SCIENCE SEQUENCE

9th	**Foundations of Physics**	**Freshman Physics**	**Honors Freshman Physics**

10th	**Foundations of Chemistry**	**Chemistry**	**Honors Chemistry**

11th	**Foundations of Biology**	**Biology**	**Honors Biology**

11th – 12th Additional Junior and Senior Course Options

AP Biology (Full Year)
AP Chemistry (Full Year)
AP Environmental Science (Full Year)
AP Physics I (Full Year)
AP Physics II (Full Year)
Anatomy and Physiology (Full Year)
Solar System Astronomy (One Semester)
Cosmology: Origins of the Universe (One Semester)
Evolution (One Semester)
Forensic Science (One Semester)
Advanced Forensic Science (One Semester)
Physics (Full Year)
Plant Science (One Semester)
Science Career Seminar (One Semester)

PROJECT LEAD THE WAY

(Science Credit Awarded)

Principles of Biomedical Science (Full Year - Grades 9-12)
Human Body Systems (Full Year - Grades 10-12)
Medical Interventions (Full Year - Grades 11-12)
Biomedical Innovation (Full Year - Grade 11-12)

Clayton Science Enduring Understandings

Students in the Clayton School District will understand the following big ideas presented throughout their K-12 science classes:

1. The systematic nature of all things

All things in nature are made up of interacting and interdependent parts. Everything is a part in a larger system.

2. The interaction between energy and matter that flow through systems

All things in nature interact with and are affected by energy. The total amount of energy and matter in the universe remains constant.

3. The nature of stability, change and equilibrium

All things in nature change over time in order to reach a balance (equilibrium), however, systems can show stability over long periods of time.

4. The relationship between structure and function

The way things are put together determines what they can do. The way a system works depends on what it is made of and on the shapes and forms of its parts.

5. The creation of models to represent abstract ideas and phenomena

In order to understand how systems function and the patterns observed in nature, people develop models that describe how nature works. Many models are quantified using mathematics.

6. The process of scientific reasoning and the evaluation of ideas

Advances in science start with observations that lead to questions that are answered by experimentation and modeling. Measurements of observations lead to a mathematical treatment of data.

7. The interaction between science and society

As a result of scientific pursuits, human beings have developed an understanding of nature that has affected all people's lives in many ways.

Missouri's Department of Elementary and Secondary Education requires high school graduates to earn three units of credit selected to ensure students:

- have mastered the unifying concepts, principles, and laws common to all the sciences.
- are experienced in applying scientific practices to develop models for understanding nature.
- can organize and solve scientific problems in the consumer, career, and technical environments.

At Clayton High School students are required to complete a core science sequence of physics, chemistry, and biology. Exceptions require departmental approval.

Science courses typically alternate between a standard 47 minute period and an extended "lab" period that meets for 74 minutes. All courses are laboratory oriented and include investigations that give students experience in collecting, organizing, graphically representing, analyzing, and interpreting data. At its core, the CHS science experience is designed to help students understand science as a process of evidence-based discovery that facilitates the understanding of natural phenomena.

Placement recommendations are tailored to needs and abilities so each student is challenged every year. To this end, a wide variety of science experiences are available. Freshmen are recommended for Foundations of Physics, Freshman Physics, or Honors Freshman Physics based on aptitude in 8th grade science and math, performance on a reasoning test, and scores on the ASPIRE test. Sophomores are recommended for Foundations of Chemistry, Chemistry, or Honors Chemistry based on performance and aptitude in their physics course. Juniors are recommended for Foundations of Biology, Biology, Honors Biology, or AP Biology based on performance and aptitude in their chemistry course. Juniors often take a science elective concurrently with their Biology course. Students who have completed Honors Chemistry may be recommended to take both AP Biology and AP Chemistry as a combined, three-period block during their junior year. Seniors are recommended for science electives and/or AP science courses based on performance and aptitude displayed during their junior year. Students who do not meet specific course prerequisites may occasionally be enrolled in a class with the consent of the instructor.

FOUNDATIONS OF PHYSICS

9th Grade
Credit - 1
Full Year

Prerequisite: Enrollment requires departmental approval

Foundations of Physics is an adapted version of Freshman Physics for a select group of students who will benefit from a modified pace and depth of content. The course is designed to build the science and math skills of students in preparation for the rest of their high school experience. Students will gain conceptual understandings of motion, forces, energy, and electricity. Students develop scientific models to describe the physical world by analyzing the results of laboratory experiments. The skills of experimental design, data collection, and graphical analysis will be emphasized. Students will demonstrate their understanding verbally, diagrammatically, graphically, and algebraically. **(This course does not qualify for NCAA eligibility.)**

FRESHMAN PHYSICS

9th Grade
Credit - 1
Full Year

Freshman Physics is an introductory course to the formal study of the physical sciences. Students will develop conceptual understanding of electricity, motion, forces, energy, and waves. Students will learn to build scientific models to describe the physical world by analyzing the results of laboratory experiments. The skills of experimental design, data collection, and graphical analysis will be emphasized. Students will express these models verbally, diagrammatically, graphically, and algebraically. Students will build a laboratory portfolio, which includes results of each of the major investigations throughout the year.

HONORS FRESHMAN PHYSICS

9th Grade
Credit - 1
Full Year

Prerequisite: Enrollment requires departmental approval.

Honors Freshman Physics is an introductory course to a formal study of the physical sciences with emphasis on mathematical problem solving. Students will develop major concepts in motion, forces, energy, electricity, and wave motion. Students will learn to build scientific models to describe the physical world by analyzing the results of laboratory experiments. The skills of experimental design, data collection, and graphical analysis will be emphasized. Students will express these models verbally, diagrammatically, graphically, and algebraically. This course moves at an accelerated pace and it requires excellent reasoning skills and well-developed work and study habits. Fluency in the application of algebra is essential. Students will build a laboratory portfolio, which includes results of each of the major investigations throughout the year.

FOUNDATIONS OF CHEMISTRY

10th Grade
Credit - 1
Full Year

What is the nature of matter? How does matter change? Why does matter change? How do changes in the world around us affect our lives? How does one system affect another? Students will investigate these questions and others through a variety of "hands-on" and written experiences as they explore how science is relevant to daily life. Students will develop an awareness of the potential and the limitations of science and technology. Activities will include reading, writing, discussion, laboratory activities, laboratory reports, and student projects. Students will frequently work together in teams. Critical thinking (the ability to carry out systematic thought processes in making decisions and solving problems), inquiry (solving problems through scientific investigation), science ethics, and the nature of science are stressed in this class. **Enrollment requires departmental approval**. **(This course does not qualify for NCAA eligibility.)**

CHEMISTRY

10th Grade
Credit - 1
Full Year

This course introduces important concepts of chemistry while applying these concepts to the students' everyday lives and experiences. Topics addressed include basic problem solving, scientific measurement, states of matter, atomic structure, the periodic table, chemical formula writing, chemical reactions, gas behavior, stoichiometry, chemical bonding, thermochemistry, acids and bases, and nuclear chemistry. Activities include laboratory experiences, discussion, reading, writing, laboratory reports, and student projects. Students will frequently work together in teams. Basic algebra skills are required.

HONORS CHEMISTRY

10th Grade
Credit - 1
Full Year

Prerequisite: Enrollment requires departmental approval

The models and theories of chemistry are developed in this course. Considerable emphasis is placed on the student's ability to interpret data, solve problems, and use higher-order thinking skills. The core topics include models for atoms, bonding theory, chemical reactions, kinetic molecular theory, gas behavior, thermochemistry, chemical bonding, rates of reactions, equilibrium, and acids and bases. We will connect the topics of the course to everyday life and current news events whenever possible. The course will include reading, lecture/discussion, laboratory activities, and problem solving. This course is designed for students who have demonstrated success in honors mathematics and science courses. Laboratory reports will be required and homework assignments are given daily. Each student needs a scientific calculator. A college level text is used.

FOUNDATIONS OF BIOLOGY

11th Grade
Credit - 1
Full Year

Prerequisite: Enrollment requires departmental approval

This course emphasizes an inquiry-based exploration of living organisms; how they function, interact, and evolve. Students will develop and conduct experiments, collect data, and analyze data throughout the year. This exploration allows students to ask questions about the world around them, work on problem solving strategies, think critically, and develop their understanding of science as a process. The main goal of this course is for students to explain phenomena encountered in their everyday lives and to develop a thoughtful and well-reasoned understanding of the living world. **(This course does not qualify for NCAA eligibility.)**

BIOLOGY

11th Grade
Credit - 1
Full Year

Biology takes a cellular and molecular approach to understanding the unity and diversity of the living world. The course begins by investigating the nature of chemical reactions in living systems and the biomolecules involved. This serves as a foundation for the exploration of cell structure and function, energy conversions, the cell cycle, genetics, gene expression, evolution, and culminates in understanding the flow of energy and cycling of matter in organisms and ecosystems. Students will design and implement experiments, gather data, and perform data analysis to deepen their conceptual understandings of course content.

HONORS BIOLOGY

11th Grade
Credit - 1
Full Year

Prerequisite: Enrollment requires departmental approval

Honors Biology takes a cellular and molecular approach in exploring the living world. Twelve core themes are interwoven throughout the course to build a holistic understanding of the essential elements of modern biology. These themes include: biochemistry, metabolism, cellular transport, cell structure & function, energy flow through living systems, transport systems of life, cell reproduction, gene expression, genetics, ecology, evolution, and paleobiogeography. Learning of content material is enriched through inquiry-based experimental design, data collection, and data analysis. Honors Biology is a good fit for students who are adept at scientific reasoning, fluid at learning conceptually, have excellent study habits, and have a record of academic excellence in previous science courses.

AP BIOLOGY

11th - 12th Grade
Credit - 1
Full Year

Prerequisite: Honors Chemistry, Honors Biology, or departmental approval.

Advanced Placement (AP) Biology is an in-depth study of living systems. The curriculum is equivalent to that of a first-year college course in the biological sciences. Conceptual emphasis is placed on biochemistry, cell biology, genetics, molecular biology, evolution, and ecology; moreover, the interconnectedness of these topics is underscored throughout the course. The classroom experience allows students to work independently with AP science practices which include hypothesis generation, experimental design, statistical analysis of data, and writing scientific explanations. Students will improve their critical thinking skills by interpreting data from the scientific literature and through this experience become more familiar with contemporary biological issues. Students are expected to take the AP Biology exam in May.

AP CHEMISTRY

11th - 12th Grade
Credit - 1
Full Year

Prerequisite: Honors Chemistry or departmental approval.

This course is designed to be the equivalent of the general chemistry course usually taken during the first year of college. Students will experience depth and breadth of understanding of chemical fundamentals, competence in dealing with chemical calculations, and experience in the nature and variety of laboratory experiments equivalent to that of a typical college course. Topics such as the atomic and molecular structure of matter, kinetic theory of gases, chemical equilibrium, chemical kinetics, electrochemistry, and basic principles of thermodynamics are emphasized. A substantial portion of class time is spent on understanding and applying these concepts through chemical problem solving. Students develop the ability to think clearly and to express their ideas in writing with clarity and logic. In addition, the behavior of chemical systems is investigated in the laboratory. Students will develop a laboratory portfolio from reports that are submitted for each experiment. Each student is expected to take the AP Chemistry exam in May.

AP ENVIRONMENTAL SCIENCE

11th - 12th Grade
Credit - 1
Full Year (Unlike other full-year science courses, AP Environmental Science does not have an extended lab period.)

Prerequisite: Honors Chemistry, Honors Biology, AP Biology, concurrent enrollment in Honors or AP Biology, or departmental approval.

In AP Environmental Science students will investigate the nature of Earth systems (ecology, geology, climate, etc.), historical and current human impacts on Earth systems, ways to decrease human impacts on Earth systems, ongoing efforts to preserve biodiversity and repair past damage, and options for leading a more sustainable way of life. The lab experience includes hypothesis generation, experimental design and implementation, the process of peer review, graphical organization and statistical analysis of data, and the use of mathematical models to represent natural phenomena. Higher order cognitive skills will be grown through the use of science as a process to develop an evidence-based understanding of nature, identification of logical fallacies, critical examination of commonly held assumptions about the environment, and scrutinizing the relationship between science and public policy. Students should be skilled in Algebra, capable of comprehending a college-level science text, and willing to devote study time to APES on a daily basis. Students are expected to take the AP Environmental Science exam in May.

AP PHYSICS I

11th – 12th Grade
Credit – 1
Full Year

Prerequisite: Excellent skills in Algebra, at least concurrent enrollment in Geometry, or by departmental approval

AP Physics I is a rigorous treatment of the classical physics areas of mechanics, mechanical waves, and introductory electric circuits. It is the equivalent of a typical first semester, algebra-based college physics course. Physical models will be developed through laboratory investigation in the areas of one and two-dimensional kinematics, Newton's laws, energy, circular motion, gravitation, linear momentum, rotational motion, oscillations, mechanical waves, sound, and introductory electric circuits. Students will submit lab reports for each laboratory investigation. Students will be required to solve problems mathematically, with extensive use of proportional and symbolic reasoning. The ability to translate between multiple representations of physical models will be emphasized. The course is designed to provide excellent preparation for students considering the study of science, medicine, or engineering in college. Students who successfully complete the course will be well-prepared for, and expected to take, the College Board Advanced Placement Physics I examination in May. Except when recommended by the instructor, students should have successfully completed Freshman Physics or Honors Freshman Physics prior to enrollment in AP Physics I.

AP PHYSICS II

11th – 12th Grade
Credit – 1
Full Year

Prerequisites: Algebra, Geometry, Algebra II, and Trigonometry. Students who take this class must be concurrently enrolled in, or have previously completed AP Physics I, or by department approval

AP Physics II is a rigorous treatment of fluid statics and dynamics, thermodynamics with kinetic theory, electrostatics, electric circuits, magnetic fields, electromagnetism, geometric and physical optics, and topics in modern physics. It is the equivalent of a typical second semester, algebra-based, college physics course. Physical models in the areas listed above will be developed through laboratory investigation. Students will submit lab reports for each laboratory investigation. Students will be required to solve problems mathematically with extensive use of proportional and symbolic reasoning. The ability to translate between multiple representations of physical models will be emphasized. The course is designed to provide excellent preparation for students considering the study of science, medicine, or engineering in college. Students who successfully complete the course will be well-prepared for, and expected to take, the College Board Advanced Placement Physics II examination in May.

ANATOMY AND PHYSIOLOGY

11th - 12th Grade
Credit - 1
One Year (Unlike other full-year science courses, Anatomy & Physiology does not have an extended lab period.)

Prerequisite: Project Lead the Way Principles of Biomedical Science, Honors Biology or departmental approval.

Anatomy and Physiology is geared to upperclassmen preparing for study in health-related areas. Students will engage in the study of the processes, structures, and interactions of human body systems. Important concepts in the course include the structure and function of: communication systems, transport systems, the musculoskeletal system, the integumentary system, immune system, and metabolic processes. The central theme is how body systems work together to maintain homeostasis and good health. The systems are studied as "parts of a whole" that work together to keep the amazing human machine functioning at an optimal level. Students design experiments, investigate the structures and functions of body systems, and use data acquisition software to monitor selected body functions. Students work through interesting, real-world cases and often play the role of biomedical professionals in solving medical mysteries. Students are expected to complete and present a mastery project each semester.

SOLAR SYSTEM ASTRONOMY

11th - 12th Grade
Credit - 1/2
One Semester

Prerequisite: Freshman Physics and Chemistry, or departmental approval.

This one-semester course for juniors and seniors explores the historical foundations and techniques of astronomy and pursues diverse investigations into the structure and function of our solar system. Topics include the development of methodologies for making and interpreting astronomical measurements, comparative planetology (structure, surfaces, & atmospheres), the evolution of our solar system over time, and our ongoing search for exoplanets (planets around other stars). We will also investigate the challenges of human space-travel, searching for alien life, and colonizing other moons and planets. This course meets one period per day with additional laboratory/field experiences planned outside of the regular school schedule.

COSMOLOGY: Origins of the Universe

11th - 12th Grade
Credit - 1/2
One Semester

Prerequisite: Biology, concurrent enrollment in Biology, or departmental approval

This one-semester course for juniors and seniors provides an introduction to the physical processes in stars and the evolution of stars that leads to their observed properties. It includes a study of the final endpoints of stellar evolution and an introduction to the properties of galaxies and star formation in galaxies. Topics include the electromagnetic spectrum, classification, structure, and evolution of stars, the sun, galaxies, and the larger universe, including cosmology. We will also investigate challenges to understanding interstellar space and distant star systems by exploring a variety of research methodologies including the search for extraterrestrial intelligence and the potential for developing probes and other spacecraft capable of reaching other stars and galaxies.

EVOLUTION

11th - 12th Grade
Credit - 1/2
One Semester

Prerequisite: Biology, concurrent enrollment in Biology, or departmental approval.

Evolution explores the nature of change on universal, planetary, and population levels. The broad theme of the class is that the laws of nature have shaped the development of the cosmos, our planet, and the organisms that inhabit it. To this end, we will develop an evidence-based understanding of the Big Bang, formation of our solar system, geological processes of the Earth, relative and absolute dating, the fossil record, plate tectonics, abiogenesis, population genetics, and cladistics. Students will also gain insight about the life history of Earth as we explore the succession of flora and fauna during the Paleozoic, Mesozoic, and Cenozoic eras.

FORENSIC SCIENCE

11th - 12th Grade
Credit - 1/2
One Semester

Forensic science is the application of science to legal situations. Students will formulate and critically examine problems, and investigate probable solutions. They will collect and scientifically evaluate data, draw conclusions based on evidence, apply data to authentic situations, and communicate the results of the work. The topics used to teach these skills include: crime scene investigation and photography, print exposure and analysis, trace evidence (the examination of hair, fiber, and fracture patterns in glass), serology (determining if blood is present, blood typing, microscopic identification of blood, and spatter pattern analysis), and forensic anthropology (the examination of skeletal remains to determine, age, sex, race, and height of the victim). This course gives students the opportunity to apply the concepts and skills learned in physics, chemistry, and biology to the real-life problems of crime scene investigation. **(This course does not qualify for NCAA eligibility.)**

ADVANCED FORENSIC SCIENCE

11th - 12th Grade
Credit - 1/2
One Semester

Prerequisite: Forensic Science

Students in Advanced Forensic Science will process more complicated evidence than in the first level course. When studying arson, students will learn how to determine if a fire was accidental or intentional, what type of accelerant was used, and how to identify common motives of arsonists. When exploring toxicology, students will learn about the effects of drugs, poisons, and alcohol on the body. We address the nature of DNA, perform gel electrophoresis, and explore how it is used in our legal system. Students will also learn about geographical and behavioral profiling, eyewitness testimony and polygraphs as they study the criminal mind in forensic psychology. The cases we solve are complex and involve subtle clues with many twists. In our final project, facial reconstruction, students use tissue depth markers and clay to create a face from a skull. **(This course does not qualify for NCAA eligibility.)**

PHYSICS

11th - 12th Grade
Credit - 1
Full Year

Prerequisite: Chemistry and Biology or departmental approval; facility with Algebra and Trigonometry

This course is designed as an introduction to the study of physics. It is appropriate for students who have never studied physics. It is also intended for students who have completed Freshman Physics and would like to extend their study of physics to include a broader range of topics with slightly greater emphasis on mathematical problem solving. The fundamental concepts of physics are emphasized with topics chosen from among the following: mechanics, wave motion, light, electricity, and magnetism. The course is laboratory-based as students will build physics concepts through laboratory investigations. Students will be expected to gather and interpret data, analyze experimental results and draw conclusions. Emphasis will be placed on the graphical analysis of experimental data. Experimental results will be documented in laboratory reports and organized as a laboratory portfolio. A scientific calculator capable of performing scientific notations and trigonometric functions is required. Although this course is taught at an introductory level, it is an excellent follow-up to Freshman Physics and includes many new topics and previously encountered topics in greater depth.

PLANT SCIENCE

11th – 12th Grade
Credit –1/2
One Semester

Prerequisite: Biology, Concurrent Enrollment in Biology or departmental approval.

The mission of this class is to cultivate a love of plants that becomes a life-long passion to protect and conserve plants in a way that is infectious and benefits our world. Topics will include plant diversity, evolutionary relationships, germination, photosynthesis, growth, cells, tissues, organs, plant anatomy/physiology, reproduction, and propagation. The course will build to explore plant-based societal issues of conservation, climate change, food security, and genetically modified crops.

SCIENCE CAREER SEMINAR

11th - 12th Grade
Credit - 1/4
One Semester

Prerequisite: Biology, Concurrent Enrollment in Biology or departmental approval.

Designed for students who wish to explore careers in science, this semester course will meet two times per week and will focus on interaction with professionals working in various scientific fields. Students interested in obtaining firsthand information about life as a scientist, potential networking opportunities, and career options in science should consider enrolling. **(This course does not qualify for NCAA eligibility.)**

PROJECT LEAD THE WAY (PLTW) COURSES: SCIENCE CREDIT

PRINCIPLES OF BIOMEDICAL SCIENCES – PROJECT LEAD THE WAY (PLTW)

9th – 12th Grade
Credit – 1 Science
Full Year

The death of a fictional character, Anna Garcia is the thread that ties all of the units of this course together. In reading Mrs. Garcia's autopsy report, students discover what contributed to her death. Students study metabolism as they discover that Mrs. Garcia suffered from diabetes. Through this study, carbohydrates, proteins and calorimetry will be explored. As they learn about her sickle-cell disease, students study genetics and DNA. Models and computers will be used to simulate changes in the DNA and proteins. Mrs. Garcia also had hypercholeteremia. A study of this will involve dissection of sheep hearts and the use of computers to analyze and experiment with student blood pressure, heart rate and EKG. Students will also learn to analyze abnormal EKGs. When it is discovered that the patient also had an infectious disease, students learn about the differences between bacterial infections and viruses. Gram staining will be done and students will learn how to choose an antibiotic based on the results. The final project for the class will be to write a grant proposal on a topic of the student's choice, using what was learned about research and writing science summaries. The proposals will be shared through a PowerPoint presentation.
This is the introductory course in a potential four-course program that ends with an on-site research assignment with a health care professional.

HUMAN BODY SYSTEMS – PROJECT LEAD THE WAY (PLTW)

10th – 12th Grade
Credit – 1 Science
Full Year

Prerequisite: PLTW Principles of Biomedical Science, Honors Biology or instructor approval.

Students will engage in the study of the processes, structures, and interactions of the human body systems. Important concepts in the course include: communication, transport of substances, locomotion, metabolic processes, defense, and protection. The central theme is how the body systems work together to maintain homeostasis and good health. The systems are studied as "parts of a whole," working together to keep the amazing human machine functioning at an optimal level. Students design experiments, investigate the structures and functions of body systems, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary actions, and respiratory operation. Students work through interesting real world cases and often play the role of biomedical professionals to solve medical mysteries. This course will be taught concurrently with Human Anatomy and Physiology. This course does not have an extended lab period.

This is the second course in a potential four-course program that ends with an on-site research assignment with a health care professional.

MEDICAL INTERVENTIONS – PROJECT LEAD THE WAY (PLTW)

11th – 12th Grade
Credit – 1 Science
Full Year

Prerequisite: PLTW Principles of Biomedical Science, PLTW Human Body Systems, Honors Biology or instructor approval.

Students investigate a variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. The course is a "How-To" manual for maintaining overall health and homeostasis in the body as students explore how to prevent and fight infection; how to screen and evaluate the code in human DNA; how to prevent, diagnose and treat cancer; and how to prevail when the organs of the body begin to fail. These scenarios expose students to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Each family case scenario introduces multiple types of interventions and reinforces concepts learned in the previous two courses, as well as presenting new content. Interventions may range from simple diagnostic tests to treatment of complex diseases and disorders. These interventions are showcased across generations of a family and provide a look at the past, present and future of biomedical sciences. Lifestyle choices and preventive measures are emphasized throughout the course as are the important roles scientific thinking and engineering design play in the development of interventions of the future. This course does not have an extended lab period.

This is the third course in a potential four-course program that ends with an on-site research assignment with a health care professional. **(This course does not qualify for NCAA eligibility.)**

BIOMEDICAL INNOVATION – PROJECT LEAD THE WAY (PLTW)

12th Grade
Credit – 1 Science
Full Year

Prerequisite: PLTW Principles of Biomedical Science

Working through progressively challenging, open-ended problems that address topics such as clinical medicine, physiology, biomedical engineering, and public health, students will explore innovative solutions for the health challenges of the 21st century. They will have the opportunity to work on independent projects with a mentor or advisor from a university, hospital, research institution, or the biomedical industry. Throughout the course, students will be expected to present their work to an audience of STEM professionals. The course is designed for 12th grade students.

This is the fourth course in a potential four-course program that ends with an on-site research assignment with a health care professional.