



PAVIRTUAL

CHARTER SCHOOL

Course Descriptions

Eighth Grade

8

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Language Arts

Throughout this course, students engage in literary analysis and close reading of short stories, poetry, drama, novels, and informational texts. The course focuses on interpretation of literary works, analysis of informational texts, and the development of oral and written communication skills in standard (formal) English. Students read between the lines to interpret literature and go beyond the text to discover how the culture in which a work of literature was created contributes to the theme and ideas it conveys. Analysis of the structure and elements of informational texts and media helps students develop the skills needed for academic success and navigating the world. Students continue to acquire knowledge and skills in grammar, usage, mechanics, and vocabulary. Setting goals, self-monitoring progress, and reflecting on successes and challenges helps students become metacognitive learners. The course includes discussion activities that engage students in the curriculum while creating a sense of community.

Algebra

In this course, students deepen their computational and problem-solving fluency through topics in linear relationships, functions, and geometry. Proportions are understood as special linear equations in which the constant of proportionality is the slope. Students also consider the fit of bivariate data with linear models. Students solve systems of two linear equations in two variables and relate those solutions to a representation in the coordinate plane. Functions are understood as a rule that determines a unique output for every input. Students apply functions and are able to translate between various representations. Geometry delves into translations, rotations, reflections, and dilations in the coordinate plane. Students also consider the angles created by the transversal of parallel lines. The Pythagorean Theorem is explored and used to find distances between points and to analyze polygons. Students also find volumes of cones, cylinders, and spheres.

Physical Science

The Physical Science program introduces students to many aspects of the physical world, focusing first on chemistry and then on physics. The course provides an overview of the physical world and gives students tools and concepts to think clearly about matter, atoms, molecules, chemical reactions, motion, force, momentum, work and machines, energy, waves, electricity, light, and other aspects of chemistry and physics. Among other subjects, students study the structure of atoms; the elements and the Periodic Table; chemical reactions; forces, including gravitational, motion, acceleration, and mass; and energy, including light, thermal, electricity, and magnetism.



World History

Continuing a survey of World History from prehistoric to modern times, K12 online lessons and assessments complement the second volume of *The Human Odyssey*, a textbook series developed and published by K12. This course focuses on the story of the past from the fourteenth century to 1917 and the beginning of World War I. The course is organized chronologically and, within broad eras, regionally. Lessons explore developments in religion, philosophy, the arts, and science and technology. The course introduces geography concepts and skills as they appear in the context of the historical narrative. Major topics of study include:

- Cultural rebirth of Europe during the Renaissance
- The Reformation and Counter-Reformation
- Rise of Islamic empires
- Changing civilizations in China, Japan, and Russia
- The Age of Exploration, and the civilizations that had been flourishing in the Americas for hundreds of years prior to encounters with Europeans
- The Scientific Revolution and the Enlightenment
- Democratic revolutions of the eighteenth and nineteenth centuries
- The Industrial Revolution
- Nineteenth century nationalism and imperialism
- Transformations in communications and society at the turn of the Twentieth century

Math 8

Grade 8 mathematics course prepares students for more advanced study in algebra as students solve linear equations and systems of equations, work with radical and integer exponents, gain conceptual understanding of functions, and use functions to model quantitative relationships. To prepare students for more advanced study in geometry, the course emphasizes the Pythagorean theorem and a deepening exploration of similarity and congruence.

Art

Art 8 is intended for eighth-grade students and is a follow-up course to Art 7. The one-semester course continues students' exploration of world regions as they study the unique art and architecture that defines modern-day civilizations. In Art 8, students learn how to converse with others about art and the function of art in modern society as they analyze artworks and identify valid resources for the study of art history and the applied arts. Students do hands-on activities, participate in discussions, turn in written assignments, and take assessments on art from India, China, Japan, Europe, the United States, the Americas, Africa, and the Pacific cultures. Course content includes instruction on writing about art and a discussion of art historians.



Spotlight on Music

Spotlight on Music promotes successful music learning as students explore and build foundational music skills. The program includes enriching musical experiences that help students understand music concepts. Students are exposed to a variety of interactive learning activities, such as focused listening, singing, creative movement, dancing, real and virtual instruments, authentic recordings, videos, music theory exercises, and playing the recorder (grades 3–8). Spotlight on Music provides opportunities for students to make meaningful connections with math, language arts, science, social studies, and other subjects.

Health & Physical Education

In the eighth grade physical education course, students are exposed to various physical activities and fitness concepts that contribute to their overall physical activity level. Students learn a multitude of skills that will accompany them throughout their lives. Skills and concepts include target heart rate, the basics of fitness testing, goal setting, flexibility, aerobic/anaerobic exercise, strength training, and other individual games and activities, as well as team sports. This course gives students fitness knowledge and skills that can be incorporated into their lives now and in the future.

Business, Computers, and Information Technology

Business, Computers, and Information Technology exists to provide students with real-life instruction of various societal experiences they will have later in life. Topics covered include budgeting, entrepreneurship, coding, Microsoft Office Suite, management, digital citizenship, and the basics of information technology.