SCIENCE

Physical Science Grade 8 *SOL Test Required* The Physical Science standards stress an in-depth understanding of the nature and structure of matter and the characteristics of energy. The standards place considerable emphasis on the technological application of physical science principles. Major areas covered by the standards include the organization and use of the periodic table; physical and chemical changes; nuclear reactions; temperature and heat; sound; light; electricity and magnetism; and work, force, and motion	**Biology I** Grade 10 **Biology Part I** Grade 10 **Biology Part II** Grade 11 This is an introductory course into the study of living organisms. Students will survey the plant, animal, and microorganism kingdoms, exploring the anatomical and behavioral adaptations which allow certain organisms to survive. After completion of the class, students should appreciate well the vast scope of the history of life on earth.
Environmental Science Grade Level: 9 The purpose of the new Environmental Science course is to provide foundational content that will prepare students for either Earth Science I or Biology I while also including aspects of other disciplines such as civic engagement, mathematics, and engineering. The goal of the course is to provide the students with the skills and content necessary for them to analyze current and future environmental issues, both natural and man-made, through a critical lens and to provide a platform to make informed decisions. This course will provide students the opportunity to learn environmental concepts in depth and build on the concepts currently embedded in the *2010 Science Standards of Learning.*	**Biology II: Ecology** Grade Levels: 11-12 *Prerequisites: Biology*. This course is laboratory based and covers biology and biology honors topics in depth and focuses on contemporary issues. Topics may include environmental science, local flora and fauna, diseases, genetics, evolution, DNA technology, forensic science, anatomy and physiology, food safety, genetically modified foods, and marine biology. Students will be challenged to learn and research, utilizing both classroom experimentation and literature reviews from written and electronic resources, and to present topics in biology in greater depth. Students may engage in fieldwork. Dissections are part of the course; however, alternative projects will be provided for dissections.

Earth Science Earth Science Part I Earth Science Part II Grade Levels: 10 -12 Earth-Space Science is a course dealing with the topics of geology, meteorology, oceanography, astronomy, conservation, and the environment. The course is divided into lecture-demonstration periods, study periods, and laboratory work periods. The course attempts to show the students the relationships between themselves and Earth processes and the universe. *Not Offered for the 2019-2020 School Year*	**Chemistry** Grade Levels: 11-12 *SOL Test Required* *Prerequisite: Biology I & Algebra II; pass Algebra II SOL and Biology SOL; teacher recommendation* This course is laboratory based. It covers the study and investigation of the structure and properties of matter. The course addresses the composition and the changes that matter undergoes. It will include a study of energy, reactions, acid/base theory, and how they relate to everyday life. Laboratory investigations with write up will be taught to accommodate the college bound student. Students will take an SOL in the spring.
Career Investigations This course allows students to explore career options and begin investigating career opportunities. Students assess their roles in society, identify their roles as workers, analyze their personal assets, complete a basic exploration of career clusters, select career pathways or occupations for further study, and create an Academic and Career Plan based on the their academic and career interests. This course also helps students identify and demonstrate the workplace skills that employers desire in their future employees.	**Physics I** Grade Levels: 11-12 *Prerequisite or co-requisite: Pre-calculus* This course explores the behavior of our physical world through analysis of motion using force, energy, and momentum concepts, followed by a study of electricity and magnetism, light, sound, and wave behavior. The necessary mathematics is reviewed in class and is used to support the more challenging conceptual understanding that will be developed.