

# Core Class Descriptions

## Mathematics

### Grade 6

This course address the sixth grade Common Core content standards, focusing especially on ratios and proportional reasoning. With the College Prep Mathematics (CPM) text at its core, the class emphasizes problem-solving and conceptual understanding balanced with procedural fluency. Students are also introduced to the basics of integers, algebraic expressions and equations, coordinate graphing and measurement.

### Grade 7

This course is the second of a three-year sequence designed to prepare students for a rigorous college prep high school mathematics course. It continues to build students' skill in problem-solving as well as conceptual understanding and procedural fluency with rational number operations. Using the College Prep Mathematics (CPM) textbook as its core, the class develops skill with solving 2-step equations, proportional reasoning (including percentage applications), probability, and both 2- and 3-dimensional geometry. The lessons meet all of the Common Core content standards and embed the "Mathematical Practices" of the Common Core State Standards.

### Accelerated Grade 7

In this class, which actually begins with summer school in between 6th and 7th grades, students learn the totality of 7th and 8th-grade Common Core content standards and prepare to begin Integrated I in 8th grade. They develop proficiency with integers and rational numbers and apply their skills to the solution of complex, multi-step equations. They examine bivariate relationships using scatterplots, lines of best fit, and the concept of linear growth, including slope and y-intercept. Using the College Prep Mathematics (CPM) text as its core, students complete the year with the ability to solve challenging problems, understand topics conceptually and demonstrate procedural fluency in proportional reasoning, algebra, geometry and statistics.

### Grade 8

This is the third in a three-year course sequence which prepares students for rigorous high school mathematics. Using the College Prep Mathematics (CPM) textbook as its core, it primarily addresses bivariate relationships. Students analyze data using scatterplots and lines of best fit. They also investigate functions and coordinate graphs to characterize numerical relationships, and they use slope, y-intercept and equations in  $y=mx + b$  form to characterize linear growth. By the end of 8th grade, students are proficient in problem-solving and conceptual understanding, and they demonstrate procedural fluency with equations, 2- and 3-dimensional geometry and statistics.

## Accelerated Grade 8 (Integrated I)

This course is comparable to an honors 9th-grade high school class. Using the College Prep Mathematics text as its core, students advance their knowledge of functions and sequences to characterize linear and exponential growth. The class continues to develop proficiency in problem-solving, conceptual understanding and procedural fluency. The course covers standard topics in Algebra I, Geometry and Statistics/Probability, including systems of equations, triangle congruence proofs and least squares regression. (Note: Quadratic equations are not taught until students reach Integrated II.)

## **English Language Arts**

### Grade 6

Sixth graders will learn a variety of skills that comply with the Common Core State Standards in the content areas of Reading, Writing, Listening/Speaking, and Language. Students will learn the 4 Cs (Critical Thinking, Creativity, Collaboration, Communication) through Project Based Learning. Students will read a variety of novels, conduct research reports, and write constructed responses using Interactive Notebooks and Google Apps for Education.

### Grade 7

Students will master the 7th grade Common Core State Standards in Reading (both Literature and Informational Text), Writing, Listening & Speaking, and Language Standards. Students will compare and contrast primary and secondary source documents, analyze novels, and use interactive notebooks to organize their learning. Students also practice the 4C's of Common Core: critical thinking, collaboration, creativity, and communication.

### Grade 8

The 8th grade course for English Language Arts emphasizes the 8th Grade Common Core Standards in Reading Literature, Reading Informational Texts, Writing, Language, and Speaking & Listening. Via a curriculum that explores both middle school and high school level texts, primary source documents, and articles, students will apply themselves in the 4C areas of critical thinking, collaboration, communication, and creativity. Multifaceted analysis of and response to novels, poetry, short stories, and informative texts are a main focus of this course, as well as campus-wide learning strategies like Say Show So writing, interactive notebooks, and student-run collaborative projects and discussions.

## **Humanities/Social Sciences**

### Grade 6

Students will explore archeological evidence of human ancestors, investigate the characteristics of hunter-gatherer societies, learn about the emergence of agriculture and its impact on human societies' food surplus, division of labor, the beginnings of towns and cities, trade, specialized labor, government, social hierarchy, and learn about people and events that ushered in the dawn of major Western and non-Western civilizations. The developing social, economic, religious,

and political structures of their society will be taught. Emphasis will be placed on historical research in order to develop students' critical thinking skills and analysis.

### Grade 7

Students will explore the Medieval and Early Modern World focusing on the following civilizations: Fall of Rome, China, Japan, Europe, and Islam. Students will explore such topics as What is citizenship and what benefits come from it? and How did points of interest impact communication, technology, and the spread of ideas? Students will also develop an understanding of the social, economic, and religious structures in place during each time period. In addition, students will apply their learning with respect to the past to real-world problems that directly impact their lives today.

### Grade 8

Students will study historical events that have helped shape the United States from the 1500's-1800's. The curriculum will integrate with topics from several courses and follow the California History-Social Science Framework. Students will recognize how events in our country's history have impacted our current culture and practices. During each unit we will be building skills in the following areas: history, geography, citizenship, research skills, and cooperative learning. The course will include units that explore the topics of European exploration, establishment of the colonies, voting, westward expansion, the creation of the Constitution & the Bill of Rights.

## **Science**

### Grade 6

The integrated sixth grade science curriculum focuses on the three disciplinary core ideas of life science, earth science, and physics, including engineering, technology, and the applications of science. NGSS standards of weather, heat transfer, climate change and human effect on the planet will be integrated with engineering and environmental standards.

### Grade 7

Integrated Science 7: Students learn about the structure and properties of matter, atoms to molecules. Students learn how basic forms of matter are connected to natural resources; they will learn how natural matter compares to synthetic materials and how we can mitigate the issues caused by synthetic materials. Students learn how energy and matter cycles through ecosystems and the role of human impact on ecosystems.

### Grade 8

The integrated 8 science curriculum focuses on the three disciplinary core ideas of life science, earth science, and physics, including engineering, technology, and the applications of science. The curriculum is designed to give students the necessary skills that will prepare them for a transition into high school.

## Physical Education

In middle school Physical Education we build upon Elementary PE standards. In 6th grade, students primarily experience skill development (Ex. kicking, throwing, dribbling). In 7th grade students learn life-long exercise principles and develop an understanding of team sports. In 8th grade we emphasize team sports in an effort to prepare students for high school physical education and athletics. An overarching theme of middle school PE is teaching students to work with others of different ability levels.