

Life Science

Life Science is essentially a pre-biology course, examining the wonders of God's living creation from cellular organisms to His most complex organism, Man. An emphasis on practical application of the scientific method through beginning laboratory experimental technique is combined with training in scientific writing and note-taking. Participation in our school's annual Science Fair is a required part of the curriculum, which is also enhanced by a four-day integrated marine biology/natural history unit of study at the Cape Cod National Seashore.

Physical Science

Foundational principles and terminology related to the study of chemistry and physics are introduced in this class. Further experience in laboratory experimentation is offered, along with instruction in data collection technique and application of scientific laws and formulas to specific scientific questions. Curriculum includes introduction to and discussion of the periodic table, atomic model, chemical reactions, chemical formulas, concepts of mass, density and volume, and an emphasis on natural laws governing physical phenomenon which reflect the intelligent design of a God of order and enduring truths. Participation in the annual Science Fair is required, and field trips and related media supplement the course.

Biology

This college-preparatory course is divided into two main units of study. First, "The Science of Life" includes an overview of major biological discoveries and theories, as well as an in-depth look at cellular processes and genetics. Secondly, "The Science of Organisms" is a detailed study of microbiology, as well as studies in zoology, including the structure and life of processes of plants, Invertebrates, Arthropods, Endothermic and Exothermic Vertebrates. (A third unit, "The Study of Human Life", is covered in the Bio II elective course, Anatomy and Physiology) Laboratory exploration is a major part of this class, and correct application of the Scientific Method, introduced in grades 7 and 8, is expected in lab reports. In addition, field excursions are planned to enhance the experience in the collection of specimens as well as to expose students to the work of biologists in the field.

Chemistry

Chemistry has been described as an experimental science base on observation. As such, it has an intense laboratory component, along with the study of more advanced principles and application of chemical formulas. Strict safety protocol (as in all lab settings) is adhered to, with an expectation of increased independent lab work and curriculum review.

Anatomy/Physiology

An advanced science elective designed for upperclassmen interested in exploring human anatomy and physiology at a more in-depth level. Curriculum includes a continuation of the Biology I curriculum combined with college-level resources and an anatomy coloring book, which the students keep at the end of the course. Supplemental readings and field trips are also included.

French I

An introductory course to French in which students will be exposed to all aspects of the present indicative tense including regular, irregular and reflexive verbs in their positive, negative and interrogative forms. They will acquire a working vocabulary encompassing expressions of time, date, weather, numbers and everyday life (food, shopping, school, home, leisure, health, sports, etc.). Initial emphasis will be placed on accurate reading, writing, audio-comprehension, and pronunciation. Project work on various aspects of French culture will be assigned by the teacher.

French II

A continuation of French I in which students will develop skills acquired in French I and be introduced to the imperfect, perfect, pluperfect and future tenses both for regular and irregular verbs. Their working vocabulary will be extended to include the world of transportation, work, entertainment, travel, clothing, music, driving. The class will be semi-taught in French to further develop audio-comprehension skills. More emphasis will be placed on accurate oral skills. Students will be required to learn Bible verses in French and will be assigned project work to cover aspects of French literature, fine arts and history.

Latin I

As they follow the fortunes of a patrician Roman family in AD 80, students are introduced to various aspects of Roman culture and the basic elements of the language. Students will be expected to learn the present indicative tense in all four conjugations; first, second, and third declension endings; acquire a basic working vocabulary and knowledge of everyday Latin expressions in common usage today. In so doing, students will develop an understanding of the case system still used in many modern languages and come to understand the derivation of their own mother tongue. Memorization of some Bible verses in Latin will be required. Project-based work on some aspect of Roman culture will be assigned each term. All students will be entered for the National Latin Exam in March.

Latin II

As a continuation of Latin I, students will extend their working vocabulary, be introduced to the dative case and become acquainted with the imperfect, future and perfect tenses. Further aspects of Roman history will be explored including the early kings of Rome, the Republic and the Caesarian age during the Pax Romana. More emphasis is placed on understanding the etymology of English words. Memorization of more complicated Latin verses from the Bible is required. Project-based work on some aspect of Roman culture will be assigned each term. All students will be entered for the National Latin Exam in March.

Latin II Honors

In addition to the curriculum of Latin II, Honor students will be required to produce monthly project-based work on a feature of Roman culture as outlined by the teacher, translate from English into Latin and sit a more complex and rigorous Latin final exam. All students will be entered for the National Latin Exam in March.

Pre-Algebra

Pre-Algebra picks up where elementary mathematics leaves off. In preparation for higher level thinking, students will be introduced to such topics as roots, advanced application of scientific notation, distance problems, Pythagorean Theorem, various volume problems, and permutations.

Algebra I

In keeping with its purpose of laying the foundation for all higher mathematics, Algebra I has a unifying concept of an *Expression*. Students will learn, for increasingly complex expressions, to write an expression representing a variable quantity in some “real-world” situation, find the value of the expression when “X” is known, and find “X” when the value of the expression is known. Students will be introduced to linear and quadratic equations, inequalities, properties of real numbers, exponents, rationales and radicals.

Algebra II

Building on the concepts of solving expressions developed in Algebra I and the skill of logical thinking, the Algebra II class prepares students to use advanced algebra skills and concepts. Students will develop their mathematical powers through problem solving strategies, while using critical thinking and reasoning activities to connect algebra to daily life. The course covers the topics of functions, systems of equations and inequalities, matrices, polynomials, complex numbers, and quadratic functions.

Pre-Calculus

Pre-Calculus is designed as a foundational course to prepare the student for a course in Calculus. Topics include analysis and application of functions – polynomial, rational, exponential, logarithmic, and trigonometric – and analytic trigonometry with proofs. The course integrates the use of the TI graphing calculator into classroom instruction and homework.

Calculus

Calculus is designed to teach topics covered on the College Board Advanced Placement Exam for Calculus AP. Topics include limits and continuity, differential calculus, integral calculus, and calculus techniques and applications. The course integrates the use of the TI-89 graphing utility into classroom instruction and homework.

New Testament Survey

Using a survey of the New Testament to give students an understanding of the Bible as a life application tool, this class also seeks to develop an appreciation for its historical value, specifically focusing on the book of Acts. This course will focus on the importance of being rooted in the Word and the promises that follow. Classes will be structured around the question, "How does this apply to me and life today?" Personal devotion and Bible reading time will be promoted for the cultivation of a deeper relationship with God.

Modern Christian Thought

This class is designed to equip students with a better understanding of who they are as Christians living in a non-Christian world. Students will also be studying Christianity in comparison with other worldviews. The course seeks to strengthen their faith in God through contemplation of works by Christian authors, and answering the question, "Why do I believe in God and how does this belief define who I am?"

World History

This course will give students an understanding of past occurrences in an effort to enlighten our present condition. Beginning with the theories of human origins, we will explore past events and situations in relation to events that are relevant at this time and to the Bible. Use of the text and the internet will help students to understand the growth of civilizations, and cultural and technological advances.

Current Events

This class is designed to teach students the importance of staying in touch with current events. Class discussions will range from any local newsworthy topic to major developing issues in the world. The goal of the course is to give students an understanding of the government system and reiterate the significance of being aware. This is done in an effort to encourage them to be part of the decision making process in the formation of new policies and the election of new leaders.

U.S. History/Geography

This course is a study of the significant events which were instrumental in shaping our country - politically, economically, socially, and spiritually. The study of American Geography is a strong integral part of the year's curriculum. Students will learn from texts, primary sources, and personal research. Topics of discussion and unit study will include - the ideologies upon which our country was founded, important historical movements and figures, world political issues which affected and continue to affect our country's development, America's rise as a world power, U.S. economic, and political systems and how they have evolved, etc.

Foundations of English Literature

The course is focused on the basics of reading literature (poetry and prose) at a secondary level. Students are taught the fundamentals of reading deeply and intelligently, going beyond mere comprehension of literary works. This is accomplished through in-class questioning, analysis, and discussion of texts. Students are also encouraged to form their own opinions independently through short and long essays/responses, reaction to analysis, and questions for discussion and individual thought. Also focused on are the elements of literature – what makes up a short story (theme, plot, setting, character, etc.) or poem (meter, rhyme, structure, etc.) – as well as word usage and definitions (through frequent vocabulary quizzes, drawn from class readings). Works read include short stories; poetry; full-length novels, and/or plays. With basic grammar skills in place, grammar instruction is limited to occasional study in relation to, or drawn from, the literature curriculum. Frequent vocabulary lists and tests, drawn from readings, underline the importance of . To complete the English curriculum, each term students are responsible for the independent reading and critical review of one novel, as well as the memorization of one poem, taken from class study.

British/American Literature - (alternated yearly)

The British/American Literature courses place literature within a cultural and historical framework. Students read prose and poetry not only for its literary value, but also in an effort to understand the time/area/zeitgeist out of which the literature was created. The purpose of this focus is not only to further the students' exposure to and understanding of literature, but also to stress the merit and relevance of other areas/time periods in relation to their own. Through background information of author and time period, as well as through classroom discussion and analysis, students form a well-rounded opinion and understanding of the texts and culture. Students are also encouraged to form their own opinions independently through short and long essays/responses, reaction to analysis, and questions for discussion and individual thought. Vocabulary study is drawn from readings, and grammar review is presented through SAT preparation. Quarterly, students are responsible for the independent reading and critical review of one novel, as well as the memorization of one poem, taken from class study.