

SCIENCE

EARTH SPACE SCIENCE 20013100

Grade(s): 9-12

Pre-Req: N/A

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

EARTH SPACE SCIENCE HONORS 20013200

Grade(s): 9

Pre-Req: N/A

While the content focus of this course is consistent with the Earth/Space Science course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

BIOLOGY 20003100

Grade(s): 9-12

Pre-Req: N/A

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

***This course is a one-year course and is only complete when the student takes the Biology EOC. The Biology EOC will count for 30% of the student's grade.**

- **Honors Level Course Note:** Academic rigor is more than simply assigning to students a greater quantity of work. Through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted, students are challenged to think and collaborate critically on the content they are learning.
- **Advanced Placement Course:** Students earn 6 Quality Points on their weighted GPA for these courses; however, to earn college credit, the student must pass an end of the year course given by the College Board.
- **LH Courses:** LH is designated Local Honors. This means that the district has deemed the course honors; however, the state has not. Some scholarships, and post secondary institutions may not consider these courses Honors level.

BIOLOGY HONORS/GIFTED 20003200(7)

Grade(s): 9-10

Pre-Req: Reading level 3 or above.

While the content focus of this course is consistent with the Biology I course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

***This course is a one-year course and is only complete when the student takes the Biology EOC. The Biology EOC will count for 30% of the student's grade.**

AP BIOLOGY 20003400

Grade(s): 11-12

Pre-Req: Successful completion of Biology I Honors with an A or B and a level 3 or higher Reading Score

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes — energy and communication, genetics, information transfer, ecology, and interactions.

ENVIRONMENTAL SCIENCE 20013400

Grade(s): 10-12

Pre-Req: N/A

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

AP ENVIRONMENTAL SCIENCE 20013800

Grade(s): 11-12

Pre-Req: Level 3 or higher in reading

The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science, through which students engage with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. Environmental Science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography.

- **Honors Level Course Note:** Academic rigor is more than simply assigning to students a greater quantity of work. Through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted, students are challenged to think and collaborate critically on the content they are learning.
- **Advanced Placement Course:** Students earn 6 Quality Points on their weighted GPA for these courses; however, to earn college credit, the student must pass an end of the year course given by the College Board.
- **LH Courses:** LH is designated Local Honors. This means that the district has deemed the course honors; however, the state has not. Some scholarships, and post secondary institutions may not consider these courses Honors level.

CHEMISTRY 1 20033400

Grade(s): 10-12

Pre-Req: Successful completion of Algebra 1 and successful completion of Algebra 1 or concurrently enrolled in Geometry or above.

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

CHEMISTRY 1 HONORS 20033500

Grade(s): 10-12

Pre-Req: Successful completion of Algebra 1 & Geometry and concurrently enrolled Algebra 2.

While the content focus of this course is consistent with the Chemistry I course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

AP CHEMISTRY 20033700

Grade(s): 11-12

Pre-Req: Successful completion of Algebra 2 and Chemistry

The AP Chemistry course provides students with a foundation to support future advanced course work in chemistry. Through inquiry-based learning, students develop critical thinking and reasoning skills. Students cultivate their understanding of chemistry and science practices as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium.

- **Honors Level Course Note:** Academic rigor is more than simply assigning to students a greater quantity of work. Through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted, students are challenged to think and collaborate critically on the content they are learning.
- **Advanced Placement Course:** Students earn 6 Quality Points on their weighted GPA for these courses; however, to earn college credit, the student must pass an end of the year course given by the College Board.
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PHYSICS 1 20033800

Grade(s): 11-12

Pre-Req: Successful completion of Algebra 2 and Chemistry

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

PHYSICS I HONORS 20033900

Grade(s): 11-12

Pre-Req: Successful completion of Algebra 2 and Chemistry

While the content focus of this course is consistent with the Physics I course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

AP PHYSICS 1 20034210

Grade(s): 11-12

Pre-Req: Successful completion of Honors Chemistry and Algebra 2 or concurrently enrolled in Algebra 2.

Course will cover mechanics in depth. Vibration and waves, sound and introduction to electrical circuits are additional topics. The course emphasizes physics content, critical thinking skills and scientific investigation.

AP PHYSICS C 20034300

Grade(s): 11-12

Pre-Req: PreCalculus

The course applies elementary calculus (which is taught as part of the course) to the study of mechanics. Electricity and Magnetism is also covered. Problem solving and scientific reasoning are emphasized throughout the course.

- **Honors Level Course Note:** Academic rigor is more than simply assigning to students a greater quantity of work. Through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted, students are challenged to think and collaborate critically on the content they are learning.
- **Advanced Placement Course:** Students earn 6 Quality Points on their weighted GPA for these courses; however, to earn college credit, the student must pass an end of the year course given by the College Board.
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ANATOMY AND PHYSIOLOGY HONORS 20003600

Grade(s): 10-12

Pre-Req: Successful completion of Biology

Anatomy & Physiology Honors will focus on the study of the structure and function of the human body with an emphasis on how each system plays a vital role in **HOMEOSTASIS**. It is designed to prepare students for college in the biological sciences and for careers in the biological sciences, especially those in health and medicine. It is also especially relevant to student athletes and other students who are particularly interested in learning about the human body, how it works, and how to take care of it. Course content focuses on body tissues, human organ systems and their major processes, and current health issues. There are many diverse class, laboratory, homework, and research activities that enhance students' understanding of course concepts, develop students' analytical and critical thinking skills, promote student inquiry, and build students' scientific skills and processes. This course is recommended for students willing to strive for academic success; it is a challenging course that requires and improves student motivation and academic skills.

MARINE SCIENCE 1 20025000

Grade(s): 10-12

Pre-Req: Successful completion of Regular Biology

Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

MARINE SCIENCE 1 HONORS 20025100

Grade(s): 10-12

Pre-Req: Successful completion of Honors Biology

While the content focus of this course is consistent with the Marine Science I course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

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MARINE SCIENCE 2 HONORS 20025300

Grade(s): 11-12

Pre-Req: Successful completion of Marine Science 1

While the content focus of this course is consistent with the Marine Science 2 course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course. The National Science Teachers Association (NSTA) recommends that at the high school level, all students should be in the science lab or field, collecting data every week. School laboratory investigations (labs) are defined by the National Research Council (NRC) as an experience in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC, 2006, p. 3). Laboratory investigations in the high school classroom should help all students develop a growing understanding of the complexity and ambiguity of empirical work, as well as the skills to calibrate and troubleshoot equipment used to make observations. Learners should understand measurement error; and have the skills to aggregate, interpret, and present the resulting data (National Research Council, 2006, p.77; NSTA, 2007).

PHYSICAL SCIENCE 20033100

Grade(s): 10-12

Pre-Req: N/A

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ASTRONOMY HONORS 20209100

Grade(s): 12

Pre-Req: Successful completion of Algebra 2

Love space? Want to know the latest findings in Astronomy and Space Science? Then this is the course for you! First Semester focuses on the basics of the night sky, the history of Astronomy, and a tour of the Solar System. Second Semester focuses on stars, galaxies, and the universe at large – amazing and eye-opening material that will expand your mind and give you a new perspective on the Earth and on yourself. You will be given a variety of options for learning about this wonderful subject, but whatever option you choose, you will be expected to work hard every minute of every day in class. However, homework assignments are limited. Tests are designed at an Honors-level, but daily grades ensure that the vast majority of students will earn an 'A' or 'B'. So make the most of your Senior year and sign up for this exciting course today!

- **Honors Level Course Note:** Academic rigor is more than simply assigning to students a greater quantity of work. Through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted, students are challenged to think and collaborate critically on the content they are learning.
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