to prevent such disasters. The first unit covers land-based events, detailing how scientists predict and react to avalanches, earthquakes, volcanic eruptions, mudslides, and fires. The second unit focuses on catastrophic events that begin in the ocean and atmosphere, describing the impact of flooding, hurricanes, blizzards, and droughts. In the third unit, students learn how disease spreads and how quickly one disease can impact the world's population. The final unit looks skyward for potential catastrophic impacts from comets and asteroids.

Prerequisite: None Length: 9-week



Physical Science Physical Science is an interactive and engaging course that covers the sciences of chemistry and physics. The course begins with a unit on the nature of science and a review of measurement and its importance. The course proceeds with the study of chemical principles, exposing students to topics such as the properties of matter, the structure of the atom, the formation of bonds, and the properties of solutions. The course then moves to the science of physics, describing the topics of motion, force, work, and energy. Students apply their knowledge of these topics through problems, explanations, graphs, and virtual lab activities.

Prerequisite: None Foundation Course Available Length: Year





Physics This course is designed to provide students with an overview of traditional physics and the latest, most modern research in the field today. Beginning with Newtonian mechanics, students learn that every object is acted upon by multiple predictable forces. The course moves on to investigate the laws of thermodynamics, covering fluid mechanics and the relationship between matter and energy. The course also explores the various models used to explain and apply the universal forces of electricity and magnetism. Students learn the characteristics of waves and the basics of optics before the final set of lessons on atomic physics. Here, students review the characteristics of the atom and its elemental particles and apply their knowledge to modern physics. Topics in this course will be reinforced through interactive, online lab assignments.

Prerequisite: Algebra 2

Length: Year



Sports Medicine In this course, students explore ways to keep the human machine in optimal condition. They learn about various aspects of sports medicine, including careers, basic concepts, and techniques. Students also learn about sports injuries and how they are treated so athletes can continue to compete. At the end of this course, students have a knowledge of and appreciation for the field of sports medicine and its applications.

Prerequisite: None

Length: 9-week



Sports Science Modern-day sports and the world-class athletes who excel at them take center stage in this journey through sports science. This course provides students with a survey of the impact of physics, biomechanics, and physiology on 14 modern sports. The first unit describes the role physics plays in a variety of sports, from the aerodynamics involved in auto racing to the force behind a boxer's right hook. The next unit investigates the biomechanics of these sports, discussing concepts such as the contortions of a gymnast's body and the cause of tennis elbow. The last unit focuses on the limits of the human body, describing the energy used by cyclists during a climb through the Alps and the reaction time required to hit a fastball traveling at 90 miles per hour. Overall, the course presents engaging information that will forever change how students perceive world-class athletes and competition.

Prerequisite: None

Length: 9-week



Sports Science and Medicine This course analyzes the ways athletes apply concepts of various sciences while participating in sports. Throughout the course, students will examine how athletes utilize the dynamics of physics as an advantage when actively participating in competitions. When participating in sports injuries will occur, and students will explore through the various types of injuries that can come about ranging in a variety of severity. Furthermore, students will learn about the surgical processes to heal these injuries as well as the whole rehabilitation process it takes for athletes to get back to optimal performance.

Prerequisite: None Length: 9-week



Stem Cells In this course, the diverse and rapidly changing field of stem cell research comes alive for students. Students learn about the different types of stem cells; how stem cells were discovered; their importance to research; and the goals, challenges, and controversies in the field. Students explore human and mouse embryonic stem cells and a variety of types of stem cells found in different parts of the body, as well as the potential clinical applications of these cells in human medicine. Finally, students study stem cell research models.

Prerequisite: None Length: 9-week



Superstars of Science In this course students appreciate the accomplishments and impact of the most influential scientists on today's society, from scientists who lived in ancient Greece to those who are still alive and working today. The timeline structure allows students to see how science is cumulative in nature and how the discoveries and inventions of every scientist are influenced by past breakthroughs. It is commonly said that every great scientist stands on the shoulders of those of the past; this course explores that concept. The biography of each scientist, one per lesson, includes not only their contributions to their field, but the context of their work at the time and the world's reaction to their groundbreaking ideas.

Prerequisite: None Length: 9-week



Technologies in Medicine Analyze the ways medical practice has been able to positively advance as technology increased. Throughout the course, students will examine the engineering behind technology that has led to creating cures for various life threatening diseases. In which case students will be looking at medicine all the way back to the cellular level where they will be able to learn the importance of DNA and RNA as well as how scientists are learning to genetically modify the strands. Furthermore, students will examine epidemiology in its entirety which will allow the students to understand how pandemics and other diseases spread over time as well as allowing students to develop an understanding of how trends work. The course as a whole will give students the tools to be able to map, data analyze, and understand how diseases spread.

Prerequisite: None Length: Semester

High School—Mathematics



Algebra 1 What are algebraic expressions? How are they structured, and how can they be combined to create equations and inequalities? How do you know that the solutions you find are correct? In Algebra 1, students create expressions from verbal descriptions, manipulate and transform them, and create visual models. Requiring students to explain each step helps them understand mathematical processes. Exploring functions, sequences, and their corresponding graphs helps students determine the best ways to represent each. Students examine functions graphically, numerically, symbolically, and verbally, and learn how to translate between these different forms. Students' depth of understanding increases as they complete proofs and describe data, fitting functions to their data. Students then extend their knowledge of linear and exponential relationships and apply their new understanding to create quadratic and exponential expressions as models of real-life phenomena.

Prerequisite: None Length: Year



Algebra 1 (Critical Concepts) Algebra is one of the most important areas of study in mathematics. It helps develop critical thinking skills and sets students up to be successful in future mathematics courses. In this course, students will hone their algebra skills as they study essential topics, including equations and inequalities, forms and features of functions, the structure of polynomial expressions, quadratic equations and graphs, data distribution, and probabilities.

Prerequisite: None Length: 9-week



Algebra 2 Extending their knowledge of linear, exponential, and quadratic functions to polynomial, rational, and radical functions, students in Algebra 2 model situations and solve equations, discovering how the rules they learned in arithmetic continue to apply as they work with polynomials. Students focus on the properties and factors of polynomials, learning to find the zeros of a polynomial and graph it as a function. Students use complex numbers to solve quadratic equations and exponential expressions, and learn how to rewrite rational expressions in different forms and solve simple rational and radical equations. The trigonometric concepts students learned previously are expanded as they focus on the unit circle and apply these concepts to models of periodic phenomena. Students then extend their knowledge of function families to model functions defined as square roots or cube roots, as well as piecewise-defined functions. A detailed look at exponential and logarithmic functions is applied to showing intercepts and end behavior. Students collect data through sample surveys, experiments, and simulations, and learn about the role of randomness in this process. Quantitative reasoning is emphasized as students compare the differences between sample surveys, experiments, and observations, and explain how randomization relates to each one.

Prerequisite: Algebra 1 Length: Year



Calculus Students examine the foundational components of limits, derivatives, integrals, and series and apply this knowledge to problems in economics and physics. Derivatives are used to find lines tangent to curves and integrals. Students learn specific rules of differentiation and explore real-world applications, including related rates and optimization. Students explore the graphs of functions and their first and second derivatives to determine relationships. Functions increase in complexity to include logarithmic and exponential components. Various methods of finding the area under a curve are examined and applied, and each method is supported graphically. Integration is used to revolve solids about an axis. At the conclusion of the course, students are able to apply their knowledge to physics problems related to speed, velocity, acceleration, and find the volume of an object with curved sides, such as a barrel.

Prerequisite: Pre-Calculus Length: Year



General Math The goal of this course is to motivate students while helping them establish a strong foundation for success in developmental and consumer mathematics. The course leads students through basic mathematics and its applications, focusing on whole numbers, integers, decimals, and percentages. Students make sense of the mathematics they encounter each day, including wages, banking, interest, credit, and consumer costs. At the end of this course, students have a knowledge of and appreciation for mathematics and problem-solving that prepare them for the future.

Prerequisite: None Length: Year



Geometry What are the different ways a figure can be transformed? What is the difference between similarity and congruence? In Geometry, students formulate mathematical arguments and create geometric constructions. Working with triangle construction to prove theorems, students employ their reasoning abilities to show similarity and congruence, and use trigonometric ratios to find missing measures in triangles. Solving problems concerning three-dimensional figures gives students the opportunity to examine formulas. Students apply their knowledge of geometric shapes by using measures and properties to describe real-life objects, and connect algebra to geometry by graphing figures on the coordinate plane. Students then move to circles, exploring their properties and theorems. Next is the study of probability, in which students interpret data by using independence and conditional probability, and apply the rules of probability to determine compound events and evaluate outcomes of decisions.

Prerequisite: Algebra 1 Length: Year



Integrated Math 1 What are the differences between linear and exponential relationships? What are the components of mathematical expressions? What happens when one value in a data set is quite different from the rest of the data? Students extend their understanding of linear relationships by contrasting them with exponential models and modeling linear data. As they create equations and inequalities in one or more variables, students represent the constraints of these expressions and rearrange the equations to solve for particular variables. In their comprehensive study of functions, students focus on notation, domain and range, and sequences. They also interpret the key features of the graph of a function and build new functions or use existing functions to model relationships between quantities. Using their knowledge of relationships, students construct and compare linear, quadratic, and exponential models and use these models to solve various problems. Students learn that solving equations is a reasoning process and are asked to explain their reasoning in solving them. As they explore descriptive statistics, students compare measures of center and spread and determine the most appropriate ways to represent data. Students also identify and interpret outliers in a data set. Finally, they prove simple geometric theorems algebraically.

Prerequisite: None Length: Year



Integrated Math 2 focuses on quadratic expressions, equations, and functions and compares their characteristics and behavior to previously learned linear and exponential relationships. The course covers real and complex numbers to give students the background they need to solve all forms of quadratic equations. Students explore the structure of expressions and rewrite them to highlight pieces of the relationship. Creating and solving equations and inequalities leads to solving systems of equations involving quadratic or exponential equations. Students compute and interpret theoretical and experimental probabilities, making informed decisions as they apply their knowledge of probability. Similarity transformations give students another perspective on similarity and allow them to prove related theorems. Students prove and use geometric theorems and learn about right triangles and their related trigonometry. They then move to theorems of circles, study ways to find arc lengths and areas of sectors, and write equations for circles and parabolas. Finally, students examine area, circumference, and volume formulas for different geometric forms.

Prerequisite: Integrated Mathematics 1



Integrated Math 3 challenges students to gather and apply all of the concepts they have learned in previous courses. Students apply their knowledge of probability and statistics to both given data and data they collect through sample surveys, experiments, and simulations. Students look at polynomials and operations on them, examining the relationship between zeros and factors of polynomials, and use polynomial identities to solve various problems. Students learn that the arithmetic of rational expressions follows the same rules as arithmetic with rational numbers. Students deepen their understanding of trigonometry as they develop and apply the laws of sines and cosines to find missing measures of right and other triangles, determine how many triangles can be formed from a set of side measures, and use the unit circle and model periodic phenomena by using trigonometric functions. Pulling together all they have learned about function families, students analyze functions, build functions to model relationships, and build new functions from existing functions. They can also construct and compare linear, quadratic, and exponential models; use geometric shapes, their measures, and their properties to describe objects; and apply geometric concepts in modeling situations.

Prerequisite: Integrated Mathematics 2

Length: Year



Integrated Math 4 brings together all of the mathematical concepts students have learned up to this point. In this capstone course, students perform operations with and find conjugates of complex numbers and represent them on the complex plane. Work with vectors includes recognizing the magnitude and direction of vectors and performing operations on vectors. Students also represent and manipulate data in and perform operations on matrices, applying the knowledge they gain as they represent and solve systems of linear equations. Students then analyze linear and exponential functions to show intercepts and end behavior, and delve into trigonometric functions showing period, midline, and amplitude. The course then moves to inverse functions, in which students find inverse functions and produce invertible functions from noninvertible functions by limiting the domain. Special triangles form the basis for students to geometrically determine values for sine, cosine, and tangent. Students also learn how to prove and utilize the addition and subtraction formulas for sine, cosine, and tangent and derive the equations of ellipses and hyperbolas. Cavalieri's principle is used to explain the formulas for the volume of a sphere and other solid figures. Finally, students calculate expected values and employ them to solve problems, and use probability to evaluate outcomes of decisions.

Prerequisite: Algebra 2 or Integrated Mathematics 3

Length: Year



Pre-Algebra helps students make a successful transition from arithmetic to algebra by focusing on basic concepts of arithmetic and the applications of mathematics. Students learn about integers, fractions, decimals, expressions, equations, ratios, proportions and percentages, inequalities, graphing, probability and statistics, and geometry. The course highlights the math skills needed to be successful in everyday life and prepares students for future mathematics courses.

Prerequisite: None

Foundation Course Available

Length: Year



Pre-Calculus helps students gain the knowledge they need for success in calculus and other high school math courses. The course focuses on linear, rational, polynomial, exponential, and logarithmic functions; systems of equations; systems of inequalities; matrices; trigonometry; series; sequence; probability; vectors; and analytical geometry. Throughout the course, students work to improve their critical-thinking skills and apply problem-solving techniques. By the end of this course, students gain knowledge of and appreciation for calculus and its applications.

Prerequisite: Algebra 2





Probability In this course, students take a comprehensive and engaging look at the field of probability. They begin by learning the basic terms, types, theories and rules of probability. Next, the course covers random outcomes and normal distributions, as well as binomial probabilities. Finally, students learn about geometric probability, sampling distribution, populations, and the central limit theorem. By the end of this course, students gain a knowledge of and appreciation for the field of probability and its uses in everyday life.

Prerequisite: None Length: 9-week



SAT[®] **Mathematics** This course helps students prepare for the mathematics portion of the SAT[®] by equipping them with the knowledge and strategies they will need to succeed. Students learn about essential mathematical theories and operations, including rational numbers, integers, methods to solve counting problems, and the characteristics of sequences and series of numbers. Students then learn how to use algebra for solving problems, including polynomial functions, linear equations and inequalities, and variation. The final unit covers geometric shapes and how to calculate the area and perimeter of polygons and the circumference of circles. Students also learn how to solve for missing angles and sides of triangles, and understand lines, similar figures, and ratios.

Prerequisite: None Length: 9-week



Statistics This course opens students' eyes to the many uses of statistics in the real world—from sports and the weather to health and politics. Students learn basic concepts, how to use graphs to represent data, and ways to analyze data. They explore statistical relationships, including the use of correlations, residuals and residual plots, and scatter plots. Finally, students learn how to model nonlinear relationships by using exponential and logarithmic functions and how to design a sample to produce the correct type of data (observational or experimental). By the end of this course, students gain a knowledge of and appreciation for the field of statistics and its applications in the real world.

Prerequisite: None Length: 9-week



Trigonometry This course explores trigonometric functions and practical applications of trigonometry, such as solving real-life problems through engineering, physics, construction, and design. Students investigate graphs, linear functions, quadratic functions, trigonometric functions, analytical trigonometry, analytical geometry, vectors, and advanced functions. Students develop critical-thinking skills and learn problem-solving techniques to help them succeed in understanding and applying trigonometric principles. By the end of this course, students gain knowledge of and appreciation for trigonometry and problem-solving that will prepare them for future mathematics courses.

Prerequisite: Algebra 2 Length: Semester

High School—World Languages



French 1 is a comprehensive and engaging introduction to French language and culture. After mastering the French alphabet and numbers, students study French culture, events, and people. By the end of the course, students have a foundation in the study of French, are able to engage in French conversation, and have built a solid foundation for further French language study.

Prerequisite: None

Length: Year



French 2 students continue their virtual tour through France and other French-speaking countries and regions. This second-level French course takes a historical perspective in teaching the language, covering historical events and historical figures. By the end of this course, students have gained a deeper knowledge of and appreciation for the French culture and language.

Prerequisite: French 1

Length: Year



French 3 This course continues to build students' vocabulary, grammar, and communication skills with the objective of improving student achievement in reading, writing, and speaking French. Students apply what they have learned in previous French courses to French conversation. At the end of this course, students are able to express themselves in French.

Prerequisite: French 2

Length: Year



French 4 In this level-four French course, students apply the knowledge they gained in previous French courses to become true Francophones. Students explore exciting eras of French history, from the Crusades to the Renaissance to the modern day, learning about famous authors and historical figures along the way. The course provides students with an advanced knowledge of and deep appreciation for the French language and culture. At the end of this course, students are able to speak, read, and write in French with basic fluency.

Prerequisite: French 3

Length: Year



German 1 is a comprehensive and engaging look at the German language and culture and focuses on the most essential information needed to communicate in German. After mastering the German alphabet and numbers, students study German culture, events, and people. By the end of the course, students have a foundation in the study of German and can engage in conversation in German.

Prerequisite: None

Length: Year



German 2 Building on the content learned in German 1, students are immersed in the language, while learning cultural aspects of German-speaking countries. The course emphasizes increasing students' skills in understanding spoken German, and writing, reading, and speaking in German. German 2 provides a comprehensive review of German grammar while improving students' vocabulary skills. At the end of this course, students have a knowledge of and appreciation for the German people and language.

Prerequisite: German 1



Spanish 1 This introductory course provides a solid foundation for students to build proficiency in listening, speaking, reading and writing in Spanish, and provides students with basic skills and contextual information for using Spanish. Each unit presents new information, including useful vocabulary and grammatical structures, and introduces relevant cultural information. At the end of this course, students have the basic skills and contextual information required for using Spanish in their professional and daily lives and when traveling abroad.

Prerequisite: None Length: Year



Spanish 2 In Spanish 2, students are immersed in the Spanish language and in the cultural aspects of Spanish-speaking countries. Students build on what they learned in Spanish 1, with a study of Spanish grammar and an emphasis on increasing their skills in listening, writing, reading, and speaking in Spanish. At the end of this course, in addition to improving their Spanish language skills, students have a knowledge of and appreciation for the cultures of Spanish-speaking countries, including the events and people that have impacted the language.

Prerequisite: Spanish 1

Length: Year



Spanish 3 In this level-three Spanish course, students apply what they learned in previous courses to conversational Spanish. Students explore cultural aspects of Spanish-speaking countries ranging from schools and careers to sports and authors. At the end of this course, students have improved Spanish language skills and can express themselves in Spanish conversation.

Prerequisite: Spanish 2

Length: Year



Spanish 4 From the Caribbean to South America and Mexico to Spain, students continue their exploration of Spanish and Latin American language and culture. The course provides students with an advanced knowledge of and deep appreciation for the many Spanish-speaking peoples and countries around the world. At the completion of this course, students will have gained the knowledge and skills to speak, read, and write in the Spanish language with basic fluency.

Prerequisite: Spanish 3



High School—Electives



Advanced Music Theory In this course, students will be immersed in the world of music and the technical details of how music works. The course is designed to provide students with a comprehensive and engaging look at music theory and the notation and structure important to its development. Students learn about various aspects of music theory, including the different types of musical staffs, notes, scales, and chords. Students are also exposed to the use of harmony to produce melodic structure. At the completion of this course, students will have gained knowledge of and appreciation for music theory.

Prerequisite: Previous music theory experience recommended

Length: Semester



Art History & Appreciation Where do artists find their inspiration? How can you tell a Rembrandt from a Renoir? Art History and Appreciation surveys artwork and architecture from different periods in human history. Students learn how artists use their abilities to observe and interpret reality and create unique artistic styles and works. Part 1 focuses on the art and architecture in Europe, Africa, and the Americas, while Part 2 moves east to Asia and Oceania. In each part of the course, students note the development of different art movements, the variation in artistic techniques, and the influence of significant artists and designers. Lessons explain the tools, skills, and techniques artists use to create their works. Students also learn how to differentiate between art movements in significant periods of history. At the end of this course, students can recognize different artistic styles, movements, and techniques, and identify specific pieces of artwork by period and origin.

Prerequisite: None

Length: Semester



Career Explorations How do you decide what type of career to pursue? What steps can you take to get a job in your desired field? Career Explorations provides students with employment data and career resources to analyze job opportunities and prepare for their careers. Students learn about careers and the relationships between education, career, and earning potential. Students then match their interests with career opportunities and build a career map. The course defines essential professional skills such as communication, teamwork, organization, and leadership. Lessons also include explanations of essential personal attributes including flexibility, responsibility, and dependability. At the end of the course, students explore networking, résumés, using social media, applying for jobs, and preparing for interviews.

Prerequisite: None

Length: 9-week



Computer Engineering This course addresses the concepts important to the field, including the essential parts of a computer, how information is quantified, organized, and used, and the different types of information. Students learn about information compression and information theory, the different types of coding, the theory of sound, and how sound is converted into a signal. Finally, students learn about applications of computer engineering, including digital telephones, real-time data transmission, bandwidth limits, different types of systems, and information security.

Prerequisite: None

Length: 9-week



Computer Skills for Academic Success Computer programs are an integral part of day-to-day life, so it's essential to have a basic understanding of how they work and how to use them safely and responsibly. In this course, students learn about file types, including PDFs, as well as basic file management. They also learn about digital citizenship and how to communicate effectively and appropriately on the Internet. Students also explore the origins of open-source software, including the LibreOffice suite. Office productivity software is required for education and numerous professions. While some office software applications are quite expensive, a powerful and user-friendly group of programs called LibreOffice is available for free to everyone. Students explore this free application suite, learning how to create, save, and format documents in Writer; how to design spreadsheets and how to manipulate and perform calculations on data in Calc; and how to build, save, and customize slideshow presentations in Impress. After completing this course, students will have the tools to work with and present information in a variety of forms for professional, academic, and personal use.

Prerequisite: None

Length: Semester



Fitness This Fitness course is all about ways to lead an active, healthy life. The course provides up-to-date information to help students establish healthier lifestyles and better understand the close relationship between physical activity, nutrition, and overall health. This course supports and encourages students to develop an individual optimum level of physical fitness, acquire knowledge of physical fitness concepts, and understand the importance of a healthy lifestyle. At the end of this course, students have a knowledge of and appreciation for fitness and its impact on everyone.

Prerequisite: None

Length: Semester



Health Imagine the healthiest people you know. What are their secrets? While some health traits are genetically determined, the truth is we all have the ability to make positive changes to better our physical health. In Health 1, you will learn how to promote better health by decreasing stress and finding a fuller vision of your life. Explore different lifestyle choices that can influence your overall health, from positively interacting with others to choosing quality health care and making sensible dietary choices. You will have the opportunity to build your own plan for improvement and learn how to create the type of environment that will ensure your overall health, happiness, and well-being.

Prerequisite: None

Length: Semester



Health and Wellness Imagine the healthiest people you know. What are their secrets? While some health traits are genetically determined, the truth is everyone has the ability to make positive changes to better our physical health. In Health and Wellness, you will explore different lifestyle choices that can influence your overall health, from positively interacting with others to choosing quality health care and making sensible dietary choices. Wellness involves being healthy in body and mind. You will learn how to make positive choices that reduce stress and improve your mental and emotional health. You will also examine the choices and influences that can negative impact your overall wellness. You will have the opportunity to build your own plan for improvement and learn how to create the type of environment that will ensure your overall health, happiness, and well-being.

Prerequisite: None



Internet Safety Keeping yourself safe when you're using the Internet should be a high priority. Have you ever provided information to a website that you didn't know or trust? Do you know who is able to view the personal information that you post about yourself on social media sites? Have you ever shopped online? Has someone you know experienced identity theft? Are you able to determine the best places to acquire accurate, reliable information to use in a research paper? In Internet Safety, you'll learn how to keep yourself safe online. You will learn how to think critically about what constitutes appropriate behavior online and expand the range of your online interactions. In the beginning of the course, you will identify safety precautions for online communication, learn about ways to share content responsibly, and discover how to keep your accounts safe from identity theft and viruses. The course addresses virtual citizenship, defines cyberbullying, and encourages you to consider the consequences of your online interactions. Lessons also address reporting online abuse, phishing, plagiarism, copyright, and fair use. The course ends by explaining how to recognize quality websites to use for research, safely use social networking sites, and buy and sell items online.

Prerequisite: None Length: 9-week



Life Skills Life Skills is a comprehensive career-development course for high school students making the transition to life after high school. The course shows students the steps for choosing a career, conducting a job search, selecting the right college, applying to college, and getting financial aid. This course prepares young adults for a successful life after high school, from maintaining a healthy body and a safe home to finding and keeping a job. At the end of this course, students have a knowledge of and appreciation for these important life skills.

Prerequisite: None Length: Semester



Music Theory and Appreciation Have you ever wondered why some notes sound great together and others don't? Or how musicians translate the symbols of sheet music into the music you hear? Music theory—the study of how music works—is essential to any aspiring composer or performer. Students develop their knowledge through listening exercises, drawing and identifying notation, creating basic compositions, and analyzing music samples. In the second part of the course, students focus on music appreciation as they survey the development of music, beginning in ancient Greece and ending with modern western music. Students learn how to distinguish music from different periods and describe how music relates to its historical, cultural, and social context. By the completion of this course, students have a strong foundational understanding of music, preparing them to learn how to play an instrument or continue to more advanced music studies.

Prerequisite: None Length: Semester



Personal Finance This course provides students with a foundation for understanding personal budgeting and long-term financial planning. Students compare and contrast types of financial institutions, learn how to open a bank account and reconcile a monthly bank statement, and understand the importance of establishing a savings account. Students explore investments, taxes, and debt, and complete activities to develop and balance a budget. Lessons also explain credit scores and suggest ways to maintain a healthy credit score. The course also looks to the future with information about long-term financial planning and planning for large expenditures such as houses, cars, and higher education.

Prerequisite: None Length: 9-week



Physical Education This course analyzes the ways that individuals can improve their physical fitness using a variety of different exercises and maintaining an overall healthy lifestyle. Throughout the course students will examine a variety of fitness tools and ways to incorporate these tools in their daily lives. Furthermore, students will explore individual sports and the physics behind them. While looking at the variety of sports more closely students will develop an understanding of teamwork and fair play. Lastly, the physical education course will encourage students to get out and make the proper decisions when it comes to their own physical fitness.

Prerequisite: None Length: Year



Science of Computing Survey of the past, present, and future of computer technology. Students explore fascinating and enlightening topics, such as how Stonehenge may actually have been used as a type of computer, and how inventions including the abacus and the microprocessor have made today's technology possible. Students also learn about the science behind the hardware and software used today. Topics including algorithms, operating systems, and networks are described in detail and placed into context as tools for human innovation. Finally, the course looks to the future, introducing students to foreseeable improvements to current technology and visionary breakthroughs such as artificial intelligence, quantum security, and biological processors.

Prerequisite: None Length: 9-week

NOTES:			

EdisonLearning, Inc. One East Broward Blvd Suite 1599 Fort Lauderdale, Florida 33301

Corporate: 201-630-2600

Sales: 844-553-2766

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