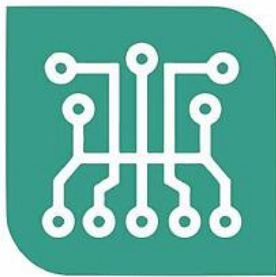
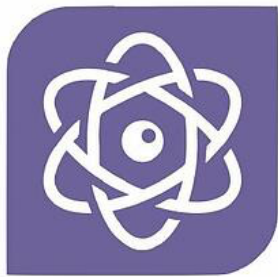


High School Catalog  
9<sup>th</sup> to 12<sup>th</sup> Grade



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ACADEMY

Brookfield Engineering Science & Technology Charter School

College & Career Pathways | Personalized Guidance Support

2024-2025 Academic Year

# ENGLISH

## ENGLISH 1A, 1B \*

### *Semester A*

English 1 is an integrated curriculum. Each unit contains thematically related lessons in five domains: reading and the study of literature, reading informational text, writing, speaking and listening, and language study, which includes word knowledge and grammar skills. Topics are presented in ways that help young adolescents relate literacy skills to other aspects of their lives. Writing assignments include narrative, expository, and persuasive/argumentative modes and emphasize the use of details and reasoning to support ideas. Speaking and listening lessons in Semester A emphasize collaborative discussion skills and peer review. Vocabulary development instruction is integrated into literature and informational text lessons. Each unit ends with an authentic assessment that presents students with a real-world scenario requiring some of the skills they learned in the unit.

### *Semester B*

Like semester A, semester B consists of integrated units focused on a theme or mode of study. The literature study in semester B focuses on analyzing different forms of literature and on comparative studies of world literature and literature delivered in different media. Writing and informational text lessons guide students through the stages of research and demonstrate how to evaluate, integrate, and share the information gathered during research. Students must share their ideas and analysis using several modes, including oral and multimedia presentations.

## ENGLISH 2A, 2B \*

### *Semester A*

English 2A is an integrated curriculum, with each unit consisting of thematically related lessons in five domains: analyzing literature, analyzing informational text, writing, speaking and listening, and language study, which includes word knowledge and grammar

skills. The skills that students practice for this course are similar to the skills in English 9 but require more independence and depth of thought. An introductory lesson at the start of each unit helps students identify any areas of weakness and review those topics before starting the more challenging grade 10 lessons. Writing assignments required in Semester A of this course include fiction, expository, persuasive, and analytical models, emphasizing the use of details, evidence, and reasoning to support ideas. Speaking and listening lessons in Semester A cover collaborative discussion skills, the peer review process, and how to plan and deliver informative speeches and presentations. Vocabulary development instruction is integrated into literature and informational text lessons. Each unit ends with an authentic assessment that presents students with a real-world scenario requiring some of the skills they learned in the unit.

### *Semester B*

Like semester A, semester B consists of integrated units focused on a theme or mode of study. Literature study in semester B focuses on the analysis of different forms of literature as well as the evaluation of various modes and forms of writing. Writing and informational text lessons guide students through the stages of a rigorous research process and demonstrate how to evaluate, integrate, and share the information gathered during research. Students must share their ideas and analysis using several modes, including oral and multimedia presentations.

## ENGLISH 3A, 3B \*

### *Semester A*

English for grade 11 is an American Literature course, with units organized chronologically according to periods in literary history. As students read foundation works of literature and other historical documents written between 1600 and 1900, they'll review and extend skills in five domains: analyzing literature, analyzing informational text, writing, speaking and listening, and language study, which includes word

knowledge and grammar skills. Each module or unit begins with a lesson that provides historical context for the era and introduces themes that emerged in the literature of that era. Each lesson provides students with an opportunity to review basic analysis skills before applying those skills to works of literature or key historical documents. Lessons focused on more difficult historical documents include activities that help students comprehend the complex ideas in these works. Writing modes addressed in Semester A of this course include narrative, reflective, persuasive, and analytical modes. Assignments emphasize the use of details, evidence, and reasoning to support ideas; writing lessons include model essays that demonstrate key features of each mode. The speaking and listening lessons in Semester A cover rhetoric, the peer review or writing workshop process, and performance skills. Vocabulary development instruction is integrated into literature and informational text lessons. Each unit ends with an authentic assessment that presents students with a real-world scenario requiring some of the skills they learned in the unit.

#### *Semester B*

Semester B of English 11 consists of units focused on historical eras and literary movements of the 20th and 21st century, such as Naturalism, Imagism, the Harlem Renaissance, and Post-Modernism. Literature analysis lessons in semester B focus on the forms of literature that were most commonly written during the Twentieth Century and how the forms, styles, and techniques of that century inform literature written today. Students will also evaluate various modes and forms of language expression, including single media and multimedia messages. Writing and informational text lessons guide students through the stages of a rigorous research process and demonstrate how to evaluate, integrate, and share the information gathered during research. Students are required to share their ideas and analysis using several different modes, including oral and multimedia presentations.

#### **ENGLISH 3A, 4B \***

Students examine major works of literature organized into thematic units. Each unit contains poetry, short stories, and a novel that revolve around the theme for the unit. Themes include the self, relationships, alienation, choice, and death. As students read these works, they have the opportunity to reflect on these important themes by writing in multiple modes and creating cross-disciplinary projects.

#### **MATH**

##### **ALGEBRA 1A, 1B \***

#### *Semester A*

Introduces students to the world of Algebra through expressions and equations. Students will evaluate algebraic expressions, solve linear equations and graph them. This course also steers students through various real-world scenarios with the emphasis on using basic statistics to interpret the information given and found. Students learn through online lesson materials, videos and interactive activities. The end of each unit tests students' understanding with a self-check quiz with feedback. Also included is a unit exam and project for students to apply what they have learned.

Teacher feedback is provided throughout the semester.

#### *Semester B*

Algebra 1 (semester B) builds on the concepts learned in the first semester by providing a strong foundation in solving problems. Students will work with problems and applications that involve exponents, quadratic equations, polynomials and factoring methods, rational and radical equations, data analysis and probability. Students will interact with course materials through online lessons, videos, interactive questions and real-world applications.

Each unit ends with a self-check quiz to confirm knowledge of the concepts learned. There is also a unit exam and project. Teacher feedback is given throughout the course.

## **ALGEBRA 2A, 2B \***

### *Semester A*

Further, it extends the learner's understanding of major algebra concepts such as expressions, equations, functions, and inequalities. An emphasis will be placed on the use of appropriate functions to model real-world situations and solve problems that arise from those situations. A focus is also on graphing functions by hand and understanding and identifying the parts of a graph. Algebra 2 (semester B) builds on the concepts learned in the first semester and prepares the learners with the building blocks needed to dive deeper into trigonometry, pre-calculus, and advanced probability and statistics.

## **CONSUMER MATH A, B**

This course focuses on the mathematics involved in making wise consumer decisions. Students explore the many ways in which mathematics affects their daily lives. The first semester will cover paychecks and wages, taxes, insurance, budgets, bank accounts, credit cards, interest calculations, and comparison shopping. Second-semester topics include vehicle and home purchasing, investing, and business and employee management.

## **GEOMETRY A, B \***

### *Semester A*

Geometry is the study of the measurement of the world. What makes Geometry so engaging is the relationship of figures and measures to each other and how these relationships can predict results in the world around us. Through practical applications, the student sees how geometric reasoning provides insight into everyday life. The course begins with the tools needed in Geometry. From these foundations, the student explores the measure of line segments, angles, and two-dimensional figures. Students will learn about similarity, triangles, and trigonometric ratios. Geometry A consists of six modules. Each module comprises ten lessons for 60 lessons in the course.

### *Semester B*

This course builds on the foundation of the first terms in Geometry. As in previous courses, deductive and inductive reasoning are emphasized, while applying problem-solving techniques to real-world problems. Students explore quadrilaterals and circles, and learn how an object is transformed, as well as how to represent that transformation algebraically and geometrically. Students calculate area and volume of 2-dimensional and 3-dimensional objects. Geometry B consists of six modules. Each module comprises ten lessons for a total of 60 lessons in the course.

## **Pre-Calculus A,B**

Students will study and apply concepts, graphs, and applications of functions, including polynomial, exponential, logarithmic, logistic, and trigonometric. Use of appropriate functions to model real-world situations and solve problems. A focus on graphing functions by hand and understanding and identifying the parts of a graph. The major units of introductory trigonometry, graphs, and trigonometric equations and identities, analytical trigonometry, sequences and series conic sections and an introduction to calculus. A focus is also on graphing functions by hand and understanding the parts of a graph.

## **SOCIAL STUDIES**

### **WORLD HISTORY A, B \***

#### *Semester A*

World History begins with a focus on the skills needed to read, understand, and analyze history, also demonstrating how historians and social scientists arrive at their conclusions about human history. Semester A covers the history of civilization from hunter-gatherer societies through the characteristics of the earliest civilizations to the Enlightenment period in Western Europe. The second half of Semester A explores early intellectual, spiritual, and political movements and their impact on interactions among world cultures.

### *Semester B*

Semester B applies the reading and analytical strategies introduced in Semester A to the events and movements that created the modern world. In the second semester, World History emphasizes the effects of the Industrial Revolution and changing attitudes about science and religion as well as the impact of European colonization. Students are encouraged to make connections between World War I and II and events related to the Cold War and between 19th-century imperialism and modern independence movements.

## **AMERICAN HISTORY A, B \***

### *Semester A: Creation of a Nation*

This course covers the discovery, development, and growth of the United States. Major topics include; American Indian cultures, European colonization of the Americas, and the causes and effects of the American Revolution. Geographical, economic, and political factors are explored as the key factors in the growth of the United States of America. American History I is a survey of the struggle to build the United States of America from the colonial period to the beginning of the twentieth century. By means of reading, analyzing, and applying historical data, students come to appreciate the forces that shaped our history and character as an American people. Not only are the topics of American history discussed, but students also explore research methods and determine accurate sources of data from the past. Knowing the facts and dates of history are just the beginning: each student must understand how history affects him or her.

### *Semester B: Expansion of a Nation*

American History B begins with a study of American life before the 1929 Stock Market crash and how the Roaring Twenties influenced society in the late 19th through early 20th centuries. Students will examine the causes and consequences of the Great Depression and

move on into a detailed study of World War II with an emphasis on America's role in the conflict. The course continues with an analysis of the Cold War struggle and America's rise as a superpower. The Civil Rights and Women's rights movements, pollution and the environment, and American domestic and foreign policy will be examined. The course wraps up with a summary of current events and issues, including a study of the Middle East. This course begins with an assessment of life in United States Pre-World War I and ends with the conflicts of the new millennium. Students look at the nation in terms of economic, social, and political trends. The experiences of the last century are summarized, including a look into the civil rights issues that have embroiled the nation in conflict. The development of the United States of America into a superpower is explored within a global context.

## **AMERICAN GOVERNMENT \***

This course will guide students through an in-depth study of the history, structure, and guiding principles of American government. The first unit will review the origins of government in general and American government in particular—from the earliest models for democracy to the founding documents that created a federalist system of government in the U.S. Several units will help students explore the roles and responsibilities of each branch of government as well as the impact that the Constitution has had and continues to have on the way government works and on the lives of individual Americans. The course's final unit will guide students through a series of projects that require them to apply what they have learned about American government to an issue that interests them.

## **ECONOMICS \***

This course 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. Students learn how individual and national economic decisions are made to allocate goods and services among competing users. Students apply economic principles to



think and problem solve. The study of Economics uses the view of economic institutions and policies to explore the history, organization, and functions of the U.S. government in controlling our economy. It offers students learning opportunities that build one on another. A goal of the course is for the student to develop the critical skills of analysis, synthesis, and evaluation in a demanding and thoughtful academic setting. Students are encouraged to use their knowledge of the policies and institutions of economics to develop their own views on current economic and monetary issues. They are taught how to apply what they have learned into personal financial activities. The course looks closely at the economic knowledge and values of the country and gives students a look into the problems faced by presidents, and congressional representatives. It also covers the roles of political activists, political parties, interest groups, and the media in shaping the U. S. economy. The Supreme Court is presented as the voice of reason in the balance of powers. Students are encouraged to perform at higher levels as they are presented with historical documents and additional readings, work with a set of facts arranged by theme, become skillful in notetaking, and join in student discussions. Students develop and demonstrate their writing skills by preparing extended research-based papers.

## SCIENCE

### BIOLOGY A, B \*

#### *Semester A*

Biology A introduces students to the scientific method and the major concepts of biology from an historical and practical viewpoint. The three major themes of this course are the cell, the molecular basis of heredity, and the interdependence of organisms. Students who take this class will have a deeper appreciation for the complexities of living organisms. Life on this planet, unlike anywhere else in the observable universe, is complex and highly organized. Whether examining life on the molecular or the planetary level, it exhibits a highly organized structure that inspires awe by its

genius and complexity. In the last 50 years, discoveries have launched new branches of biology that have transformed the daily routine, from conception to death. New challenges await, such as the current crisis in ecology, global warming, and the resurgence in viral disease. To make rational choices in the 21st century, the citizen must have a basic understanding of biological concepts and the reasoning behind them. Biology A is presented in a multimedia format using interactive modules, labs, narrated animation, text, and videos to present the study of life on this planet. Students work through and complete several self-check activities and quizzes for practice and participate in self-reflection. In each unit, students complete the unit exam and deliver a unit project. Teacher feedback is provided throughout the course.

#### *Semester B*

Biology B is a continuation of the basic course in biology, Biology A. The major concepts covered are population dynamics and evolution. Students explore population dynamics through the study of mutualism, predation, parasitism, and competition. The theory of evolution is presented, along with the many evidences and details that make evolution the backbone of modern biology. From biochemistry to evolution, biology fascinates people. Biochemists first astounded the world by showing that life obeys the same chemical principles as all creation, but that life engineer's chemistry to its own needs. Decades later, Darwin shocked the world by suggesting that life evolves according to the conditions of the environment it inhabits. Evolution, often debated and derided, has survived to become a key concept of biology. This second course in biology examines the wonder of life and its mechanisms. Students work through and complete several self-check activities and quizzes for practice and participate in self-reflection. In each unit, students complete the unit exam and deliver a unit project. Teacher feedback is provided throughout the course.

## CHEMISTRY A, B \*

### *Semester A*

In this course, students will discover what chemistry is, and how it is used and found all around us. The importance of the scientific method to solve real world problems will be investigated. Knowledge will be gained in the following areas: types of matter, atomic structure, chemical periodicity, chemical formula writing and naming, chemical equations. This course will also stress the important relationship between math and science while studying measurement, metric system and stoichiometry. Students will use higher order thinking throughout the entire course. An algebra background is recommended because of the amount and type of math involved.

### *Semester B*

It follows the Chemistry 1 A course. In Chemistry 1 B, students will investigate chemical bonding, thermochemistry, and acids and bases. The importance of the scientific method to solve real world problems will be investigated. Knowledge will be gained in the following areas: organic chemistry, biochemistry, and nuclear chemistry. This course will also stress the important relationship between math and science. Students will use higher order thinking throughout the entire course. An algebra background is recommended because of the amount and type of math involved.

## EARTH SCIENCE A, B

### *Semester A*

The first three modules of Semester 1 cover Scientific Inquiry, the Structure and Composition of the Universe, and the Features of the Solar System. Students learn the importance of scientific inquiry and how to communicate the results of scientific investigations. They then have material on the formation of the universe, including the Big Bang Theory, the motions of celestial objects, and stellar evolution. The third module covers material related to the Solar System, including features of the Sun and the planets and the movements of Earth. The second three modules of Semester 1 cover

Weather, Climate, and Earth's Water Cycle. Students first learn in Module 4 about the atmosphere and clouds, as well as the factors that influence local and global climate. In Module 5, they continue by learning about weather and air masses, meteorology, and storms. Module 6 then discusses the water cycle, including groundwater and ocean features, as well as water scarcity and pollution.

### *Semester B*

The first three modules of Semester 2 cover the physical structure of the Earth and Earth's tectonic system, including the rock cycle, tectonic activity, and mountain building. It then covers weathering and erosion and soil formation. The next material in the course then addresses the concept of systems; it addresses the Earth as a system, feedback in systems, and Earth's major nutrient cycles. The second three modules of Semester 2 cover geologic history, including the evolution of Earth's atmosphere, the geologic time scale, and the fossil record. It then goes over natural resources and the effects of human population on natural resources. The course wraps up with a discussion of human society and its interconnectedness with the Earth's environment, how science and technology work together, and the technological design process in earth science applications.

## PHYSICS A, B \*

### *Semester A*

Students begin their exploration of physics by reviewing the International System of Units (SI), scientific notation, and significant digits. They then learn to describe and analyze motion in one and two dimensions. Students learn about gravity and Newton's laws of motion before concluding the course with an examination of circular motion. Students apply mathematical concepts such as graphing and trigonometry in order to solve physics problems. Throughout the course, students apply their understanding of physics by playing roles like science museum curator and elementary teacher.

### *Semester B*

Physics B continues the student's exploration of mechanics while also guiding them through some other important topics of physics. Students begin by exploring simple harmonic motion, wave properties, and optics. Students then learn the basics of thermodynamics and fluids. Afterward, the students explore the principles of electricity and magnetism. Finally, students explore the area of physics known as Modern Physics, which includes topics such as the photoelectric effect, nuclear science, and relativity. This is a trig-based course. It is assumed you know and can use trigonometry.

## **WORLD LANGUAGES**

### **AMERICAN SIGN LANGUAGE 1A\*\***

Did you know that American Sign Language (ASL) is the third most commonly used language in North America? American Sign Language 1a: Introduction will introduce you to vocabulary and simple sentences so that you can start communicating right away. Importantly, you will explore Deaf culture – social beliefs, traditions, history, values and communities influenced by deafness.

### **AMERICAN SIGN LANGUAGE 1B\*\***

The predominant sign language of Deaf communities in the United States, American Sign Language is a complex and robust language. American Sign Language 1b: Learn to Sign will introduce you to more of this language and its grammatical structures. You will expand your vocabulary by exploring interesting topics like Deaf education and Deaf arts and culture.

### **AMERICAN SIGN LANGUAGE 2A\*\***

Building upon the prior prerequisite course, emphasis in this course is placed upon comprehension and signing. Learners will also continue to establish their communication skills and foster their understanding of deaf culture. In addition to learning classifiers, glossing, and mouth morphemes, students will explore

vocabulary for descriptions, directions, shopping, making purchases, and dealing with emergencies.

### **AMERICAN SIGN LANGUAGE 2B\*\***

Building upon the prior prerequisite course, students will increase their proficiency by learning about sequencing, transitions, role-shifts, and future tenses. Students will learn how to tell a story and ask questions, benefiting with greater exposure to deaf culture. Speed, conversations, signing skills, and cultural awareness are characteristic of this course.

### **Arabic 1A, 1B\***

In the first level, you will learn the language basics, greetings and introductions, work and school, shopping, travel, and about past/future as you build grammar and vocabulary of the language. You will also learn about the culture of the countries that speak the language.

### **Arabic 2A, 2B \***

In the second level, you will continue to build your grammar, vocabulary, and speaking skills as you explore friends and social life, dining and vacation, home and health, life and world, everyday things, and places and events. Continue to explore the culture of the language-speaking countries

### **Arabic 3A, 3B\***

In the third level, you will reach a higher level of grammar and vocabulary mastery while enriching your speaking skills. You will study tourism and recreation, professions and hobbies, at home and around town, style and personal wellness, business and industry, and arts and academics. Continue to explore the culture of the language speaking countries.

### **FRENCH 1A, 1B \***

French 1 focuses on developing listening skills by repeated exposure to the spoken language. Speaking skills are encouraged through recommended assignments using voice tools. Reading and writing



skills, as well as language structures, are practiced through meaningful, real-life contexts. The use of technology enhances and reinforces authentic language development and fosters cultural understandings through exposure to native speakers and their daily routines

### **FRENCH 2A, 2B \***

#### *Semester A*

Semester A focuses on the continuation and enhancement of language skills presented in Level 1. Vocabulary and grammar structures are revisited and expanded to provide students an opportunity to move towards an intermediate comprehension level. Speaking and listening skills are enhanced through recommended real-life voice activities. Listening skills are honed through online dialogues. Reading and writing skills are developed through access to completion of meaningful activities, reading of culturally related articles of interest and responding to reading in the target language. The use of technology enhances and reinforces authentic language development and fosters cultural understandings through exposure to native speakers and their daily routines.

#### *Semester B*

Semester B continues the enhancement of language skills. Vocabulary and grammar structures are revisited and expanded as students explore other French-speaking areas. Speaking and listening skills are enhanced through recommended real-life voice activities. Listening skills are honed through online dialogues. Reading and writing skills are developed through access to completion of meaningful activities related to travel, to the Olympics, to natural disasters, and to the space program. Reading of culturally related articles of interest and responding to reading in the target language, along with the use of technology, reinforces authentic language development and fosters cultural understandings through exposure to native speakers and their daily routines.

### **GERMAN 1A, 1B \***

#### *Semester A*

This German 1A course is an introductory course teaching basic comprehension and communication in German. It coordinates the study of language with culture through the use of video, audio and mass media production. This course assumes prior or no knowledge of the German language. It introduces the fundamentals of conversational and grammatical patterns of the German language with presentations to present the material. Students who complete the course successfully will begin to develop a functional competency in the four primary language areas: speaking, reading, listening and writing, while establishing a solid grammatical base and exploration into German culture.

#### *Semester B*

The second semester course will expand on the knowledge gained from German 1A and further develop their skills in pronunciation, grammar skills, grammar structures and vocabulary. Oral practice (via Voice Tools), homework assignments, games, songs, watching videos, quizzes, tests, projects and other activities such as writing wikis and journal entries, will be emphasized to accomplish this goal. The different cultures of the German-speaking world are emphasized through readings, videos and other activities. Taking the time to learn another language is a mind-expanding activity that can open up a world of opportunities and advantages.

### **GERMAN 2A, 2B \***

#### *Semester A*

In this course, students build on grammar and language skills that they acquired during their G1A and G1B courses. While reviewing basic grammar skills, (present and past tenses), students learn and study stem-changing verb conjugation and explore cultural themes regarding current events, famous German people, music and famous festivals.

### *Semester B*

In the second semester course, students increase their proficiency in being able to communicate by forming more complex German sentences in a variety of tenses using all four cases (Nominative, Accusative, Dative and Genitive). The variety of topics increases also, from exploring different careers to discussing relationships. Cultural themes are entwined throughout this course related to going shopping, to going to the zoo and also to travel throughout the German-speaking world.

### **LATIN 1A, 1B \***

In the first level, you will learn the language basics, greetings and introductions, work and school, shopping, travel, and about past/future as you build grammar and vocabulary of the language. You will also learn about the culture of the language speaking countries.

### **LATIN 2A, 2B \***

In the second level, you will continue to build your grammar, vocabulary, and speaking skills as you explore friends and social life, dining and vacation, home and health, life and world, everyday things, and places and events. Continue to explore the culture of the language speaking countries.

### **MANDARIN 1A, 1B \***

In the first level, you will learn the language basics, greetings and introductions, work and school, shopping, travel, and about past/future as you build grammar and vocabulary of the language. You will also learn about the culture of the language speaking countries.

### **MANDARIN 2A, 2B \***

In the second level, you will continue to build your grammar, vocabulary, and speaking skills as you explore friends and social life, dining and vacation, home and health, life and world, everyday things, and places and events. Continue to explore the culture of the language speaking countries.

### **MANDARIN 3A, 3B \***

In the third level, you will reach a higher level of grammar and vocabulary mastery while enriching your speaking skills. You will study tourism and recreation, professions and hobbies, at home and around town, style and personal wellness, business and industry, and arts and academics. Continue to explore the culture of the language speaking countries.

### **SPANISH 1A, 1B \***

Spanish 1, Semester A, is an introduction to Spanish language and culture. Students learn to start with the basics of greetings and basic conversation, working to incorporate ideas from their life and experiences in Spanish conversation. This will be accomplished through written and verbal expression of the Spanish language.

Building upon Semester A, Spanish 1 Semester B expands to asking questions and conversational Spanish throughout one's neighborhood and daily life. Through real-life scenarios and learning examples, students will describe situations, in Spanish, both verbally and written.

### **SPANISH 2A, 2B \***

Students build upon the foundation developed in Spanish 1. They continue to build vocabulary, learn new verb tenses and other grammar concepts, and they increase their ability to communicate with others. They learn new concepts, like reflexive verbs, infinitive expressions, commands, the imperfect tense. Semester B will continue building on vocabulary, grammar concepts and communicating effectively in the target language. You will explore new countries where Spanish is spoken and continue to keep abreast of current events in the Spanish-speaking world.

### **SPANISH 3A, 3B \***

Students continue to develop their ability in reading, writing, speaking, and understanding Spanish through a systematic review of its structure. 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.

## PHYSICAL EDUCATION

### *P.E. 1 A/B and P.E. 2 A/B*

In this course, students are introduced to exercise and physical fitness and the general recommendations for physical activity, while examining the benefits of exercise, lifestyle choices that can help prevent disease, and tips for kick-starting a healthier lifestyle. Students will explore each type of fitness, include the benefits, and the federal guidelines for exercise in detail. Students will also learn about bones and joints and the functions of the skeleton, and the different types of movements that occur at various joints. Students will

learn about the different types of muscle in their bodies, and how they are structured, with particular attention to the different types of muscle fibers. Students will explore the functions that muscles perform, how they work, and their interaction with the central nervous system and special considerations for safe and effective exercise. Students will learn how the cardio and respiratory systems work and interact with each other and about the different blood vessels that make up the circulatory (vascular) system. Students will learn about the body's energy systems and how eating and drinking relates to exercise. Finally, students will learn about the psychology of exercising.