



COLUMBIA SCHOOL



## 2022-2023 Course Descriptions

May 2022



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# 2022–2023 Course Descriptions

## HIGH SCHOOL ENGLISH

### Contemporary Novels (0.5 credit)<sup>‡</sup>

For this course, students will read a set of novels and novellas that were written during the twentieth century and reflect themes common to contemporary literature, such as the ability of the human spirit to rise above seemingly-impossible circumstances. Through creative projects and writing assignments, students will identify and analyze each novel's themes and also compare and contrast the novels' treatment of common themes. Please note that, like most contemporary literature, the novels assigned for this course contain realistic situations and language. In addition to the novels listed, each student will read another contemporary novel of his or her choosing that the instructor must approve. MLA (Modern Language Association) documentation is required on all papers submitted.

#### Customer-Provided Required Physical Materials:

- *Picture Bride* by Yoshiko Uchida; ISBN-10: 9780295976167; ISBN-13: 978-0295976167<sup>§</sup>
- *Night* by Elie Weisel; ISBN-10: 9780374500016; ISBN-13: 978-0374500016<sup>§</sup>
- *To Kill a Mockingbird* by Harper Lee; ISBN-10: 0060935464; ISBN-13: 978-0060935467<sup>§</sup>
- *Fallen Angels* by Walter Dean Myers; ISBN-10: 0545055768; ISBN-13: 978-0545055765<sup>§</sup>
- *The Old Man and The Sea* by Ernest Hemingway; ISBN-10: 0684801221; ISBN-13: 978-0684801223<sup>§</sup>
- *Different Seasons* by Stephen King; ISBN-10: 1501143484, ISBN-13: 978-1501143489

### Creative Writing (1.0 credit)

At the beginning of the semester, students consider the importance of word play exercises in improving their facility with language while building a compelling and creative writing style. Focusing on word nuances and precision, later lessons guide students to write in a variety of short modes—including poetry, song lyrics, prose poetry, short short stories, and creative nonfiction. There are several opportunities for peer review in this semester, during which students learn best practices for participating in writing workshops, and then revise their work using feedback from their peers. The second semester focuses on longer works of fiction: short stories, plays, and novels. Students learn basic techniques of plot and character development along with strategies for creating suspense and building a theme, and they have opportunities to write in several different genres. Lessons cover a few special topics as well, including graphic novels, animation, comedy, and improvisation. Students apply what they have learned about writing workshops and revising to the longer pieces of writing they create for this semester.

### English I (1.0 credit) and Honors English I (1.0 credit)

English I has been designed to integrate all aspects of Language Arts standards into engaging and interactive units organized around reading, writing, and comprehension skills. Students will dissect and analyze the basic elements of plot, setting, mood, character development, narrative devices, theme, and author's perspective in a variety of literary genres. Students will analyze and synthesize information from different texts, including graphic aids. Students will write in a variety of modes and tap into the power of research as they deepen their understanding of a variety of topics. Throughout this year-long course, students will also reinforce skills that support the study of other disciplines such as science, math, world languages, and social studies..

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## English II (1.0 credit) and Honors English II (1.0 credit)

This course expands on skills gained in English I. Students will critique arguments, establish patterns of persuasion, and delve into the language of poetry, history and culture by way of Greek tragedy and Medieval romance.

**Prerequisite:** English I recommended

## English III (1.0 credit) and Honors English III (1.0 credit)

In this course, students explore American passages from its beginnings (1600-1800) up to the present day. The course examines the process of writing, vocabulary development, and research in English through interactive and traditional learning exercises.

**Prerequisites:** English I & II recommended

## English IV (1.0 credit) and Honors English IV (1.0 credit)

Students enrolled in this course will explore passages from the Anglo-Saxon and Medieval periods (449-1485) up to the Victorian Age (1832-1901). The course examines writing, research, world languages and more through interactive and traditional learning experiences.

**Prerequisites:** English I, II, & III recommended

# ADVANCED PLACEMENT® ENGLISH

## AP® English Language and Composition (1.0 credit)\* † ‡ ††

This course provides high school students with college-level instruction in analyzing and writing various texts. Students learn about the elements of argument and composition as they develop their critical-reading and writing skills. Students read and analyze nonfiction works from various periods and write essays with different aims: for example, to explain an idea, argue a point, or persuade the reader of something. This course will effectively prepare students for the AP English exam.

**Prerequisites:** English I & II

### **Customer-Provided Required Physical Materials:**

Semester A: Choose one of the following:

- *Zen in the Art of Writing* by Ray Bradbury<sup>§</sup>
- *On Writing Well* by William Zinsser<sup>§</sup>

Semester B: Choose two of the following:

- *Narrative of the Life of Frederick Douglass* by Frederick Douglass<sup>§</sup>
- *A Work in Progress: A Memoir* by Connor Franta<sup>§</sup>
- *The Reason I Jump: The Inner Voice of a Thirteen-Year-Old Boy with Autism* by Naoki Higashida<sup>§</sup>
- *The Color of Water: A Black Man's Tribute to His White Mother* by James McBride<sup>§</sup>
- *The Glass Castle: A Memoir* by Jeannette Walls<sup>§</sup>
- *I am Malala: The Girl Who Stood Up for Education and Was Shot by the Taliban* by Malala Yousafzia<sup>§</sup>
- *I Know Why the Caged Bird Sings* by Maya Angelou<sup>§</sup>
- *Dust Tracks on a Road* by Zora Neale Hurston<sup>§</sup>
- *Incidents in the Life of a Slave Girl* by Harriet Jacobs<sup>§</sup>
- *The Story of My Life* by Helen Keller<sup>§</sup>

Semester B: Choose one of the following:

- *Pilgrim at Tinker Creek* by Annie Dillard<sup>§</sup>
- *Nickel and Dimed: On (Not) Getting By in America* by Barbara Ehrenreich<sup>§</sup>
- *Mountains Beyond Mountains: The Quest of Dr. Paul Farmer, A Man Who Would Cure the World* by Tracy Kidder<sup>§</sup>

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\*Increased cost for course. \*\*Course will NOT have live sessions. \*\*\*This course contains numerous videos that may not be accessible outside of the United States. §May be found in the public domain. §§Course awards high school credit. †Customer provided materials required. †Lightweight devices such as Apple iPads, Google Chromebooks, and tablets have limited support for Java and programming-based content. Therefore, these devices are not recommended for this course. ††See Career Exploration Listing on the past page of this catalog.

- *The Devil in the White City: Murder, Magic, and Madness at the Fair that Changed America* by Erik Larson<sup>§</sup>
- *Up from Slavery: An Autobiography* by Booker T. Washington<sup>§</sup>
- *Into Thin Air* by Jon Krakauer<sup>§</sup>
- *The Immortal Life of Henrietta Lacks* by Rebecca Skloot<sup>§</sup>
- *Warmth of Other Suns* by Isabel Wilkerson<sup>§</sup>
- *Bury My Heart At Wounded Knee* by Dee Brown<sup>§</sup>
- *The Boys in the Boat* by Daniel James Brown<sup>§</sup>

## AP<sup>®</sup> English Literature and Composition (1.0 credit) \* † ††

The AP<sup>®</sup> English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students learn how to understand and evaluate works of fiction, poetry, and drama from various periods and cultures through the reading of literary works and writing of essays to explain and support their analysis of passages they've read. This course prepares students for the AP English Literature and Composition exam.

**Prerequisites:** English I, II, & III recommended

### **Customer-Provided Required Physical Materials:**

#### Required Novels:

- *Barron's How to Prepare for the Advanced Placement Exam English Literature and Composition* by George Ehrenhaft
- *Frankenstein* by Mary Shelley; ([found on GP](#))
- *The Hollow Men* by T. S. Eliot; ISBN-10: 9780156806473, ISBN-13: 978-0156806473
- *Heart of Darkness* by Joseph Conrad; ([found on GP](#))
- *Wuthering Heights* by Emily Brontë; ([found on GP](#))
- *The Grapes of Wrath* by John Steinbeck; ISBN-10: 0143039431, ISBN-13: 978-0143039433
- *Hamlet* by William Shakespeare; ([found on GP](#))
- *Hamlet* video (versions available: Mel Gibson, Kenneth Branagh, Laurence Olivier)
- *The Awakening* by Kate Chopin; ([found on GP](#))
- *The Importance of Being Earnest* video

#### Choose one of the following for the research paper:

- *The Joy Luck Club* by Amy Tan<sup>§</sup>
- *Adventures of Huckleberry Finn* by Mark Twain<sup>§</sup>
- *The Color Purple* by Alice Walker<sup>§</sup>
- *Glass Menagerie* by Tennessee Williams<sup>§</sup>

#### Choose one of the following:

- *One Hundred Years of Solitude* by Gabriel García Márquez<sup>§</sup>
- *Great Expectations* by Charles Dickens<sup>§</sup>
- *Jane Eyre* by Charlotte Brontë<sup>§</sup>
- *Adventures of Huckleberry Finn* by Mark Twain<sup>§</sup>
- *Moby-Dick* by Herman Melville<sup>§</sup>
- *Tess of the d'Urbervilles* by Thomas Hardy<sup>§</sup>
- *Pride and Prejudice* by Jane Austen<sup>§</sup>
- *The Color Purple* by Alice Walker<sup>§</sup>
- *Things Fall Apart* by Chinua Achebe<sup>§</sup>
- *The Stranger* by Albert Camus<sup>§</sup>
- *The Catcher in the Rye* by J. D. Salinger<sup>§</sup>
- *Beloved* by Toni Morrison<sup>§</sup>

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Choose one of the following:

- *Things Fall Apart* by Chinua Achebe<sup>§</sup>
- *A House Made of Dawn* by Scott Momaday<sup>§</sup>
- *Cry the Beloved Country* by Alan Paton<sup>§</sup>
- *Othello* by William Shakespeare<sup>§</sup>

## HIGH SCHOOL MATH

### Algebra I (1.0 credit) and Honors Algebra I (1.0 credit)

Algebra I is the foundation for high school mathematics and the bridge from the concrete to the abstract study of mathematics. Throughout this course, students will extend their experience with tables, graphs, and equations; solve linear equations, inequalities, and systems of linear equations and inequalities; and begin the process of working with polynomials and quadratic relationships. Algebra student will expand their knowledge of the number system to include irrational numbers, generate equivalent expressions, and use formulas.

**Prerequisite:** Math 8 or Pre-Algebra

### Algebra II (1.0 credit) and Honors Algebra II (1.0 credit)

In Algebra II students conceptualize, analyze, and identify relationships among functions. Topics in the course include equations and inequalities, systems, functions (from polynomial to logarithmic functions), conics, and trigonometry. Students also explore probability and statistical analysis while deepening an understanding of the applications of algebra, trigonometry, statistics, and geometry. **Prerequisite:** Algebra I

### Consumer Math (1.0 credit)

This course focuses on the mathematics involved in making wise consumer decisions. Course topics may include paychecks and wages, taxes, comparison shopping, budgets, interest calculations and more.

### Honors Calculus (1.0 credit)<sup>† ††</sup>

This course is divided into two semesters and is designed to acquaint students with calculus principles such as derivatives, integrals, limits, approximation, and applications and modeling. During this course, students will gain experience in the use of calculus methods and learn how to apply calculus methods practically. Upon completion of this course students will be able to work with functions represented in a variety of ways: graphical, numerical, analytical, or verbal; understand the connections among these; understand the meaning of the derivative in terms of a rate of change and local linear approximation; be able to use derivatives to solve a variety of problems; understand the meaning of the definite integral; be able to use integrals to solve a variety of problems; and understand the relationship between the derivative and the definite integral.

**Prerequisites:** Algebra 1, Geometry, Algebra 2, and Pre-Calculus or Trigonometry/Analytical Geometry

**Customer-Provided Required Physical Materials:** graphing calculator (TI83 or above)

### Integrated Math 1 (1.0 credit)

In Integrated Math 1, students use arithmetic properties of subsets of integers and rational, irrational and real numbers by simplifying expressions, solving linear equations and inequalities, graphing equations, finding the equation of a line, working with monomials and polynomials, and factoring and completing the square. Students use properties of the number system to judge the validity of results, justifying each step of the procedure to prove or disprove statements. Students compute perimeter, circumference, area, volume and surface area of geometric figures. Students also use basic trigonometric functions defined by the angles of a right triangle.

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## Integrated Math 2 (1.0 credit)

Students in Integrated Math 2 will focus on pulling together and applying the accumulation of learning that they have acquired from their previous math courses. They will apply methods from probability and statistics; expand their repertoire of functions to include polynomial, rational, and radical functions; and expand their study of right triangle trigonometry. In addition, they will bring together all of their experience with functions and geometry to create models and solve contextual problems.

**Prerequisite:** Integrated Math 1

## Integrated Math 3 (1.0 credit)

Students in Integrated Math III will focus on pulling together and applying the accumulation of learning that they have from their previous courses. They will apply methods from probability and statistics. Students will expand their repertoire of functions to include polynomial, rational, and radical functions. They will expand their study of right triangle trigonometry. Students will use all of their experience with functions and geometry to create models and solve contextual problems.

**Prerequisite:** Integrated Math 2

## Pre-Algebra (1.0 credit)

In this course, students will move from the world of simple mathematics to the exciting world of Algebra and Geometry, developing skills that will be necessary throughout their lives. Students will stretch their thinking by learning increasingly abstract concepts and solving real world problems. Concepts are presented using examples of the skills and strategies students need. Students attain concrete understanding of the basics for algebraic thinking.

**Prerequisite:** Math 7

## Precalculus (1.0 credit)

In the Precalculus course students will be presented with a comprehensive study of functions and move into an analysis of rudimentary calculus concepts, such as the difference quotient and the notion of “taking a limit.” In addition to introducing students to terminology and concepts essential to the study of calculus, this course will also help develop reasoning and analytical skills that may be applied to problems in the real world. Familiarity with these topics is especially important for students intending to study calculus, physics or other sciences, and engineering in college.

### **Customer-Provided Required Physical Materials:**

An online graphing calculator - Choose from one of the following:

- Symbolab - <https://www.symbolab.com/graphing-calculator>
- Mathway - <https://www.mathway.com/graph>
- GeoGebra - <https://www.geogebra.org/graphing?lang=en>
- Desmos - <https://www.desmos.com/calculator>

## Geometry (1.0 credit) and Honors Geometry (1.0 credit)

Geometry is the branch of mathematics that studies the properties and relationships of lines, shapes, area of surfaces, and volume of solids. Geometry also answers questions about shape, size, relative position of figures, and the proportions of space by exploring objects in two and three dimensions. Throughout this year-long course, students will have the opportunity to make conjectures about geometric situations and to apply theorems and postulates for writing proofs. Students will also expand upon preexisting knowledge of algebra and basic geometry skills while studying trigonometry, coordinate geometry, and proofs.

**Prerequisites:** Algebra I or its equivalent

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## Statistics (1.0 credit) and Honors Statistics (1.0 credit)<sup>†</sup>

Statistics is a practical hands-on approach to the study of statistics and probability. Topics include the use of graphs such as histograms, stem plots, time plots, and scatter plots to display data; using numbers such as median, mean, and standard deviation to describe data; and evaluating data distribution. Students examine relationships using correlations and least square regressions. They calculate the probability of simple and compound events. They learn to estimate with confidence, explore tests of significance, and evaluate the validity of statistics contained within published reports.

### **Customer-Provided Required Physical Materials:**

An online graphing calculator - Choose from one of the following:

- Symbolab - <https://www.symbolab.com/graphing-calculator>
- Mathway - <https://www.mathway.com/graph>
- GeoGebra - <https://www.geogebra.org/graphing?lang=en>
- Desmos - <https://www.desmos.com/calculator>

## ADVANCED PLACEMENT<sup>®</sup> MATH

### AP<sup>®</sup> Calculus AB (1.0 credit)<sup>\*† ††</sup>

In AP<sup>®</sup> Calculus AB, an introductory college-level calculus course, students explore the concepts, methods, and applications of differential and integral calculus. They work to understand differential and integral calculus through engaging with real-world problems represented graphically, numerically, analytically, and verbally and using definitions and theorems to build arguments and justify conclusions as they explore concepts like change, limits, and the analysis of function. This course fulfills the requirements for the Advanced Placement Calculus AB exam.

**Prerequisites:** Algebra I, Geometry, Algebra II, and Pre-Calculus or Trigonometry/Analytical Geometry

**Customer-Provided Required Physical Materials:** graphing calculator (TI83 or above)

### AP<sup>®</sup> Calculus BC (1.0 credit)<sup>\*† ††</sup>

AP<sup>®</sup> Calculus BC is an introductory college-level calculus course in which students explore the concepts, methods, and applications of differential and integral calculus, including topics such as parametric, polar, and vector functions, and series. This course fulfills the requirements for the Advanced Placement Calculus BC exam.

**Prerequisites:** Algebra I, Geometry, Algebra II, and Pre-Calculus or Trigonometry/Analytical Geometry

**Customer-Provided Required Physical Materials:** graphing calculator (TI83 or above)

### AP<sup>®</sup> Statistics (1.0 credit)<sup>\* † ††</sup>

AP<sup>®</sup> Statistics is an introductory college-level statistics course that introduces students to the major concepts and tools used for collecting, analyzing, and drawing conclusions from data. Students explore statistics through discussion and activities, and design surveys and experiments. This course prepares students for the AP Statistics exam.

**Prerequisite:** Algebra II

**Customer-Provided Required Physical Materials:** graphing calculator (TI83 or above)

## HIGH SCHOOL SCIENCE

### Anatomy & Physiology (1.0 credit)<sup>††</sup>

This course covers the basics of human anatomy and physiology including anatomical terminology, basic biochemistry, cells and tissues, and the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, immune, respiratory, digestive, urinary and reproductive systems.

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## Biology (1.0 credit) and Honors Biology (1.0 credit)

Biology is the science of life or living matter in all its forms and phenomena, including its origin, growth, reproduction, structure, and behavior. Throughout this course, students will investigate the relationship between structure and function and apply it to the study of topics such as molecules, cells, organisms, and biological systems. They will learn how the human body works and what makes living things unique. Students will also learn about the interdependence and interactions of biotic and abiotic components of the environment, and about mechanisms that maintain continuity and lead to changes in populations over time.

## Chemistry (1.0 credit) and Honors Chemistry (1.0 credit)

Chemistry is the investigation of atomic and molecular-level properties and interactions. The course focuses on properties of matter, atomic structure, and basic atomic bonding.

### **Customer-Provided Required Physical Materials:**

An online graphing calculator - Choose from one of the following:

- Symbolab - <https://www.symbolab.com/graphing-calculator>
- Mathway - <https://www.mathway.com/graph>
- GeoGebra - <https://www.geogebra.org/graphing?lang=en>
- Desmos - <https://www.desmos.com/calculator>

## Earth Science (1.0 credit)<sup>‡</sup>

Earth Science introduces students to the complex workings of Earth's systems, including oceanography, rocks and minerals, weather, environmental issues and more.

**Prerequisites:** Pre-Algebra, Physical Science 8

### **Customer-Provided Required Physical Materials:**

- uninflated round balloon
- permanent marker
- 50 small candies that have letters on one side of them (like M&Ms or Skittles)
- a small zipper seal plastic bag
- two kitchen mixing bowls
- ice cubes
- water
- a permanent marker
- a block of wood
- a pair of pliers
- a pair of needle-nose tweezers
- a slotted spoon
- a drinking straw
- sunflower seeds in the shell
- colored water
- a long narrow vase
- rice grains
- small block of Styrofoam
- 3 or 4 large marshmallows
- a teaspoon of herbs (any kind will do, like basil or parsley)

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## Environmental Science (1.0 credit)

Environmental Science is a course designed to show thematic connections between a variety of science disciplines including biology, chemistry, and physics. Throughout this year-long course, students will gain a coherent and realistic picture of the applications of a variety of scientific concepts as they manifest in our environment. The aim of this course is to increase students' knowledge of environmental challenges of today, while continuing to cultivate scientific critical thinking skills.

## Marine Science (0.5 credit)

About 70% of the Earth is covered by water. Even today, much of the world's oceans remain unexplored. Marine scientists make exciting new discoveries about marine life every day. In this course, students will discover the vast network of life that exists beneath the ocean's surface and study the impact that humans have on the oceans.

## Physical Science (1.0 credit)<sup>‡</sup>

This course is an introduction to the physical sciences and scientific methodology. Students will gain a basic knowledge of the physical properties and chemistry of matter.

**Customer-Provided Required Physical Materials:** [lab materials](#)

## Physics (1.0 credit) and Honors Physics (1.0 credit)

Physics examines the relationship between matter and energy and how the two interact. Using an inquiry-based approach throughout this year-long course, students explore both physics concepts and the math used to describe them. The course integrates STEM and physics content standards for topics including mechanics, waves and sound, light and optics, electricity and magnetism, nuclear science, and modern physics.

# ADVANCED PLACEMENT® SCIENCE

## AP® Biology (1.0 credit)<sup>\* † ‡ ††</sup>

AP® Biology is an introductory college-level biology course in which students study the core scientific principles, theories, and processes that govern living organisms and biological systems. Students perform hands-on laboratory work to investigate natural phenomena. This course prepares students for the AP Biology exam.

**Prerequisites:** Biology, Chemistry, and Algebra I recommended

**Customer-Provided Required Physical Materials:** household items for lab experiments

## AP® Environmental Science (1.0 credit)<sup>\* † ††</sup>

AP® Environmental Science provides students with the opportunity to explore and investigate the interrelationships of the natural world and analyze environmental problems, both natural and human-made. Students take part in laboratory investigations and field work. scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. This course prepares students for the AP Environmental Science exam.

**Prerequisites:** Algebra I and two years of high school science with labs

**Customer-Provided Required Physical Materials:** household items for lab experiments

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# HIGH SCHOOL SOCIAL STUDIES

## **Civics (0.5 credit)**

In this course students learn about the significance of government, law, and politics. They examine the United States foundational documents and how they shaped the United States government, the purposes and functions of federal, state and local government, the justice system, political systems the environment, and the economy.

## **Economics (0.5 credit) and Honors Economics (0.5 credit)**

Economics introduces the principles and the applications of economics in everyday life. Students develop an understanding of limited resources and compare it with unlimited wants and needs. Economics allows students to learn how individual and national economic decisions are made to allocate goods and services among competing users, problem solve as they focus on understanding economic problems, learn the laws of demand and supply, examine market organization (labor and financial markets), discover how firms deal with competition, and how poverty and economic inequality impact individuals in the community. The goal of this single-semester course is for students to develop the critical skills of analysis, synthesis, and evaluation in a demanding and thoughtful academic setting focused on developing their own views on current economic and monetary issues.

## **Psychology (1.0 credit)**

Students in this course will learn a brief history of psychologists and their experimental methods. They will examine personality theories, human development, consciousness and more.

## **U.S. Government (0.5 credit) and Honors U.S. Government (0.5 credit)**

U.S. Government will introduce to students the main concepts that make up the modern government of the United States. In this single-semester course, students will learn the function of political systems, the purpose of a party system, how policy is decided, elections, voting, and the basic ideas that are associated with being a participant within a political system. Students will look at the development of the government from its inception to the modern incarnation that it has become. A primary goal of this course will be to teach students the concepts associated with the idea of civil efficacy. Another goal is to teach the power of the media and of public opinion. These concepts will illuminate the past and current struggles for civil rights and liberties, as well as how representative government functions in the United States.

## **U.S. History (1.0 credit) and Honors U.S. History (1.0 credit)**

U.S. History expands upon basic skills and knowledge acquired from previous history and social studies courses. Throughout this year-long course, students will learn about historical trends, breaks with tradition, and systems of political thought that supported and gave rise to the United States as a democratic republic. Additionally, students will study early exploration, colonization, the rise of empires, revolutions, and broad historical movements such as westward expansion and progressivism.

## **World Geography and Cultures (1.0 credit)**

In this course, students apply cultural and physical perspectives to examine how location affects economic and cultural activities in cities, regions, countries, and continents around the world.

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## World History (1.0 credit) and Honors World History (1.0 credit)

World History expands upon basic skills and knowledge acquired from previous history and social studies courses. Throughout this year-long course, students will examine important world civilizations from different eras, continents, and regions. Students will study ancient civilizations in the cradles of civilization, including Mesopotamian civilizations in the Fertile Crescent. The course also traces the rise and fall of important empires or dynasties in Egypt, China, India, Africa, and the Middle East. Students trace the causes and effects of colonization; slavery; global trade; economic systems; international diplomacy; political, economic, and social revolutions; and military conflicts, as well as how they helped to shape the modern world.

## ADVANCED PLACEMENT® SOCIAL STUDIES

### AP® Human Geography (1.0 credit) \* \*\*

In AP® Human Geography course students explore how humans have understood, used, and changed the surface of Earth. Students use the tools and thinking processes of geographers to examine patterns of human population, migration, and land use. This course prepares students for the AP Human Geography exam.

### AP® Macroeconomics (0.5 credit) \*

AP® Macroeconomics is a semester-length introductory college-level course in which students explore the principles of economics that apply to an economic system as a whole. Students use graphs, charts, and data to analyze, describe, and explain economic concepts. This course prepares students for the AP Macroeconomics exam.

**Prerequisite:** Algebra I recommended

### AP® Microeconomics (0.5 credit) \*

AP® Microeconomics, a semester-long introductory college-level microeconomics course, allows students to study the principles of economics that apply to the behavior of individuals within an economic system. They use graphs, charts, and data to analyze, describe, and explain economic concepts. This course prepares students for the AP Microeconomics exam.

**Prerequisite:** Algebra I recommended

### AP® Psychology (1.0 credit) \* \*\*

The AP® Psychology course provides students with the opportunity to explore the ideas, theories, and methods of the scientific study of behavior and mental processes. Students examine the concepts of psychology through reading and discussion and analyze data from psychological research studies. This course prepares students for the AP Psychology exam.

### AP® U.S. Government and Politics (0.5 credit) \*

Within AP® U.S. Government and Politics, a semester-long course, students study the key concepts and institutions of the political system and culture of the United States. They read, analyze, and discuss the U.S. Constitution and other documents as well as complete a research or applied civics project. This course prepares students for the AP U.S. Government and Politics exam.

**Prerequisite:** United States History recommended

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## **AP® U.S. History (1.0 credit)\* \*\***

AP® U.S. History, an introductory college-level course, gives students an opportunity to study the cultural, economic, political, and social developments that have shaped the United States from c. 1491 to the present. Students analyze texts, visual sources, and other historical evidence and write essays expressing historical arguments. This course prepares students for the AP United States History exam.

**Prerequisite:** World History recommended

# **HIGH SCHOOL WORLD LANGUAGES**

## **American Sign Language I (1.0 credit)\* \*\***

Jump start an American Sign Language journey by learning the basics of this visual language and exploring the Deaf culture. Students will broaden their concept of communication through connections and comparisons to their own culture and community.

## **American Sign Language II (1.0 credit)\* \*\***

This course reinforces the fundamental skills acquired in the American Sign Language I course. Students continue their journey by increasing their interpretive and communication skills of this visual language while continuing to explore the Deaf culture. Students will broaden their concepts of communication through connections and comparisons to their own culture and community.

**Prerequisite:** American Sign Language I

## **Chinese I (1.0 credit)\*\* \*\***

Students will immerse themselves in the beauty of the Chinese language and the richness of its diverse cultures. In the Chinese I course; students will learn beginning grammar and vocabulary skills to help build basic fluency and language proficiency. They will explore the culture and apply what they learn through written practice, listening, and speaking exercises.

## **Chinese II (1.0 credit)\*\* \*\***

Chinese II enables students to further develop the communicative skills of listening, speaking, reading, and writing of Mandarin Chinese at a more advanced level. Students are immersed in Chinese culture as virtual exchange students in China. Virtual excursions from one Chinese city to another expand their vocabulary helping them learn to interact with others and use appropriate terms to communicate in a variety of everyday situations.

**Prerequisites:** Chinese I

## **Chinese III (1.0 credit)\*\* \*\***

In Chinese III, students continue their study of Chinese Mandarin, continuing to build their knowledge of vocabulary, sentence patterns, and grammar points in communicative contexts. Students enhance their Chinese Mandarin listening and speaking skills, such as pronunciation and intonation while also developing in-depth reading and writing strategies and skills. This course improves students' reading abilities, and students can write in Chinese in various formats including journals, letters, invitations, and essays. The course also improves students' knowledge and skills in writing simplified Chinese characters. In this course students continue learning about Chinese culture, including the origins, histories, anecdotes, and etiquettes for various cultural settings, events, and occasions. Students also learn to compare the Chinese culture with their own.

**Prerequisites:** Chinese I and II

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## French I (1.0 credit)

In French I, students are introduced to the language and cultures of French speaking countries. Students will gain a basic understanding of reading, writing, speaking and understanding the language at a beginner's level.

## French II (1.0 credit)

French II is designed to focus on successful communication through speaking, writing, reading, and listening, and provides a thorough grounding in aspects of culture. Activities blend different forms of communication and culture to ensure that students meet all standards.

**Prerequisite:** French I

## French III (1.0 credit)<sup>‡</sup>

In this expanding engagement with French, high school students deepen their focus on four key skills in foreign language acquisition: listening comprehension, speaking, reading, and writing. In addition, students read significant works of literature in French and respond orally or in writing to these works. Continuing the pattern and building on what students encountered in the first two years, each unit consists of a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and multimedia cultural presentations covering major French-speaking areas in Europe and the Americas.

**Prerequisite:** French I and French II

**Customer-Provided Required Physical Materials:** French-English dictionary is recommended

## German I (1.0 credit)

This introductory course teaches basic communication and comprehension in German. Students are introduced to the fundamentals of German conversation and grammar.

## German II (1.0 credit)

In this course, students will build on their German grammar and language skills. Students will review basic grammar skills, learn and study stem-changing verb conjugation, and explore cultural themes regarding current events, famous German people, music, and festivals. In the second semester, students will increase their proficiency by forming more complex sentences. Cultural themes are entwined throughout the course.

**Prerequisite:** German I

## Spanish I (1.0 credit)

Spanish I is designed to develop an authentic and practical understanding of the Spanish language and culture. Students will learn to express their thoughts, feelings, and opinions in Spanish using basic, real-life situations and learning scenarios.

## Spanish II (1.0 credit)

In this course, students will build upon the foundation developed in Spanish I. They continue to build vocabulary, learn new verb tenses and grammar concepts, and improve their ability to communicate with others.

**Prerequisite:** Spanish I

## Spanish III (1.0 credit)

In this course, students will build upon the concepts developed in Spanish II. Students focus on applying vocabulary in a wider array of situations by learning about the past progressive and subjunctive moods and the present perfect, future and conditional tenses.

**Prerequisite:** Spanish II

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### **Honors Spanish III (1.0 credit)<sup>††</sup>**

In Honors Spanish III, students dive into the rich diversity of Hispanic culture across the globe by exploring the tastes, sights, and sounds of this dynamic language that reflects triumph, struggle, celebration, and so much more. During this cultural journey, students improve conversational, vocabulary, and writing skills through authentic tasks. Short of obtaining a passport, there is no better way to discover new lands, peoples, or experiences as students take their Spanish language abilities to the next level.

**Prerequisites:** Spanish I and II

### **Honors Spanish IV (1.0 credit)<sup>††</sup>**

This enhanced version of Spanish IV will certainly expand the student's language skills. However, it will also take them on a fascinating cultural journey. Students will experience the language's rich traditions and superstitions. Through exploring the past, students will come to understand the importance of community, family, and personal relationships. They will be immersed in culture—movement, art, music, literature. Meeting real people and hearing their stories will allow students to gain new vocabulary, have better command of the language, and understand their role as a global citizen.

**Prerequisites:** Spanish I, II, and III

## **ADVANCED PLACEMENT® WORLD LANGUAGES**

### **AP® French Language & Culture (1.0 credit)<sup>\*</sup>**

French Language and Culture is an advanced language course in which students acquire proficiencies that expand their cognitive, analytical, and communicative skills. The course prepares students for the AP French Language and Culture Exam. It uses as its foundation the three modes of communication (interpersonal, interpretive, and presentational) as defined in the Standards for Foreign Language Learning in the Twenty-First Century. The course is designed as an immersion experience requiring the use of French exclusively. The online learning coach only uses French to communicate with students. In addition, all the reading, listening, speaking, and writing is in French. The course teaches language structures in context and focuses on the development of fluency to convey meaning. Students explore culture in both contemporary and historical contexts to develop an awareness and appreciation of cultural products, practices, and perspectives. The course contains a forum where students share their opinions and comments about various topics and comment on other students' posts. The course makes great use of the Internet for updated and current material.

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## AP® Spanish Language & Culture (1.0 credit) \*

The AP Spanish Language and Culture course is an advanced language course in which students are directly prepared for the AP Spanish Language and Culture test. It uses as its foundation the three modes of communication: interpersonal, interpretive and presentational. The course is conducted almost exclusively in Spanish. The course is based on the six themes required by the College Board: (1) global challenges, (2) science and technology, (3) contemporary life, (4) personal and public identities, (5) families and communities, and (6) beauty and aesthetics. The course teaches language structures in context and focuses on the development of fluency to convey meaning. Students explore culture in both contemporary and historical contexts to develop an awareness and appreciation of cultural products, practices, and perspectives. Students should expect to listen to, read, and understand a wide-variety of authentic Spanish-language materials and sources, demonstrate proficiency in interpersonal, interpretive, and presentational communication using Spanish, gain knowledge and understanding of the cultures of Spanish speaking areas of the world, use Spanish to connect with other disciplines and expand knowledge in a wide-variety of contexts, develop insight into the nature of the Spanish language and its culture, and use Spanish to participate in communities at home and around the world. The AP Spanish Language and Culture course is a college level course. The intensity, quality, and amount of course material can be compared to that of a third-year college course.

**Prerequisite:** Spanish III

### **Customer-Provided Required Physical Materials:**

The textbook below is required to purchase for Semester B (Jan-May)

- *Cracking the AP Spanish Language & Culture Exam* with Audio CD, 2020 Edition; ISBN-13: 978-0525568346; ISBN-10: 0525568344

## HIGH SCHOOL ELECTIVES

### Accounting (0.5 credit)<sup>††</sup>

In this semester course, students explore accounting and accounting careers. They learn basic accounting skills and procedures both with and without a computer for general journals, general ledgers, cash payments journals, cash receipts journals, sales journals, accounts payable ledgers, and accounts receivable ledgers. Students also learn how to reconcile a bank statement and to prepare payroll records.

### Advanced Drawing (0.5 credit)<sup>\*\* ‡ ††</sup>

In Advanced Drawing, students review basic drawing skills and the elements and principles of design. They explore how each of these are used in art, expand their knowledge of art history, and explore, in depth, several different types of media and artistic styles in order to begin to define their personal aesthetic. All projects in this course will be original compositions by the student. At the end of the last four modules, students will participate in either a self- or peer-critique to help them learn to analyze their work and grow as an artist from the input of others. At the end of the course, students will compile and organize their artwork into a digital portfolio and write an artist statement that can be used as a record of personal accomplishment or as an application to a secondary art program or job.

### **Customer-Provided Required Physical Materials:**

- drawing pencil set 2H, HB, 2B, 4B, 6B, 8B (preferably woodless)
- 9×12 multimedia sketch book – 60 sheets
- 18×24 pastel paper, assorted colors (gray, tan, black, and burnt umber) – 10 sheets
- oil pastels – at least 24-piece set
- high quality colored pencils – 36-piece set (recommend Prismacolor brand or similar quality)
- chalk pastels – 24-piece set

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- high-quality art markers (tombow, Prismacolor, or similar brand) water based or alcohol based – primary colors and flesh tones
  - 1 black fine point Sharpie
  - 1 black ultra-fine point Sharpie
  - 1 kneaded eraser
  - 1 white eraser
  - 1 hand-held pencil sharpener

**Optional Materials:**

- Finishing spray for pastels
- Assorted blending stumps and tortillions
- 18x24 portfolio to keep artwork
- toolbox to keep supplies

### **Aeronautics and Space Travel (0.5 credit)<sup>††</sup>**

This course introduces students to the history and near future of space travel. Students will explore the possibilities of moon bases, Mars colonies, and visiting the outer planets in our solar system and their moons. Students will also discuss important ethical and legal issues around space exploration, such as asteroid mining and war in space. The course gives an expansive view of the technologies, science, and theories that will make far-fetched dreams into realities during the student's lifetime.

### **Art Appreciation (0.5 credit)<sup>††</sup>**

Art Appreciation investigates how quality is determined and created by artists, in order to evaluate and appreciate art on a deeper level. Students are introduced to the elements and principles of art and the importance of artists' context and perspective. The course covers different periods in art history, different techniques in art, and how to research and evaluate art, emphasizing why each contributes to valuing a piece of art and provides the necessary knowledge to do so.

### **Art History (0.5 Credit)<sup>††</sup>**

This Art History course integrates the four components of art study: art production, historical and cultural context, critical process and aesthetic process. Students identify and describe art from prehistoric times to modern time. Throughout this course, students discuss various artworks, research artists, and create documents and presentations demonstrating concepts learned.

### **Augmented and Virtual Reality Applications (0.5 credit)<sup>††</sup>**

Recent advances in technology have allowed augmented and virtual reality (AR/VR) systems to become extremely sophisticated and realistic. This course introduces students to the technologies that underpin AR/VR systems. The course walks through five applications of AR/VR and how they will change and impact numerous aspects of our lives and the economy. Students also learn about and discuss the risks and side effects of these systems on health, privacy, and ethical implications.

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## Basic Drawing (0.5 credit)<sup>\*\* ‡ ††</sup>

In Basic Drawing, students experiment with several different art materials and tools to see what each tool can do best. Students explore ordinary things around them to become more observant of the structures and meanings of things which can be seen in their home and community. Each lesson provides room for expressing the technical skill learned in a unique, creative way.

### **Customer-Provided Required Physical Materials:**

- 1 drawing pencil, 2B
- 1 round hair brush #10
- 1 bottle India Ink, black
- 1 Pilot Varsity Pen, self-contained black ink
- 2 conté crayons: white, black
- 1 Art gum eraser
- 1 white, wax Crayola crayon
- 40 sheets white drawing paper, 9x12
- 5 sheets construction paper, 9x12, black
- 15 sheets grey construction paper, 9x12
- 14 large envelopes, 10 x 13
- 2 sheets white watercolor paper (rough, heavy, stiff)
- 2 sheets rice paper 9 1/2 x12 (soft, translucent)
- 25 sheets newsprint, 9x1
- 1 bottle white glue (obtain locally)

## Basic Web Design (0.5 credit)<sup>‡ ††</sup>

In this course, students learn how to design a beautiful and functional website, and how to take their design and translate it into a live website using Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) programming languages. Students learn about the use of color, layout, and when to use different techniques, typography rules, and the importance of imagery. Upon completion of this course, each student will have hands-on experience creating a fully functioning website. Students do not need to have a previous technical background with HTML or CSS prior to taking this course.

### **Customer-Provided Required Physical Materials:**

- HTML Text Editor (choose one):
  - TextEdit – For use on Mac – comes with OS
  - Notepad – For use on Windows – comes with OS
  - Text – For use on Chromebook – free app download from the Google Store
- image editing software (choose one):
  - Pixlr – <https://pixlr.com/editor/> (in-browser)
  - GIMP – <http://www.gimp.org/downloads/> (downloadable program)
- webhosting and basic in-browser FTP:
  - Neocities – <https://www.neocities.org>

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## **Beginning Painting (0.5 credit)<sup>† ††</sup>**

This course introduces students to classical and contemporary painting, techniques and concepts, with emphasis on the understanding of its formal language and the fundamentals of artistic expression. Acrylic and watercolors are the mediums used in this class.

### **Customer-Provided Required Physical Materials:**

- chromacryl tube of acrylic paints
- round brush
- flat brush
- watercolor paints (includes brush)
- set of markers
- painting paper (The pad of paper may be labeled watercolor paper. Please use for all paintings, including acrylic.)
- newsprint paper (This paper is for sketches and testing paints. Do not use for painting projects.)
- 1–4b pencil
- 7 project cardstock pages

## **Building Maintenance Technology I (0.5 credit)<sup>\*††</sup>**

The Building Maintenance Technology course will focus on all aspects of the construction industry from health and safety to the tools that every construction professional needs in their collection. Students will learn about the various roles in the industry as well as job outlooks, educational and experiential requirements, and salary information. Some activities will focus on career exploration to discover career options that best align with interests and talents. Students will learn basic construction math and how it is applied during design and building phases of projects. They will learn specifics about carpentry, construction drawings, framing floor systems, framing walls, and framing roofs. Throughout, they will establish a foundation for what opportunities exist for them in the industry.

## **Building Maintenance Technology II (0.5 credit)<sup>\*††</sup>**

The Building Maintenance Technology II course will focus on construction components, masonry skills, and OSHA. Students will learn about the various masonry and concrete skills as well as safety measures. Some activities will focus on the real-world application of learned skills with hands-on components. Students will learn about erecting, plumbing, and bracing in relation to concrete as well as laying masonry units. Finally, students will learn important science skills for the construction industry and prepare for OSHA 30-hour Construction certification exam.

## **Business Law (0.5 credit)<sup>††</sup>**

In this course, students will learn about the American legal system as they examine ethics, court systems, criminal law, and torts. They will explore how the court systems work together, and which types of misconduct result in going to court. As they progress through the course, students will also gain an understanding of what is right and wrong in business actions and employment law. Study will focus on the formation of a business and the basic legal issues associated with each type of business.

## **Career Exploration in Finance (0.5 credit)<sup>††</sup>**

This course introduces students to the challenging and lucrative world of finance through a review of key financial terms and various groups, positions, and roles within financial institutions. Students learn about resumes, interviews, and networking, and discuss ethics on Wall Street and the role of finance within society.

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## **Career Exploration in Healthcare (0.5 credit)**

This course introduces students to the exciting and varied career opportunities in the healthcare industry by introducing roles and tasks, identifying education and skills needed, determining responsibilities of roles which support or supervise positions, and analyze legal and ethical responsibilities, limitations, and implications for each of these professions.

## **Career Planning (0.5 credit)**

The Career Planning course guides students through the essential elements of the career planning process and the development of a defined career plan. Students consider the many factors that impact career success and satisfaction. Using a process of investigation, research, and self-discovery, students acquire the understandings critical to the career planning process, and upon completion, students will have a practical and comprehensive college or career transition portfolio that reflects their skills and abilities, as well as their interests, values, and goals.

## **Character Education (0.5 Credit)**

This course teaches students practical skills for understanding and managing their emotions, setting goals and getting organized, understanding and getting along with others in our diverse world, and making good decisions. Research shows that people who practice these skills have greater academic achievement as students and experience more success and satisfaction as adults.

## **Child Development (0.5 credit)<sup>††</sup>**

This course is designed to help prepare students for their responsibilities as parents and caregivers of children. Topics include prenatal care, growth and development through age six, teen pregnancy, maternal health, parenting skills, and child guidance.

## **Cloud Technologies and the Internet of Things (0.5 credit)<sup>††</sup>**

This course examines the technologies, hardware, and software that underpin the Internet of Things. Students examine a variety of end-market applications in homes, businesses, and cities, as well as the many career opportunities that the Internet of Things enables.

## **Computer and Network Security Fundamentals (1.0 credit)<sup>\* †† ‡‡</sup>**

This inspiring course covers the fundamentals of computer safety, network security, and prevention of digital attacks. Students experience a hands-on approach to security strategies, expand their computer and networking security techniques, and improve their problem-solving skills. Students will also explore numerous employment opportunities in one of the fastest-growing industries – Cybersecurity.

## **Computer Basics (0.5 credit)<sup>††</sup>**

In this course students learn how to use productivity and collaboration tools, such as G Suite by Google Cloud to create word processing documents, spreadsheets, surveys and forms such as personal budgets and invitations.

## **Construction: Fundamentals and Careers (0.5 credit)<sup>\*††</sup>**

This course introduces students to the evolving industry of construction! In addition to building on standard concepts such as technical skills, project planning, and regulations, students will learn about the variety of career possibilities within construction. They will also explore the entrepreneurial side of construction and discover what it takes to start and run your own business in this field. Finally, the course will look towards the future and analyze trends in green materials, energy efficiency, and technology to determine how these will impact the homes we build and live in.

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## Cybersecurity(0.5 credit)<sup>††</sup>

In the Cybersecurity course, students will learn about the practice of protecting networks, systems, and programs from digital attacks. They will better understand the aim of these attacks, such as destroying information, extorting money and resources, or disrupting business operations. They will learn about the challenges and opportunities that implementing cybersecurity measures can present. As attackers become more innovative, it is more important than ever to have effective cybersecurity channels in place to counter them. Students will learn about countermeasures and role recovery and their integral function in the cybersecurity realm. Additionally, students will learn what makes certain networks and systems more vulnerable to attacks. They will become adept at identifying potential viruses, worms, threats, and malware. The Cybersecurity course acts as a foundation on which to build extensive knowledge about threats to digital security.

## Cybersecurity Essentials (1.0 credit)<sup>\* †† ††</sup>

Have you or someone you know ever had personal information compromised? This inspiring course covers defensive strategies for computer, mobile device, and network security. You'll experience a hands-on approach to security strategies, expand your computer and networking security techniques, and improve your problem-solving skills. You will also explore numerous employment opportunities and prepare for one of the fastest-growing industries: cybersecurity.

## Digital Information Technology (1.0 credit)<sup>\* †† ††</sup>

Dive into an exciting course that will provide you with the foundational skills needed for exciting careers like game development, military defense, web design, and software engineering! You will explore Microsoft Office online applications, web design, emerging technologies, operating systems, project management, communication methods, Information Technology careers, and much more in this course. Learn about your strengths and how they relate to different career paths.

## Digital Media (0.5 credit)<sup>‡ ††</sup>

Digital Media is a project-based survey of different forms of digital media, such as digital audio, imaging and illustration, movie editing, and animation. The course is oriented toward teaching broad, flexible tools and concepts that are not tied to any one platform or program. Each module ends with a culminating task (such as a podcast or short film). Students will be able to draft and develop projects as they build their skills over each lesson.

**Customer-Provided Required Physical Materials:** printer, camera, scanner (optional), and one of the following programs: Audacity (free download), GIMP (free download), Inkscape, DaVinci Resolve (free version), Pencil2D, Blender, GDevelop, or Piskel

## Early Childhood Education I (0.5 credit)<sup>††</sup>

The Early Childhood Education course is designed to provide an overview of the expectations and roles of the early childhood educator. The course provides details about childhood development, health, nutrition, and guidance strategies to help students understand the exciting and unique opportunities that a career in early childhood education can offer. The course is intended to prepare students for challenges they may face, but to emphasize the rewards of being able to influence the life of a young child. The ability to offer support to children as they learn, and grow is a point that is highlighted throughout each lesson.

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## Early Childhood Education II (0.5 credit)<sup>††</sup>

The Early Childhood Education II Course is designed to provide an overview of the professional expectations of being an early childhood educator. Throughout the course, students will learn about what it means to be a professional, including the significance of professional development in any educational role. They will review observational methods and the history of education in the United States, with a focus on early childhood and school-age programs. They will spend a significant portion of the course learning about the importance of Developmentally Appropriate Practice (DAP) and how to implement these strategies. Designing physical, social, and temporal environments will also be a major focus of the course, as will developing relationships with families and communities to strengthen their position and knowledge. Additionally, this course will prepare students for the Child Development Associate (CDA) certification exam. Introduction to Education and Teaching

## Engineering and Product Development (0.5 credit)<sup>\*\* †</sup>

This semester-long course provides an overview of the concepts of product engineering and development. Students analyze the life cycle of a product to prepare a product for distribution and for target markets. The course begins with building an understanding of the product life cycle, from the initial idea to drafting requirements to using 3-D modeling tools and other design tools. The final unit focuses on assembling the pieces within a project plan to achieve a product and evaluating the plans for a successful product launch. In addition, the course provides information about the different careers available to students interested in engineering, product development, and project management.

**Customer-Provided Required Physical Materials:** Students will need a computer or laptop for this course; tablets are not sufficient.

## Financial Literacy (0.5 credit)<sup>††</sup>

This personal finance course is designed to help students budget, keep a checkbook and filing system, deal with debt and credit, and become wiser consumers. Students will learn how money and the dynamics surrounding it affect their relationships, their lifestyles, and their retirement.

## First Aid and Safety (0.5 credit)

In this course, students learn and practice first aid procedures for a variety of common conditions, including muscular, skeletal, and soft tissue injuries. In addition, students learn how to appropriately respond to a variety of emergency situations. They also learn the procedures for choking and CPR for infants, children, and adults. In addition to emergency response, students will explore personal, household, and outdoor safety, and disaster preparedness.

## Foundations of Programming (1.0 credit)<sup>\* †† ††</sup>

Foundations of Programming will teach students the fundamentals of programming using the computer language Python. The course provides students with the concepts, techniques, and processes associated with computer programming and software development. Students will also explore the many programming career opportunities available in this high-demand field.

## Fundamentals of Bitcoin and Cryptocurrency (0.5 credit)<sup>\*\* ††</sup>

Upon completion of this course, students will understand bitcoin, including its history, development, and context within the modern global economy. Students will learn the basic cryptographic principles that underlie bitcoin, and gain confidence by demonstrating strong security principles in storing and transaction bitcoin. Key principles such as mining, wallets, and hashing will be introduced. And finally they will be familiarized with the nascent industry of digital currencies and how they function.

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## **Fundamentals of Blockchain and Cryptography (0.5 credit)<sup>\*\* ††</sup>**

Blockchain seems to be the latest buzzword that the business world is talking about. But what is it? And why should a high school student care? This course will seek to answer those questions. It will strip away the layers of complexity and sophistication to help students understand the key concepts of the blockchain. The course will introduce and discuss areas where blockchain has the greatest potential.

## **Health (1.0 credit)**

In this course, students acquire the knowledge and skills they need to lead a healthy life. Topics include the impact of personal decisions on the student's own health; the basic science behind nutrition, exercise, stress, and psychology, and examine how these factors affect a person's overall health; the dramatic changes that the human body experiences from birth to death; and improving or maintaining one's own health.

## **Health and Fitness (1.0 credit)**

The purpose of Health and Fitness is to develop and enhance healthy behaviors that influence lifestyle choices and student health and fitness. This year-long course provides opportunities to prepare for and implement healthy actions and set personal goals. Students will engage in daily physical activity, design a personal fitness plan, and monitor progress as they implement their fitness plans. Nutrition, personal health, mental and emotional health, and other healthy lifestyle topics are covered.

## **Health Careers (0.5 credit)**

In this course students explore a variety of career options related to the health care field, including medicine, nursing, physical therapy, pharmacy, dental careers, child care, sports medicine, personal training, social work, psychology, and more. Students will learn about various options within each field, what each of these jobs entails, and the education and knowledge required to be successful. In addition, they will focus on basic job skills and information that would aid them in health care and other career paths.

## **Health Science Concepts (1.0 credit)**

This year-long course introduces high school students to the fundamental concepts of anatomy and physiology—including the organization of the body, cellular functions, and the chemistry of life. As they progress through each unit, students learn about the major body systems, common diseases and disorders, and the career specialties associated with each system. Students investigate basic medical terminology as well as human reproduction and development. Students are introduced to these fundamental health science concepts through direct instruction, interactive tasks, and practice assignments. This course is intended to provide students with a strong base of core knowledge and skills that can be used in a variety of health science career pathways.

## **Honors Art History and Criticism I (1.0 credit)<sup>†† ††</sup>**

In this course, students will understand the political, cultural, and religious changes throughout history that are depicted within art. This course is an opportunity for students to reflect on how art was and is used as a vehicle to communicate, depict political and religious propaganda, and serve as evidence of cultural shifts and changes. Students will be challenged to contemplate the connection between art and context through reflective writing assessments, and will build upon knowledge to understand how art reflects and communicates cultural change and evolution.

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## Individual and Team Sports (0.5 credit)

To improve and maintain optimum health, it is necessary for people of all ages to participate in physical exercise. Physical education is much more than just fitness and exercise. Emphasis in this course is placed on the value of sports as possible lifetime activities and on creating a clear explanation of the rules and basic principles of a variety of sports.

## Introduction to Agriculture, Food, and Natural Resources (0.5 credit)

This semester-length high school course introduces students to the basic scientific principles of agriculture and natural resources. Students recognize and research plant systems, animal systems, government policy, “green” technologies, agribusiness principles, and sustainability systems. In this course, students apply understanding of ecosystems and systems thinking to the management of natural resources to maximize the health and productivity of the environment, agriculture, and communities. Students also analyze community practice or policy development related to sustainability in agriculture, food, and natural resources. Finally, students apply adaptive ecosystem management to a common pool resource problem in a manner that addresses ecological, socioeconomic, and institutional contexts.

## Introduction to Artificial Intelligence (0.5 credit)<sup>††</sup>

This course teaches what every student should know about Artificial Intelligence. AI is a fast-moving technology with impacts and implications for both our individual lives and society as a whole. In this course, students will get a basic introduction to the building blocks and components of artificial intelligence, learning about concepts like algorithms, machine learning, and neural networks. Students will also explore how AI is already being used, and evaluate problem areas of AI, such as bias. The course also contains a balanced look at AI’s impact on existing jobs, as well as its potential to create new and exciting career fields in the future. Students will leave the course with a solid understanding of what AI is, how it works, areas of caution, and what they can do with the technology.

## Introduction to Business (0.5 credit)<sup>††</sup>

This course introduces students to basic business concepts that will help them understand how a business survives in today’s economy and the role that consumers play in the same economy. Students will learn how to balance a checkbook, save for the future, and use credit wisely. Students will also learn how to create a resume and how to participate in a job interview.

## Introduction to Education and Teaching (0.5 credit)<sup>††</sup>

This course is designed to prepare future educators for the classroom they will inherit! It starts with a history of education and how blended, adaptive, and personalized learning are coming to the forefront in learning. It then explores new and emerging technologies, along with their current and future impact on education. Throughout the course, students will explore a wide range of career possibilities in the education field and evaluate both the promises and pitfalls of technology in education.

## Introduction to Hospitality and Tourism (1.0 credit)<sup>†† ††</sup>

Introduction to Hospitality and Tourism dives into the numerous career avenues and business opportunities of the hospitality and tourism industry. Students will learn about airline, hotel, and cruise ship industries in addition to customer service and selling techniques. This course prepares students to launch their career in hospitality and tourism, with projects and take-aways for immediate use to help land their dream job.

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## Introduction to Information Technology (0.5 credit)

This course introduces students to the essential technical and professional skills required in the field of Information Technology (IT). Through hands-on projects and written assignments, students gain an understanding of the operation of computers, computer networks, Internet fundamentals, programming, and computer support. Students also learn about the social impact of technological change and the ethical issues related to technology. Throughout the course, instructional activities emphasize safety, professionalism, accountability, and efficiency for workers within the field of IT.

## Introduction to JAVA Programming (0.5 credit)<sup>‡ † † †</sup>

JAVA is one of the most widely used computer languages in the world. This course teaches students Java by having them complete multiple projects, including games such as mad libs, player vs. computer games, battleship, tic-tac-toe, picture shuffler, and many more. This course assumes no Java coding experience and includes self-graded quizzes and tests.

### **Customer-Provided Required Physical Materials:**

- Students will need a computer or laptop for this course; tablets are not sufficient.
- HTML Text Editor (TextEdit, Notepad, or Text) and Eclipse

## Introduction to Network Systems (0.5 credit)

This semester-long course introduces students to the fundamental technology and concepts that make networking systems possible. The most important concept introduced is that of the OSI reference model and its bottom four layers, which are most directly concerned with networking instead of computing. The course explores the software and hardware supporting LANs, WANs, and Wi-Fi networks. Students are introduced to the protocols in the TCP/IP stack that are used to communicate across a network, and to networking hardware, including hubs, switches, bridges, routers, and transmission media. Students explore questions of security, network management, and network operating systems.

## JavaScript (0.5 credit)<sup>‡ † † †</sup>

In this course, students learn how to start programming with JavaScript. Students learn the basics of JavaScript including testing, functions, objects, arrays, loops, conditional code, operators and syntax basics. Students learn timing and animations, and how to debug. The class will conclude with a robust project that incorporates everything they learned in the semester. **Note:** Some YouTube videos are embedded within course.

**Prerequisite:** Students should have a working knowledge of HTML and CSS prior to taking this course.

### **Required materials:**

- HTML Text Editor (choose one):
  - TextEdit – for use on Mac – comes with OS
  - Notepad – for use on Windows – comes with OS
  - Text – for use on Chromebook – free app download from the Google Store
- Image Editing Software (choose one):
  - Pixlr – <https://pixlr.com/editor/> (in-browser)
  - GIMP – <http://www.gimp.org/downloads/> (downloadable program)
- Webhosting and basic in-browser FTP: Neocities – <https://www.neocities.org>
- Students will need a Windows PC or Mac for this course; Chromebooks and tablets are not sufficient.

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## **Leadership Skills Development (1.0 credit)<sup>\* ††</sup>**

In Leadership Skills Development, students build skills to succeed in high school, college, and life. Students learn to act by pressing their "Turbo Button", manage their time by staying in the "Lasting Zone", chart their goals by creating a "North Star", and many other proven leadership techniques developed by the leadership training institute Mawi Learning. Whether students are struggling or already at the top of their game, Leadership Skills Development will give them new skills for a successful life.

## **Leadership Skills Development II (0.5 credit)<sup>††</sup>**

Increase your confidence and build your social skills as you learn how to overcome many of the toughest challenges teens face. Discover how your "super-charged" teen brain really works, so you can make better decisions, have more fun, and achieve more. Learn how to conquer peer pressure, social anxiety, and the unnecessary risks that can derail your future. By the end of your training, you will have new power to direct your own life and lead your classmates. Throughout the course, you will be coached by Mawi Asgedom, a Harvard graduate and student success expert who has written eight books and trained over 1,000,000 students.

## **LEED Green Associate (0.5 credit)<sup>\*††</sup>**

This course introduces students to the LEED process. LEED, or Leadership in Energy and Environmental Design, is the global standard for green building certification. Throughout the course, students will gain an understanding of the various components of green building. The theme of sustainability and sustainable construction is woven throughout each module both in terms of physical environment and as it pertains to LEED certification.

## **Media and Communication (0.5 credit)<sup>††</sup>**

From banner ads to billboards, newspaper articles, and Facebook feeds, people are constantly sharing ideas. This course looks at the many facets of mass media. Students will learn how the media shapes every aspect of our lives. We examine the role of newspapers, books, magazines, radio, movies, television, and the growing influence of Facebook, YouTube, and Twitter.

## **Medicine (0.5 credit)**

This course provides students with an introduction to healthcare, with emphasis on modern, clinical medicine. Students will review basic human anatomy and physiology and study major health concerns affecting people in the U.S. and the world. Topics include infectious diseases, cancer, traumatic injuries, and healthcare career opportunities.

## **Music Appreciation (0.5 credit)<sup>††</sup>**

In this course, students will gain a thorough understanding of music by studying the elements of music, musical instruments, and music history, as well as music advocacy. Students will be introduced to the orchestra and composers from around the world. They will be required to be a composer, performer, instrument inventor, and advocate.

## **Nutrition (0.5 credit)**

This course takes students through a comprehensive study of nutritional principles and guidelines. Students will learn about world-wide views of nutrition, nutrient requirements, physiological processes, food labeling, healthy weight management, diet related diseases, food handling, nutrition for different populations, and more. Students will gain important knowledge and skills to aid them in attaining and maintaining a healthy and nutritious lifestyle.

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## **Paleontology (0.5 credit)<sup>††</sup>**

In this course, students will learn about the creatures both large and small that roamed the earth before modern man. Students will watch videos from experts at the Royal Tyrrell Museum, a leading paleontology research facility, and discover how the field of paleontology continues to provide insight into early life on earth.

## **Personal Finance (0.5 credit)<sup>††</sup>**

The Personal Finance course prepares students to be successful financial citizens as they learn about the role and responsibilities as a responsible financial planner and saver as well as learn about the services, functions, and products of the financial industry.

## **Personal Fitness (0.5 credit)**

This course helps students understand what it is to live a healthy life, maintain fitness, and gain an understanding of the body and how it influences personal fitness. Students are introduced to exercise and how it relates to well being, the work of the body's bones and joints, muscles, cardio, respiratory, and energy systems, and healthy habits including eating and drinking as it relates to exercise.

## **Principles of Architecture (0.5 credit)<sup>\*‡† ††</sup>**

In Principles of Architecture, students review various concepts used in the design and architecture field to learn about basic drafting equipment and how to use and maintain it. They analyze challenges and solutions within the development of design and learn how to prepare drawings manually and using AutoCAD software. A substantial portion of the course will be spent on sequential processes so that students develop an understanding of creating and annotating drawings as well as how to apply standard rules regarding line types, offset objects, creating layers, and setting up a page for plotting.

### **Customer-Provided Required Physical Materials:**

- AutoCAD software (free download - <https://www.autodesk.com/education/edu-software/overview?sorting=featured&page=1>)
- Students will need a computer or laptop for this course; tablets are not sufficient.

## **Project Management (0.5 credit)<sup>††</sup>**

The Project Management course is intended to identify the key components of a career as a project manager. Students will review the basics in project management terminology, such as designating distinctions among projects, products, programs, and portfolios. They will delve into concepts like managing deliverables and creating engaging relationships with stakeholders. The primary components of project planning will be laid out and described in detail. Students will explore teams and organizational structures. They will discover project management tools and innovation being used in the industry. Overall, they will develop a greater understanding of the mechanisms that are in place to effectively carry out projects of any size through specific project management techniques.

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## Python Multiplayer Adventure (0.5 credit)<sup>\* ‡ † † †</sup>

Python is a powerful language designed to do just about anything! This course allows students to learn Python by first completing a text based console game and then turning it into a multiplayer adventure! Students will not only learn Python from going through the individual lessons and video reviews but also understand a client server relationship. They will get to code in their own python web server that allows connections through a browser. Students will gain experience using variables, classes, functions, lists, dictionaries, generators and proper Python formatting. This is a great course for anyone interested in preparing themselves for future coding classes. This course assumes no coding experience and includes self graded quizzes and tests.

### **Customer-Provided Required Physical Materials:**

- Python Version 3 (<https://www.python.org/downloads/>).
- Students will need a Windows PC or Mac for this course; Chromebooks and tablets are not sufficient.

## Renewable Energy (0.5 credit)<sup>††</sup>

In this course, students will investigate sustainability and the importance of finding new, innovative ways to ensure that we can provide for global energy needs today and in the future. Students will take a balanced and evidence-based look at climate change, ways that we can harness renewable resources, sustainable societies, biodiversity, and smart growth.

## Robotics: Applications and Careers (0.5 credit)<sup>††</sup>

It seems like many elementary to high school robotics courses are focused on coding a simple robot to move its mechanical arm up and down. This course, in contrast, teaches students what a robot is and how it relates to other key technologies such as artificial intelligence and machine learning. Then the course examines 10 applications of robots and how they will change and impact various aspects of our lives and the economy. Will robots simply steal our jobs, or will they be a tool that will create new opportunities and even free humans to use our creativity and curiosity to their full potential? Students will grapple with this and many other questions as they explore this vital, future-focused subject.

## Smart Cities: Technology and Applications (0.5 credit)

A smart city uses Internet of Things sensors and tech to connect components across a city to ultimately improve the lives of citizens. In this course, students will learn about the history and development of smart cities. They will explore how technology are affecting a city's energy, transportation, and government. With rapidly increasing urbanization globally, this field presents a world of career opportunities for students.

## Social Media (0.5 credit)<sup>††</sup>

This course will teach students that the world of Social Media revolves around them—their actions, decisions, and interests. They will examine how Social Media has evolved. They will understand how to find authenticity and truth within an online world where people can “be” anyone. They will also learn how their digital footprint makes a bigger impression than their physical one. Students will also discover that their voice is important. They are not only a reader—they are a writer. They don't just follow the news—they report it as a citizen journalist. And they don't just gather information—they crowdsource it.

## Space Explorations (0.5 credit)<sup>††</sup>

This course will examine the history and future of space travel. Students will learn about landmark 20th century events, find out what it takes to put people in space, and what it will take for us to reach new frontiers, including Mars and beyond. Topics include launch and landing systems, manned vs. unmanned spaceflight, and low earth vs. beyond earth orbit.

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## Startups and Innovation (0.5 credit)<sup>††</sup>

In this course, students will explore the entrepreneurial mindset of searching for opportunities, creating value, and solving pain points to create the next world-class startup. They will explore how this mindset applies not just to business, but to schools, non-profits, and many other types of organizations. They will investigate how to apply this mindset in their own experiences.

## Study Skills & Strategies (0.5 credit)

The Study Skills and Strategies course equips students with skills and understandings critical to effective learning. Using a unique approach to the traditional topic of study skills, this course weaves understanding regarding the role of the brain in learning into the instruction of discrete learning skills and strategies. Moving beyond a list of good tips and ideas, the Study Skills and Strategies course will challenge students to develop intentional approaches to learning. They will be required to make connections between the strategies and skills they learn in this course and the implementation of those strategies and skills in their other coursework. Upon completion of the course, students will have learned a variety of specific learning skills and strategies, gained greater understanding of their own learning preferences, and become prepared to develop and implement specific learning and study plans for any academic course or other learning needs.

## The History of Gaming and Esports (0.5 credit)<sup>††</sup>

In this course, students will learn about the technologies and design principles that have been the foundation of video game technology and development over the last 50 years. Students will examine and discuss the impact of video games on culture and the economy. Students will learn about the current gaming and e-sports landscape, including strategies and techniques of top teams and individuals. This course will also discuss the risks and dangers of video games and understand how to set appropriate time and content parameters. Finally, the course will identify career paths and opportunities for those who are passionate about gaming.

## Theater Studies (0.5 credit)<sup>††</sup>

Have you ever wondered how a play goes from the playwright's mind all the way into a multi-million dollar Broadway production? In this course, you'll learn the whole process! This course provides a thorough introduction to the theater by providing an overview of major topics in theater studies, with a blend of theoretical and practical lessons. In the first half of this course you will learn about the definitions of theater, theater history, and contemporary theatrical genres. The second half of the course will guide you through all of the elements of putting on a professional theatrical production. You will learn about the entire production process, from playwriting through opening night, including elements of technical theater, the rehearsal process, and audience response. Whether you're an aspiring actor, technician, director, or producer, or even just an avid theater-goer, this course is for you.

## Transportation Technologies (0.5 credit)

This course introduces students to the newest and most cutting edge futuristic transportation technologies out there. Students gain familiarity with the history of transportation development and understand a framework with which to evaluate new transportation modes. Then the course dives into 10 different technologies on the horizon. Students examine the technologies, the pros and cons of each mode, and explore potential career paths in these emerging fields.

## Virtual Tutor: ACT® (0.5 credit)

This course provides students with the opportunity to prepare to successfully complete the ACT® college-entrance exam. Practice tests diagnose and target areas of opportunity, and students are prescribed individual study paths. The learning experience includes video-based instruction by highly qualified teachers, interactive assignments, and frequent assessment opportunities to track progress.

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## Virtual Tutor: SAT® (0.5 credit)

This test preparation course effectively prepares students for all sections of the SAT® exam. Course content is broken into strands, allowing students to focus on each subject extensively before moving on to the next area of study. Within each strand, a diagnostic pretest identifies students' strengths and weaknesses and tailors a personalized study plan for each test-taker.

## Wearable Technology Innovations (0.5 credit)<sup>††</sup>

From hearing aids to pedometers to smart watches, humans have made and worn devices to overcome physical deficiencies, count their steps, and communicate. With the continue miniaturization of chips and sensors, combined with increasing sophistication of artificial intelligence, wearable technology has proliferated into countless end-markets. This course will introduce students to wearable technologies and the components and software that make these technologies possible. The course will also evaluate several applications of wearable technologies in various industries. Finally, the course will examine and discuss the implications of wearable technology, including its pros and cons, and potential implications to our health, privacy, and society.

# ADVANCED PLACEMENT® HIGH SCHOOL ELECTIVES

## AP® Art History (1.0 credit)<sup>\*</sup>

AP® Art History explores the history of art across the globe from prehistory to the present. Students analyze works of art through observation, discussion, reading, and research. This course prepares students for the AP Art History exam.

**Prerequisite:** World History recommended

## AP® Computer Science A (1.0 credit)<sup>\*‡ †</sup>

The AP® Computer Science A course, which is equivalent to the first semester of a college level computer science course, allows students to get familiar with the concepts and tools of computer science as you learn a subset of the Java programming language. Students do hands-on work to design, write, and test computer programs that solve problems or accomplish tasks. This course prepares students for the AP Computer Science A exam.

**Prerequisites:** Algebra I, Geometry, and Algebra II required. Foundations of Programming and Procedural Programming recommended

### **Customer-Provided Required Physical Materials:**

- graphing calculator
- JAVA, BlueJ (free download)
- Students will need a computer or laptop for this course; tablets are not sufficient.

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# MIDDLE SCHOOL LANGUAGE ARTS

## Language Arts 6<sup>‡</sup>

Student assignments include writing narrative essays and completing a book report. Students will learn about storytelling, myth, poetry and composition.

### Customer-Provided Required Physical Materials:

#### Required Materials:

- *Seedfolks* by Paul Fleischman; ISBN-10: 0590511904; ISBN-13: 978-0064472074
- *The Giver* by Lois Lowry; ISBN-10: 9780544336261, ISBN-13: 978-0544336261
- *Esperanza Rising*; ISBN-10: 9780439120425, ISBN-13: 978-0439120425
- *Flying Lessons and Other Stories*; ISBN-10:110193462X, ISBN-13:978-1101934623

#### Optional Novels (1 per semester):

- *Walk Two Moons* by Sharon Creech; ISBN-10: 0064405176, ISBN-13: 978-0064405171
- *The Westing Game* by Ellen Raskin; ISBN-10: 014240120X; ISBN-13: 978-0142401200
- *Freak the Mighty* by Rodman Philbrick; ISBN-10: 9780439286060; ISBN-13: 978-0439286060
- *True Confessions of Charlotte Doyle* by Avi; ISBN-10: 0545477115; ISBN-13: 978-0545477116

## Language Arts 7<sup>‡</sup>

Through analysis of written, spoken, and multimedia texts, students will become more critical consumers of information and various forms of media.

### Customer-Provided Required Physical Materials:

#### Required Materials:

- *Poetry Speaks Who I Am* by Elise Paschen – ISBN-10: 1402210744, ISBN-13: 978-1402210747
- *Julie of the Wolves* by Jean Craighead George; ISBN-10: 0064400581, ISBN-13: 978-0064400589
- *The Outsiders* by S.E. Hinton; ISBN-10: 014240733X, ISBN-13: 978-0142407332

#### Optional Novels (1 per semester):

- *Where the Red Fern Grows* by Wilson Rawls; ISBN-10: 0440412676; ISBN-13: 978-0440412670
- *Nothing But the Truth, Isham*, by Frederic Stewart; ([found on GP](#))
- *The Cay* by Theodore Taylor; ISBN-10: 0440416639; ISBN-13: 978-0440416630
- *A Christmas Carol*, by Charles Dickens; ([found on GP](#))
- *A Day No Pigs Would Die* by Robert Newton Peck; ISBN-10: 0679853065; ISBN-13: 978-0679853060

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## Language Arts 8<sup>‡</sup>

In this course, students will analyze the poetry of noted writers. They will also learn sentence structure, verb tenses, punctuation, grammar rules and logic, essay and letter writing, and more.

### **Customer-Provided Required Physical Materials:**

#### **Required Materials:**

- *Poetry Speaks Who I Am* by Elise Paschen – ISBN-10: 1402210744, ISBN-13: 978-1402210747
- *Roll of Thunder, Hear Me Cry* by Mildred D. Taylor; ISBN-10: 0142401129, ISBN-13: 978-0142401125
- *Diary of a Young Girl* by Anne Frank; ISBN-10: 9780553296983, ISBN-13: 978-0553296983

#### **Optional Novels (1 per semester):**

- *My Brother Sam is Dead* by James Lincoln Collier; ISBN-10: 0439783607, ISBN-13: 978-0439783606
- *Across Five Aprils* by Irene Hunt; ISBN-10: 0425182789; ISBN-13: 978-0425182789
- *The Ox-Bow Incident* by Walter Van Tilburg Clark; ISBN-10: 0812972589, ISBN-13: 978-0812972580
- *That Was Then, This is Now* by S. E. Hinton; ISBN-10: 0140389660, ISBN-13: 978-0140389661
- *The Pearl* by John Steinbeck; ISBN-10: 014017737X, ISBN-13: 978-0140177374

## MIDDLE SCHOOL MATHEMATICS

### Mathematics 6

In this course, students will build on their basic math skills, learning how to add, subtract, multiply and divide integers, decimals and fractions.

### Mathematics 7

Students in this course will work on their problem solving skills and learn basic algebra, geometry, decimals, fraction, data analysis, percentage, integer use and more.

### Math 8: Pre-Algebra

This course will help students move from the world of simple mathematics to the world of Algebra and Geometry, learning to solve real-world problems.

### Algebra I (High School Course – 1.0 credit)<sup>§§</sup>

This course is the foundation for high school mathematics. Students will develop fluency in working with linear equations, tables, graphs, inequalities and more.

**Prerequisite:** Math 8 or Pre-Algebra

## MIDDLE SCHOOL SCIENCE

### Life Science 6

Students will explore the study of cells, heredity, biological populations, and their changes over time. This course provides opportunity for students to conduct and design experiments as well as identify and classify organisms.

### Earth and Space Science 7

In this middle school course, students will learn about the scientific method and hone their use of scientific measurements in earth and space science.

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## Physical Science 8<sup>‡</sup>

This course is an introduction to the physical sciences and scientific methodology. Students will gain a basic knowledge of the physical properties and chemistry of matter.

**Customer-Provided Required Physical Materials:** Basic Kitchen Lab Supplies

# MIDDLE SCHOOL SOCIAL STUDIES

## Social Studies 6

This course introduces students to the beginnings of ancient civilization. Students will trace the path of human origins in Africa and follow the paths of migration around the Earth.

## Social Studies 7

This course emphasizes how ideas, events, and philosophies have shaped the history of the United States. Study begins with the earliest arrivals of people and concludes at the Civil War.

## Social Studies 8

In this course, students will understand the significance of government, law, and politics and learn their role in civic responsibility, including voting and being a productive member of society.

## World Geography

This one-semester middle school course focuses on the regions of the world and helps students understand Earth's physical and human geography. Students analyze population and settlement patterns and how these impact human activities and their interactions with the physical environment.

# MIDDLE SCHOOL ELECTIVES

## Art Appreciation Grade 8 only

Art Appreciation investigates how quality is determined and created by artists, in order to evaluate and appreciate art on a deeper level. Students are introduced to the elements and principles of art and the importance of artists' context and perspective. The course covers different periods in art history, different techniques in art, and how to research and evaluate art, emphasizing why each contributes to valuing a piece of art and provides the necessary knowledge to do so.

## Arts Explorations

Introducing students to diverse areas in the arts can broaden their perspective on the arts in general. Arts Explorations encourages students to experience each of the modern arts disciplines including Visual Arts, Theatre, Music, Media Arts and Dance. Students will also be able to identify areas of special interest where they would like continued study and the ways that the arts can be a part of their career paths.

**Customer-Provided Required Physical Materials:** Funny Photomaker (free download)

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## Beginning Painting<sup>‡</sup>

This course introduces students to classical and contemporary painting, techniques and concepts, with emphasis on the understanding of its formal language and the fundamentals of artistic expression. Acrylic and watercolors are the mediums used in this class.

### **Customer-Provided Required Physical Materials:**

- chromacryl tube of acrylic paints
- round brush
- flat brush
- watercolor paints (includes brush)
- set of markers
- 1–4b pencil
- painting paper (The pad of paper may be labeled watercolor paper. please use for all paintings, including acrylic.)
- newsprint paper (This paper is for sketches and testing paints. do not use for painting projects.)
- 7 project cardstock pages

## Character Education Grades 7 and 8

This course teaches students practical skills for understanding and managing their emotions, setting goals and getting organized, understanding and getting along with others in our diverse world, and making good decisions. Research shows that people who practice these skills have greater academic achievement as students and experience more success and satisfaction as adults.

## Health

This course will help students understand the importance of making decisions that will affect their physical, emotional, mental, and social health. It will provide students with the knowledge and resources they will need to make responsible, informed decisions about their health. Students will have an opportunity to evaluate their own values, opinions and attitudes about health.

## Individual and Team Sports

To improve and maintain optimum health, it is necessary for people of all ages to participate in physical exercise. Physical education is much more than just fitness and exercise. Emphasis in this course is placed on the value of sports as possible lifetime activities and on creating a clear explanation of the rules and basic principles of a variety of sports.

## Keyboarding<sup>\*\* ‡ †</sup>

This keyboarding course is appropriate for elementary and middle school students. The curriculum introduces new keys by rows where students first learn the middle row, then the top row and then the bottom row of the keyboard. The content focuses on sight and high-frequency words. This course assumes no keyboarding experience and will guide students across the keyboard.

**Customer-Provided Required Physical Materials:** Students will need a computer or laptop for this course; tablets are not sufficient.

## Music Appreciation Grade 8 only

In this course, students will gain a thorough understanding of music by studying the elements of music, musical instruments, and music history, as well as music advocacy. Students will be introduced to the orchestra and composers from around the world. They will be required to be a composer, performer, instrument inventor, and advocate.

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## Physical Education

This course emphasizes the value of physical activity and sports. Students will learn about the rules and basic principles of a variety of sports, including archery, bicycling, golf, skiing, tennis, volleyball, baseball, basketball, football, hockey, and soccer. Discussions cover information about playing area and equipment, basic rules, safety considerations, and terminology for each sport.

## Python Multiplayer Adventures<sup>‡ †</sup>

Python is a powerful language designed to do just about anything! This course allows students to learn Python by first completing a text based console game and then turning it into a multiplayer adventure! Students will not only learn Python from going through the individual lessons and video reviews but also understand a client server relationship. They will get to code in their own python web server that allows connections through a browser. Students will gain experience using variables, classes, functions, lists, dictionaries, generators and proper Python formatting. This is a great course for anyone interested in preparing themselves for future coding classes. This course assumes no coding experience and includes self graded quizzes and tests.

### **Customer-Provided Required Physical Materials:**

- Students will need a Windows PC or Mac for this course; Chromebooks and tablets are not sufficient.
- Python Version 3 (<https://www.python.org/downloads/>)

## Scratch Coding<sup>‡ †</sup>

Scratch is a program developed by MIT which teaches students the basics of how computers think. This course will introduce students to coding programs and allow them to drag and drop coding blocks to create a fully functional program. The user interface and tutorials allow students to quickly create and run their code to see its results. This course assumes no prior computer coding knowledge and includes self-graded quizzes and tests.

**Customer-Provided Required Physical Materials:** Students will need a computer or laptop for this course; tablets are not sufficient.

# MIDDLE SCHOOL WORLD LANGUAGES

## French I (High School Course – 1.0 credit)<sup>§§</sup>

In French I, students are introduced to the language and cultures of French speaking countries. Students will gain a basic understanding of reading, writing, speaking and understanding the language at a beginner's level.

## French II (High School Course – 1.0 credit)<sup>§§</sup>

French II is designed to focus on successful communication through speaking, writing, reading, and listening, and provides a thorough grounding in aspects of culture. Activities blend different forms of communication and culture to ensure that students meet all standards.

**Prerequisite:** French I

## German I (High School Course – 1.0 credit)<sup>§§</sup>

This introductory course teaches basic communication and comprehension in German. Students are introduced to the fundamentals of German conversation and grammar.

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## German II (High School Course – 1.0 credit)<sup>§§</sup>

In this course, students will build on their German grammar and language skills. Students will review basic grammar skills, learn and study stem-changing verb conjugation, and explore cultural themes regarding current events, famous German people, music, and festivals. In the second semester, students will increase their proficiency by forming more complex sentences. Cultural themes are entwined throughout the course.

**Prerequisite:** German I

## Spanish I (High School Course – 1.0 credit)<sup>§§</sup>

Spanish I is designed to develop an authentic and practical understanding of the Spanish language and culture. Students will learn to express their thoughts, feelings, and opinions in Spanish using basic, real-life situations and learning scenarios..

## Spanish II (High School Course – 1.0 credit)<sup>§§</sup>

In this course, students will build upon the foundation developed in Spanish I. They continue to build vocabulary, learn new verb tenses and grammar concepts, and improve their ability to communicate with others.

**Prerequisite:** Spanish I

# ELEMENTARY SCHOOL COURSES

‡Please note that all elementary school courses have grade specific required materials. You can find each by following the links below.

- [Elementary School Supply List](#)
- [Kindergarten](#)
- [First Grade](#)
- [Second Grade](#)
- [Third Grade](#)
- [Fourth Grade](#)
- [Fifth Grade](#)

# ELEMENTARY LANGUAGE ARTS

## Language Arts K

This course teaches students to identify and write all letters, learn weekly sight words and reading comprehension, and produce letter sounds and frequently used phonograms. All Common Core K LA standards are met in this course.

## Language Arts 1

In this course, students learn to identify and write all letters, learn weekly sight words and reading comprehension, and produce letter sounds and frequently used phonograms. All Common Core 1 LA standards are met in this course.

## Language Arts 2

This course teaches students to spell and write vocabulary, read more fluently, apply grammar concepts, and participate in handwriting and writing activities. All Common Core 2 LA standards are met in this course.

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### **Language Arts 3**

This course teaches students reading comprehension skills and strategies along with spelling, vocabulary words, and grammar concepts that will help them become stronger writers. All Common Core Third Grade LA standards are met in this course.

### **Language Arts 4**

This course integrates reading, writing, speaking, listening, and the study of vocabulary and grammar to help students build broad and diverse literacy skills.

### **Language Arts 5**

This course integrates reading, writing, speaking, listening, and the study of vocabulary and grammar to help students build broad and diverse literacy skills.

## **ELEMENTARY MATHEMATICS**

### **Mathematics K**

In this course, students will learn foundational math facts. They will learn to count to 12, how to compare sizes, ordinal numbers, how to tell time, and more. As they progress, students will learn to count to twenty and will learn the concepts of left and right.

### **Mathematics 1**

In this course, students will build fluency with basic math facts. They will learn to count to 100, basic addition and subtraction facts, and how to add double-digit numbers.

### **Mathematics 2**

Students in this course will build fluency with basic math facts and add and subtract within 100 to solve word problems using strategic methods. They will also be introduced to working with money and time to compare value.

### **Mathematics 3**

In this course, students will build flexibility with numbers as they master addition, subtraction, multiplication, and division. In addition, students will learn to borrow, carry, find patterns, make estimations and more.

### **Mathematics 4**

This course focuses on developing understanding and fluency in multi-digit multiplication, fraction equivalence, and more.

### **Mathematics 5**

In this course, students will focus on several areas including division of fractions, operations with decimals, and more.

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# ELEMENTARY SCIENCE

## Science K

In this course, students will use their senses to explore their world through nature walks, gardening, and imitative games.

## Science 1

Students in this course complete projects that allow for exploration and discovery. Through observations of the natural world, students conduct inquiries into topics related to their healthy development.

## Science 2

In this course, students are introduced to the process of observation using their five senses. Students will use these observation skills as they examine different types of animals and their environments.

## Science 3

This course introduces students to experimentation as they learn about the earth, the sun, and the moon. Through simple experiments, students will explore the water cycle, gravity, and more.

## Science 4

This course covers the three main domains of science: Physical, life, and earth and space science. Students will use various kinds of experimenting, including field studies, systematic observations and more.

## Science 5

In this course, students will study the solar system, light and sound, different types of energy, and more.

# ELEMENTARY SOCIAL STUDIES

## Social Studies K

This course introduces students to their place in the community and their responsibilities as members of society. Students learn about everyday heroes, the importance of rules, table manners, and more.

## Social Studies 1

In this course, students explore the fundamentals of social studies, including map skills, jobs in the community, storytelling, and more.

## Social Studies 2

This course helps students explore social studies concepts such as culture, geography, history, and economics.

## Social Studies 3

In this course, students will look at the beginning of civilization and will take a close look at their own personal heritage by mapping their ancestry.

## Social Studies 4

In this course, students will apply their understanding of social studies skills to exploring local states and communities through topography, local wildlife, natural wonders, and more. They will also study U.S. colonial history and the frontier life of early American settlers.

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## Social Studies 5

Students in this course study U.S. history through the Civil War. They also investigate early settlements of North America and what life was like for the colonists and Native Americans.

# ELEMENTARY ELECTIVES

## Art Development Level 1

Art Development Level 1, designed for first grade students, focuses on foundational art concepts. Students learn about art while also learning self-discipline, cooperation, and self-expression. Students use their senses and imaginative thinking to learn about artistic expressions and inventions from cultures around the world.

## Art Development Level 2

Art Development Level 2, designed for students in grades 2-3, focuses on concepts and foundational art, and builds upon activities and lessons in Art Development Level 1. Students learn about mixing colors, applying their imaginations and using their knowledge of nature to develop their art skills and understanding.

## Art Development Level 3

In this course designed for students in grades 3-4, students continue to learn about art while also learning self-discipline, cooperation, and self-expression. The student will see artistic expressions and inventions from cultures around the world.

## Art Development Level 4

In this course designed for students in grades 4-5, students continue to learn about art while also learning self-discipline, cooperation, and self-expression. The student will see artistic expressions and inventions from cultures around the world.

## Kindergarten Arts & Crafts<sup>\*\* †</sup>

This course is designed to be an independent arts and crafts playtime experience for the kindergarten student. A foundation for artistic imagination and creativity are the focus. Students are introduced to lines, circles, recognizing and using shapes, and explore a variety of media such as pastels, watercolors, crayons, tempera, and pencil drawing. Students work with clay, draw with pastels, make fingerprint flowers, draw barns and animals using shapes and recognizing lines using the student's name, create a bird feeder, make pig puppets, craft paper flowers, make potpourri, craft a heart collage, construct a wind chime, and press flowers.

## Arts and Crafts 1<sup>\*\* †</sup>

This course is designed to be an independent arts and crafts playtime experience for the first grade student. In this course, children's inherent artistic imagination and creativity focus on the basics of art and making art. Students are introduced to primary colors, the color wheel, shapes such as lines and circles, and concepts such as symmetry. Young artists explore a variety of media such as pastels, watercolors, crayons, tempera, and pencil drawing as they create a watercolor tree, use a printing block, produce weather painting, and produce a watercolor painting. They will also be creating colorful calendars, stenciling, fashioning intricate flower drawings, revisiting symmetrical objects, and mixing colors.

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## Arts and Crafts 2<sup>\*\* †</sup>

This course is designed to be an independent arts and crafts playtime experience for the second-grade student. Using their senses, student are encouraged to further develop what they already know as a source of knowledge and creativity. They will use watercolors to create a value chart and begin to understand symmetry in art, as well as work with clay and create a Memorial Clay. In the second semester, students create a 12 month calendar, focusing on a new month each week forming drawings and making a seasonal chart using objects familiar with each of the four seasons.

## Elementary Health Kindergarten and Grade 1

Elementary Health for kindergarten and first grade helps young students establish a basic understanding of health. Students focus on the various aspects of their health and how they can make healthy choices. Topics include personal safety, healthy behaviors, nutrition, communication, disease prevention, basic anatomy and physiology, and the values of cooperation and teamwork.

## Elementary Health Grades 2 and 3

Elementary Health for grade 2 helps young students establish a basic understanding of health. Students focus on the various aspects of their health and how they can make healthy choices. Topics include personal safety, healthy behaviors, nutrition, communication, disease prevention, basic anatomy and physiology, and the values of cooperation and teamwork.

## Elementary Health Grades 4 and 5

In Elementary Health for grades 4 and 5, students establish a basic understanding of the aspects of health. They focus on the various aspects of their health and how they can make healthy choices. Topics include personal safety, reducing illness, avoiding bullying, nutrition, healthy friendships, emergency situations, and the human body. Fourth grade will study the functioning systems of the body. Fifth grade will cover the reproductive system, puberty, and sexually transmitted diseases (STDs).

## Elementary Music – Recorder 1<sup>\*\* †</sup>

This course combines music and performing arts. Students will experience and learn new songs and perform them using their bodies. In addition, the student will begin learning how to play the recorder.

**Customer-Provided Required Physical Materials:** a recorder

## Elementary Physical Education Kindergarten and Grade 1

In this course, kindergarten students establish a basic understanding of health and fitness. Topics include exercise safety, making healthy choices, nutrition, and more.

## Elementary Physical Education Grades 2 and 3

Second grade students expand on their understanding of fitness and learn how to become more fit and healthy. Topics include goal setting, warm-up and cool down, flexibility, motor skills, and more.

## Elementary Physical Education Grades 4 and 5

In this course, students in fourth and fifth grade focus on fitness and learn about topics such as muscle strength, flexibility, water safety, and more.

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## Keyboarding<sup>\*\* ‡ †</sup>

This keyboarding course is appropriate for elementary and middle school students. The curriculum introduces new keys by rows where students first learn the middle row, then the top row and then the bottom row of the keyboard. The content focuses on sight and high-frequency words. This course assumes no keyboarding experience and will guide students across the keyboard.

**Customer-Provided Required Physical Materials:** Students will need a computer or laptop for this course; tablets are not sufficient.

## Scratch Coding<sup>‡ †</sup>

Scratch is a program developed by MIT which teaches students the basics of how computers think. This course will introduce students to coding programs and allow them to drag and drop coding blocks to create a fully functional program. The user interface and tutorials allow students to quickly create and run their code to see its results. This course assumes no prior computer coding knowledge and includes self-graded quizzes and tests.

**Customer-Provided Required Physical Materials:** Students will need a computer or laptop for this course; tablets are not sufficient.

# ENGLISH LANGUAGE LEARNING

## Certification Levels Offered: A1, A1+ A2, A2+, B1, B1+, B2

Using a series of writing, reading, listening, and speaking activities, students work on English language skills to improve their comprehension and use of the English language in an academic setting. In this course, students interact with a native English speaker and work independently online to complete learning and practice activities that meet identified CEFR Levels for Academic English in an American education program.

- In the ELL Level A1 course, students are introduced to precision in time relations. They also learn to communicate their likes, dislikes, and favorites, and develop more detailed responses for family, job, and school.
- In the ELL Level A1+ course, students use more detail when they communicate about parts of their day, activities they do in school, and locations. They tie together more than one action using clauses with sequence words and begin to communicate about past and future events.
- In the ELL Level A2 course, students communicate about past and future events and build their vocabulary about weather, transportation, and duration. They also practice asking for and giving an opinion.
- In the ELL Level A2+ course, students learn how to use "will" for volunteering and "can" for future action. They compare and contrast similar and different objects and situations, state their thoughts and beliefs, and join concepts together into more complex phrases and sentences.
- In the ELL Level B1 course, students master increasingly difficult concepts for time relations, communication about the background of a past event, and describe an action that happened at a time that isn't specified. Their sentences include multiple clauses, and they demonstrate the ability to recognize and discuss academic definitions and explanations.
- In the ELL Level B1+ course, students use complex sentences with adverb and noun clauses to communicate about events that happen simultaneously, or one followed by another. They are exposed to a large amount of basic business language for jobs and companies, and are expected to talk about education and experiences, along with industry structures, products, and services.
- In the ELL Level B2, students use phrases such as "dramatically" or "steadily" or "linearly" to provide more description about increasing and decreasing amounts. They string together multiple verbs using gerunds, infinitives, and clauses, and are able to define, classify, and explain rhetorical grammatical structures. They paraphrase what they read and sequence events with detail.

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# Elementary Materials List

## Elementary Supply Kit

The list below details the school supplies required to supplement the Grade Level Materials Kits.

### Materials Needed

Colored Pencils (12pk)	Colored Pencils (12pk)
Composition Notebooks, QTY 4 Ruler	Composition Notebooks, QTY 4 Ruler
Glue Scissors	Glue Scissors
Highlighter, Yellow Scotch Tape	Highlighter, Yellow Scotch Tape
Marker, Black Permanent Watercolor Paints	Marker, Black Permanent Watercolor Paints
Paint Brushes	

## Grade K: Materials

The list below details the required materials that are needed for Kindergarten.

### Materials Needed

Alfalfa seeds ½ teaspoon	Bag of dry beans, QTY 100
Beads (caution: buttons would be a choking hazard), QTY 50 of various size and color	Beads in three colors, 1/8" to 3/16" wide, QTY 30 of each color
Bean seeds, Lima, QTY 8	Bean seeds, Scarlet runner, QTY 20
Blocks (Lego, building blocks, etc.), QTY 16	Coin, Pennies (Caution: choking hazard) QTY 10
Cardboard, 8.5" X 11", QTY 2	3x5 Index Cards (100pk)
Crayons (64ct)	Cloth, (as a cape), 22" X 32"
Coin, Dime (Caution: Choking hazard), QTY 1	Coin, Nickels (Caution: Choking hazard), QTY 5
Chalk, sidewalk, 1 piece	Cotton balls, 1.25 cups
Cup, clear plastic, 12 oz (drinking glass)	Cup, clear plastic, 9 oz (glass tumbler)
Cups, foam coffee, 8 oz	Deck of cards, (like kid's Crazy 8s)
Dowel, 12" X 3/8"	Felt, 8" X 8"
Flashlight, easy to take apart standard type	Garden stakes, 3' to 4' long, QTY 3
Iron filings, 3 cc	Jar, wide mouth, 16 to 32 oz
Magnets, 1 each of bar type and horse shoe type	Magnifying glass, 50 to 75 mm
Maple sugar, 1 tablespoon	Mixture of soil, sand and peat, 1 cup
Modeling clay, about 2.5 lbs	Nails, zinc 2" to 2.5", QTY 3
Paper plate, 9", QTY 5	Paper towel to use as blotter paper, 2 sheets
Pipe cleaners in various colors, QTY 26 total	Plastic, vinyl, 6" X 6"
Pots, starter peat pots (includes soil), QTY 5	Rubber band, thick, 3" long
Salt, 1 cup	Sand or glitter, 1 teaspoon
Seeds, flowers, QTY 10	Straws, clear drinking, QTY 6
String, 9'	Sunflower seeds (to plant), QTY 25
Tacks / pushpins, QTY 26	Toothpicks, QTY 10
Poster Board (8.5 x 11, 9 pieces)	Pen, black click (able to be taken apart)
Watercolor paper, 9" X 12", QTY 2	Multi-Color Construction Paper
Variety of containers	Large piece of display board, about 36" X 48"

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Textured fabrics and materials of different kinds (velvet, wool, sandpaper, bubble wrap, etc).	Sweet potato or avocado seed
Garden fork	Potato
Apples	

## Grade 1: Materials

The list below details the required materials that are needed for grade 1.

### Materials Needed

Bags, plastic zip close type, quart size, QTY 2	Balance scale (small handheld)
Ball, indoor safe, about 2"-3"	Bean bags, QTY 2
Beans, as counters, QTY 100	Bird seeds, 1 cup
Blindfold (bandana)	Bowl, foam, 20 oz
Bowl, foam, 12 oz	Box, cardboard, shoe box size
Thermometer, outdoor, with Celsius and Fahrenheit measurements	Cardstock printed with coins (included in the supply kit) or coins
Cardstock printed with sock shapes to cut out	Clay, 4-6 oz
Compass, 25 mm or larger size	Container, about 2 oz
Cotton balls, 1-2 cups	Deck of cards such as "Go Fish" game
Dowel, 8" X 5/8"	Drinking glass, plastic 12 oz
Forceps or tweezers	Globe, inflatable
Hole puncher, single	Honey, small packet
Inflatable ball (soccer ball size)	Inflatable beach ball, about 6"
Jump rope, kid's size	Magnet, with center hole
Magnifying glass, 50mm or larger	Nails, 1.5"-2", QTY 3
Paper clips, QTY 12	Paper towels (blotting paper), 6 sheets
Paper, 8 1/2" X 11", QTY 10	Paper, legal size, QTY 12
Paper, poster, about 11" X 17", 3 Pieces	Paper, roll of blank white, 24" X 10'
Pin, sewing type	Pine cones, QTY 3
Plate, plastic, 9"	Potting soil, 1.5 cups
Push pins, QTY 3	Starting pots, 2 1/2" X 2 1/2", QTY 2
Straw, plastic drinking	String, cotton 16'
Crayons (64ct)	Tomato seeds, QTY 8
Cardboard, about 11" X 17"	Multi-Color Construction Paper
Toothpicks, QTY 10	Wax paper, 12" pieces, QTY 4
Wood dowel (or stick), 12"	Yarn, 12' for 4 pieces of finger knitting
Yarn, 8", 6 pieces	Empty toilet paper roll
Socks (from family laundry)	Hard boiled eggs, QTY 7
Large box (big enough for the student to sit in)	Rope for tug of war
Gallon or half gallon plastic milk jug	Hat
Flowers or plants for pressing	Old sheet or towel
Soapy water	Iron
Pre-made calendar or available calendar	Peanut butter
Empty milk carton	1 cup of Crisco or shortening

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Water	Large pot, pitcher, or sink filled with water
Marbles (optional)	Play Dough (optional)
Magazines (optional)	Popcorn (optional)
Toys (optional)	

## Grade 2: Materials

The list below details the required materials that are needed for grade 2.

### Materials Needed

Bag of Beans, for counters, about 130 beans	String, 13 feet
Birdseed, 1 cup	Towel
3" X 5" Index Cards (100pk)	Multi-Color Construction Paper
Hole punch, single	Wax Paper, 10" X 12", QTY 10
Rubber bands, colored	Push pins, tall, QTY 25
Globe (inflatable)	Seeds, beans, QTY 6
Pots for plants, 2.5" square, QTY 3	Yarn, red, blue and green, 8' each
KoKo's Kitten (Francine Patterson) Book	Yarn, 8", QTY 9
Popsicle Sticks (craft sticks), QTY 2	Potting soil, about 2 cups
Iron	Small objects for measuring (string, paperclips, etc.)
Large grapefruit or orange	Leaves (evergreen and / or deciduous)
Old sheet or towel	Gum, about 10 pieces

## Grade 3: Materials

The list below details the required materials that are needed for grade 3.

### Materials Needed

Balloons, 9", QTY 2	Pitcher (Gallon)
Brass Brad	Plastic bowl, 12 oz
Cardboard, 8.5" X 11", QTY 3	Clay, air dry, 2.5 pounds
Clay, any color, 4 oz nondrying	Clear plastic or plastic wrap, 6" X 6"
Construction paper, Blue 3 hole pre-punched, 7 pages	Printed sheet of coins with 50 pennies, 4 dimes, 1 nickel, 1 quarter, 1 dollar bill, and 30 counters
3x5 Index Cards (300)	Tempera Paint (R,Y,B) with small roller
Cups, foam, 3 to 6 oz, QTY 2	Cups, paper, 3-5 oz, QTY 3
Cups, plastic clear, 12 oz, QTY 2	Cups, plastic clear, 9 oz, QTY 3
Eye dropper	Foam craft material, 8.5" X 11"
Foam rod, round ½" X 20'	Food coloring (red and green), 5 mL each
Globe, inflatable, 10" to 14"	Hole puncher, single hole
Jar with lid, 6 oz to 12 oz	Liquid Measuring Cup, 1 cup (8 oz)
Liquid Measuring Cup, 4 cups / 1 liter	Magnifying glass, 2x to 10 x
Nail, 2 ½"	Outdoor thermometer / general purpose, F/C

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Paper clips, large, QTY 12	Permanent Marker, black
Plate, paper, 9"	Plate, plastic, 9"
Plate, small paper 6", QTY 2	Cotton balls, about 1 quart
Rubber band, 3"	Sheets of Hundred Blocks, QTY 13
Sponge, standard, 2" X 2" X ½" (clean)	Sponge, standard, 2" X 4" X ½"
Spoon	Steel washer, 7/16 – ½"
String, cotton, 10 feet	Tablespoon
Tape measure, 60" cloth with metric and inches	Teaspoon
Toothpicks, box of 100	Watercolor paper
Yarn, 14 feet	Yarn, ball, 30-60 feet
Wire hanger	Cylinder object such as a crayon
Gallon job	Meat thermometer
Body temperature thermometer	Dictionary, print or online
Lamp from your home or school	Gallon container or similar bowl or pan
Ice cubes	Globe and / or world maps that indicate terrain (Google maps)
Avocado or sweet potato	Celery stalk
Flower	Leaf

## Grade 4: Materials

The list below details the required materials that are needed for grade 4.

### Materials Needed

Aluminum Foil, about 12" X 10"	il, zip lock
Bags, 4" X 6" 4 mil, zip-close plastic, QTY 3	Balloons, 9", QTY 3
Battery, D	Bowl, 12 oz foam, QTY 4
Box for a diorama, shoebox size	Car, small toy
Chalk, ½ Teaspoon, ground up	Clay, air dry, 8 oz
Clay, modeling, 2 oz each (blue, brown, green, white, gray, yellow)	Container, plastic, 6 quarter, QTY 2
3x5 Index Cards (100pk)	Highlighters – 4 Colors, No Yellow
Craft sticks, small, wooden, QTY 4	Cup, clear plastic, 9 oz
Cups, 12 oz clear plastic, QTY 8	Cups, paper, about 3 oz, QTY 4
Dirt, ½ teaspoon	Drawing paper, 8.5" X 11", 28 pound, QTY 6
Epsom salt, 12 oz	File folders, manila, tabbed, QTY 7
Flour, 1.1 cup	Foam, plastic, 2" X 3" X ½"
Food coloring (any color will work)	Inflatable globe
Gumdrops, 5 of one color, 1 of each of 4 colors	Index cards, 4" X 6", QTY 30
Indoor holiday light, 1 bulb with wires attached	Jars with lids, clear plastic, 6 oz, QTY 8
Liquid measuring cup, 1 cup / 250 ml size (metric & standard)	Match, QTY 3
Measuring spoon, ½ teaspoon	Measuring spoon 1 tablespoon

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Nail, 3", zinc (galvanized nails are zinc coated)	Oil, ½ teaspoon cooking
Pebbles, 1 cup	Pitcher ½ gallon
Plate, white foam, 9", QTY 1	Plywood, about 5" X 11"
Potting soil, 1.5 quart	Protractor
Salt, 1.75 cups	Sand, 1.25 quart
Soap, ½ teaspoon liquid	Soap, ½ teaspoon solid laundry
Socks, 1 pair	Sponge, 2" X 2" X ½" (simple, inexpensive sponge with no scrubber side)
Spoon, large mixing	Straight pin
Straw, clear plastic drinking	String, light cotton, 6'
Sugar cubes, QTY 6	Sugar, 3 teaspoons of regular granular
Thermometer, 6"	Thumbtacks, QTY 2 metal
Toothpicks, QTY 16	Vinegar, 4.2 oz
Wax paper, 12" long, QTY 7	Wire, copper with insulation, ends stripped, 20 gauge, 12"
Wire, copper, 3", bare thick 10-14 gauge	Wood block, about 1.5" X 3.5" X 4"
Poster Board, 11" X 17", 3 Pieces	

### Language Arts Novels

Required Semester A	Required Semester B
A Tale of Despereaux by Kate Dicamillo	Wringer by Jerry Spinelli
Bud, Not Buddy by Christopher Paul Curtis	Pictures of Hollis Woods by Patricia Reilly Giff
Tales of a Fourth Grade Nothing by Judy Blume	Shiloh by Phyllis Reynolds Naylor

### Grade 5: Materials

The list below details the required materials that are needed for grade 5.

#### Materials Needed

Comb, 4-inch plastic	Pennies, QTY 8
Balloons, 12", QTY 2	Cardboard, 8.5" X 11", QTY 2
Cheesecloth, 8" X 8", QTY 2	Clothespin
Container, 6 qt plastic shoebox size (to hold the water)	Containers, small plastic with similar volume and different shapes, QTY 3
Dice, QTY 2	Dried mint leaves
Dried sweet basil	Fabric, soft such as lightweight flannel, 9" X 9", QTY 2
Flashlight	Ground cloves
Needle and thread	Paper towel, 1 sheet
Paper, drawing, 3 sheets	Rubber bands, 3"
Small mirror, about 2" X 3"	Tape measure, cloth
Three types of seeds: corn (maize), bean (lima or other large bean), and radish	Waxed paper, 4" X 3"

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Wineglass, with thin rim	Ziploc or plastic lunch bag, quart size
3x5 Index Cards (10)	Highlighter - Blue
Masking Tape	Multi-Color Construction Paper
Poster Board 8.5" X 11"	Jars with lids, clear plastic, 6 oz, QTY 8
Calculator, handheld or online	Rectangular prisms of any size from around your home or school (tissue box, shoe box, cereal box, etc.) QTY 5
Graph paper, can be printer	Paper towel tube
Rose petals	

### Language Arts Novels

Required Semester A	Required Semester B
Because of Winn Dixie by Kate Dicamillo	Maniac Magee by Jerry Spinelli
Number the Stars by Lois Lowry	Out of the Dust by Karen Hesse
The Watsons Go to Birmingham by Christopher Paul Curtis	Island of the Blue Dolphin by Scott O'Dell

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## NCAA Approved Courses

To be successful in college, students need to be prepared for college coursework. In [Division I](#) and [Division II](#), the National Collegiate Athletic Association (NCAA) sets academic initial-eligibility standards that take into account GPA, standardized test scores, core courses taken in high school and the grades earned in those core courses. [Division III](#) schools hold student-athletes to the same overall standards for the institution in which they're enrolling. All student-athletes also must meet the unique acceptance requirements of the college or university they plan to attend (which may exceed NCAA standards).

Not all high school classes count as NCAA core courses. Only classes in English, math (Algebra 1 or higher), natural or physical science, social science, foreign language, comparative religion or philosophy **may be approved** as NCAA core courses. Remedial classes and classes completed through credit-by-exam are not considered NCAA core courses. Following is a list of NCAA approved course offered.

Columbia School has received approval from the NCAA for the following courses:

- Algebra I
- Algebra II
- Anatomy & Physiology
- Biology
- Chemistry
- Earth Science
- English I: Survey of Literature
- English II: World Literature
- English III: American Literature
- English IV: British Literature
- Environmental Science
- French I
- French II
- French III
- Geometry
- German I
- German II
- Honors Algebra I
- Honors Algebra II
- Honors Biology
- Honors Chemistry
- Honors English I
- Honors English II
- Honors English III
- Honors English IV
- Honors Geometry
- Honors Physics
- Honors Statistics
- Honors U.S. Government
- Honors U.S. History
- Honors World History
- Marine Science
- Physics
- Precalculus
- Psychology
- Spanish I
- Spanish II
- Spanish III
- Statistics
- U.S. Government
- U.S. History
- World Geography and Cultures
- World History
- AP Biology
- AP Calculus AB
- AP Calculus BC
- AP English Language and Composition
- AP English Literature and Composition
- AP Environmental Science
- AP French Language & Culture
- AP Human Geography
- AP Macroeconomics
- AP Microeconomics
- AP Psychology
- AP Spanish Language And Culture
- AP Statistics
- AP U.S. Government And Politics
- AP U.S. History

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## UC A-G Approved Courses

The University of California A-G / College Entrance Requirements are a sequence of high school courses that students must complete (with a grade of C or better) to be minimally eligible for admission to the University of California (UC) and California State University (CSU). They represent the basic level of academic preparation that high school students should achieve to undertake university work.

The purposes of the A-G / College Entrance Requirements are to ensure that entering students:

- can participate fully in the first year program at UC and CSU in a broad variety of fields of study
- have attained the necessary preparation for courses, majors, and programs offered at UC and CSU
- have attained a body of knowledge that will provide breadth and perspective to new, more advanced studies
- have attained essential critical thinking and study skills

Columbia School has received approval from the UC A-G for the following courses

- Accounting
- Aeronautics and Space Travel
- Algebra I (Middle School)
- Algebra I
- Algebra I Credit Recovery
- Algebra II
- Algebra II Credit Recovery
- Anatomy and Physiology
- AP Art History
- AP Biology
- AP Calculus AB
- AP Calculus BC
- AP Computer Science A
- AP English Language and Composition
- AP English Literature and Composition
- AP Environmental Science
- AP French Language & Culture
- AP Human Geography
- AP Macroeconomics
- AP Microeconomics
- AP Psychology
- AP Spanish Language and Culture
- AP Statistics
- AP U.S. Government and Politics
- AP U.S. History
- Art Appreciation
- Art History
- Art History I Credit Recovery
- Biology
- Biology Credit Recovery
- Business Law
- Chemistry
- Computer Basics
- Digital Media
- Earth Science
- Economics
- Economics Credit Recovery
- English I
- English II
- English III
- English IV
- English Language Arts 9 Credit Recovery
- English Language Arts 10 Credit Recovery
- English Language Arts 11 Credit Recovery
- English Language Arts 12 Credit Recovery
- Environmental Science
- Environmental Science Credit Recovery
- Financial Literacy
- French I
- French II
- French III
- Geometry
- Geometry Credit Recovery
- German I
- German II
- Health and Fitness
- Honors Algebra I
- Honors Algebra II
- Honors Biology
- Honors Calculus
- Honors Chemistry
- Honors Economics
- Honors English I
- Honors English II
- Honors English III
- Honors English IV
- Honors Geometry
- Honors Physics
- Honors Statistics
- Honors U.S. Government
- Honors U.S. History
- Honors World History
- Integrated Math I Credit Recovery

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- Integrated Math II Credit Recovery
  - Integrated Math III Credit Recovery
  - Introduction to Business
  - Modern World History Credit Recovery
  - Music Appreciation
  - Personal Finance
  - Physics
  - Physics Credit Recovery
  - Precalculus
  - Psychology
  - Spanish I
  - Spanish II
  - Spanish III
  - Statistics
  - U.S. Government
  - U.S. Government Credit Recovery
  - U.S. History
  - World Geography and Cultures
  - World History

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# ††Career Exploration

From STEM and Education to Art and Information Technology, we offer online courses in a variety of career disciplines. Career-focused courses help students get a head start in planning for their future. Students have an opportunity to focus on one discipline or explore several, helping them find the best fit for their skills and interests. Allow your students to explore their potential.

## Architecture and Construction

Building Maintenance Technology I  
Building Maintenance Technology II  
Construction: Fundamentals and Careers  
LEED Green Associate  
Principles of Architecture

## Arts, A/V Technology, and Communication

Advanced Drawing  
Art Appreciation  
Art History  
Honors Art History and Criticism I  
Basic Drawing  
Beginning Painting  
Digital Media  
Media and Communication  
Music Appreciation  
Social Media  
Theater Studies

## Business, Administration, and Finance

Introduction to Business  
Project Management  
Startups and Innovation  
Accounting  
Career Exploration in Finance  
Financial Literacy  
Fundamentals of Bitcoin and Cryptocurrency  
Personal Finance  
Introduction to Hospitality and Tourism  
Business Law  
Leadership Skills Development  
Leadership Skills Development II

## Education and Training

Child Development  
Early Childhood Education I  
Early Childhood Education II  
Introduction to Education and Teaching

## Information Technology

Basic Web Design  
Cloud Technologies and the Internet of Things  
Computer and Network Security Fundamentals  
Computer Basics  
Cybersecurity  
Cybersecurity Essentials  
Digital Information Technology  
Foundations of Programming  
Fundamentals to Blockchain & Cryptography  
Introduction to Artificial Intelligence  
Introduction to Java Programming  
JavaScript  
Python Multiplayer Adventure

## STEM

Aeronautics and Space Travel  
Anatomy and Physiology  
Augmented and Virtual Reality Applications  
Paleontology  
Renewable Energy  
Robotics: Applications and Careers  
Space Exploration  
The History of Gaming and Esports  
Wearable Technology Innovations

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