

WARREN COUNTY SCHOOL DISTRICT

MIDDLE LEVEL

COURSE DESCRIPTION BOOKLET

Grades 6 - 8

January 2025



CENTRAL ADMINISTRATIVE OFFICES
6820 MARKET STREET
RUSSELL, PA 16345

GARY L. WEBER
SUPERINTENDENT

Dear Parents/Guardians and Students:

Selecting a program of studies is one of your most important steps toward future success. Choices must be made carefully and wisely to ensure that a student is fulfilling his/her potential in addition to wisely preparing for future goals. In this book you will find important information to guide you through both sequence and course selections.

If you have questions concerning scheduling, contact the following principals or school counselors:

Eisenhower Middle High School 757-8878
Mr. Jason Markiewicz, Principal
Mrs. Danielle Gulnac, Assistant Principal
Mrs. Monica Linkerhof, Counselor

Sheffield Area Middle High School 968-3720
Mrs. Misty Weber, Principal
Mrs. Natalie Black, Assistant Principal
Ms. Carrie Warner, Counselor

Beaty-Warren Middle School 723-5200
Dr. Lyle Dosser, Principal
Mrs. Lisa Franklin, Assistant Principal
Mrs. Shelly Wagner, Assistant Principal
Mrs. Renae Getner, Counselor (Grades 5-6)
Mrs. Melissa Paduano Counselor (Grades 7-8)

Youngsville Middle High School 563-7573
Mr. Michael Craddock, Principal
Mr. Neal Kent, Assistant Principal
Dr. Susan Gizzie, Counselor

Virtual Academy 723-0574
Mrs. Misty Weber, Principal
Mr. Neal Kent, Assistant Principal
Mr. Matthew Getner, Counselor

Mrs. Lynn Shultz
Director of Curriculum, Instruction, and Assessment

LANGUAGE ARTS

- 00001 Information Literacy (Library Media) Skills** This is an elective for 6th grade students where they will work on the completion of College and Career Readiness activities, as well as library media center citizenship, behavior, procedures and care of the library and its resources. The students will also learn how to use the library and find necessary resources within it. **Semester Elective**
- 00036 English Language Arts 6** – Students will learn to communicate effectively and build upon skills in the areas of reading, writing, speaking, and listening. The curriculum ensures that students gain adequate exposure to a range of genres and tasks in both fiction and nonfiction. Students will demonstrate increased sophistication in all aspects of language use, from vocabulary and grammar to the development and organization of ideas in writing. Students will write effectively with a purpose appropriate to their audience while utilizing elements of distinct types of writing including narrative, informative, argumentative and text dependent analysis. Students will engage in a wide range of speaking and listening activities to effectively share their ideas and critically evaluate and interpret the assertions made by others. An emphasis is placed on rigor, higher order thinking skills, employing effective reading and writing strategies, and integrating communication skills. Using the Pennsylvania Common Core Standards and Pennsylvania System of School Assessment Anchors and Eligible Content as guides, the course will prepare students for the state standardized assessments. District marking period assessments are required. **Full Year Mandatory Course**
- 00037 English Language Arts 7** – Students will learn to communicate effectively and build upon skills in the areas of reading, writing, speaking, and listening. This curriculum ensures that students gain adequate exposure to a range of genres, texts, and tasks in both fiction and nonfiction. Students will demonstrate increased sophistication in all aspects of language use, from vocabulary and grammar to the development and organization of ideas in writing. Students will engage in a wide range of speaking and listening activities to effectively share their ideas and critically evaluate and interpret the assertions made by others. An emphasis is placed on rigor, higher order thinking skills, employing strategies, and integrating all communication skills. Using the Pennsylvania Core Standards and Pennsylvania System of School Assessment Anchors and Eligible Content as guides, the course will prepare students for the state-standardized assessments. District marking period assessments are required. **Full Year Mandatory Course**
- 00039 English Language Arts 8** – Students will learn to communicate effectively and build upon skills in the areas of reading, writing, speaking, and listening. This curriculum ensures that students gain adequate exposure to a range of genres, texts, and tasks in both fiction and nonfiction. Students will demonstrate increased sophistication in all aspects of language use, from vocabulary and grammar to the development and organization of ideas in writing. Students will engage in a wide range of speaking and listening activities to effectively share their ideas and critically evaluate and interpret the assertions made by others. An emphasis is placed on rigor, higher-order thinking skills, employing strategies, and integrating all communication skills. Using the Pennsylvania Core Standards and Pennsylvania System of School Assessment Anchors and Eligible Content as guides, the course will prepare students for the state standardized assessments. District marking period assessments are required. **Full Year Mandatory**
- 00044 Reading and Writing Unlimited** - This course is designed to enrich a student’s reading and writing experiences. Through guided lessons, student will read various genres and write on multiple topics. **Semester Elective**
- 00056 Creative Writing and Drama** – This course is designed to enhance the creativity of young writers and performers. It includes the reading and writing of personal and fictional narratives, poetry, journalistic or argumentative pieces, and drama. Additionally, this course is an introduction to the elements of drama through the use of skits and/or dramatic performances. **Semester Elective**

00057 Science Fiction, Fantasy, and Detective Mystery – Students will read works that examine the development of the science fiction, fantasy, and detective/mystery genres. The course will include reading and analysis through discussion and writing. **Semester Elective**

SOCIAL STUDIES

00131 World Geography - Sixth grade World Geography is an introduction to students of our great world. Students will learn key geographic skills such as mapping, latitude and longitude and landforms. They will also explore the continents of the world. Students will also be introduced to the study of archaeology and examine the human interactions and relationships of Early Man and how the planet has played a role in those relationships. The course seeks to enrich students' exploration of world geography through a variety of learning activities. These include lesson presentations, case studies, text and supplemental reading, map studies, simulations, current events, and individual and small group projects. District marking period assessments are required. **Full Year Mandatory Course**

00123 Ancient World History: Early Empires – World Revolutions - This course will focus on World History beginning with the world's first empires of Greece and Rome and how those two civilizations laid the political foundations of Europe and eventually America. The course will also cover the fall of these empires and the growth of Europe through the eras of Feudalism, the Renaissance and Reformation. Finally, the year will end with the students learning about the Age of Exploration and discovering how the ideas of the Enlightenment led to nationalistic revolutions. District marking period assessments are required. **Full Year Mandatory Course**

00104 Civics - This class is designed to introduce the eighth-grade students to the political processes of the United States. Civics will provide the students with the evolution of those processes and the basic organization of our government. The students will understand the roles of local, state, and federal government in citizens' lives. A deeper knowledge of the Constitution as the foundation of the United States government and the Bill of Rights as our basic freedoms will be explored. There will also be exploration of topics such as the importance of laws, civil rights and our court system. This course introduces our students to the importance of being engaged in good citizenship through service projects and the political process. The course will end with an introduction to our economic system. District marking period assessments are required. **Full Year Mandatory Course**

00100 Pennsylvania History and Cultures - Discover the amazing story of Pennsylvania's past and the different cultures that make it special with an emphasis on the heritage of Warren County. This elective class offers students an engaging journey through the significant events, people, and traditions that have shaped the Keystone State. By the end of the course, students will have a comprehensive understanding of Pennsylvania's rich history and diverse cultures, with a special appreciation for the unique contributions of Warren County to the state's narrative. This elective offers a dynamic exploration of our state's past, fostering critical thinking and a deeper connection to the historical roots of the community. **Semester Elective**

00101 World Investigations - World Investigations introduces students to current events and world issues through a blend of historical context, geography, and current news stories. Students will explore global themes such as politics, culture, economics, then environment, and human rights. The course will focus on developing critical thinking, media literacy, research skills, and a greater understanding of world events. **Semester Elective**

00102 Histories Mysteries – Embark on an intriguing journey through the shadows of history in "Histories Mysteries," an elective class designed to ignite students' curiosity and critical thinking skills. This course invites participants to explore unsolved mysteries, cryptic events, and enigmatic figures that have left an indelible mark on the historical landscape. Histories Mysteries offers students a unique and captivating

approach to history, fostering a sense of curiosity, analytical thinking, and a deeper appreciation for the complexities of the past. Through exploration and investigation, students will develop the skills to unravel the most perplexing puzzles of history and draw their conclusions about the mysteries that continue to intrigue and baffle the world. **Semester Elective**

MATHEMATICS

- 00203 Mathematics 6** – In Mathematics 6, instructional time will focus on five critical areas: (1) Connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) Completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) Writing, interpreting, and using expressions and equations; (4) Solving area, surface area, and volume problems; (5) Developing understanding of statistical thinking. Students will be provided the opportunity to take two district assessments at the end of the school year. Students achieving successful scores based on the district required benchmark will be offered enrollment into Advanced Mathematics 7. Students will take the Grade 6 PSSA. District marking period assessments are required. **Full Year Mandatory Course**
- 00204 Mathematics 7** – In Mathematics 7, instructional time will focus on 5 critical areas: (1)Proportional relationships; (2) Understanding and applying operations to rational numbers; (3)Creating and solving expressions, equations, and inequalities; (4) Describing and implementing geometric relationships in real world applications; (5) Drawing inferences about populations and developing, using, and evaluating probability models. Students will take the Grade 7 PSSA. District marking period assessments are required. **Full Year Mandatory Course**
- 00205 Advanced Mathematics 7** – **Prerequisites: Completion of Mathematics 6 with at least an 85% average Students must meet district guidelines on placement assessments to take this course.** In the course, Advanced Mathematics 7, students’ learning will be focused on the major topics: The Number System, Expressions and Equations, Functions, Exponents, Ratio and Proportional Relationships, Probability, and Geometry and Data Analysis. The pace and rigor of this course will establish the path to reach advanced mathematics in high school. Students will take the Grade 7 PSSA. District marking period assessments are required. **Full Year Mandatory Course**
- 00201 Pre-Algebra 8** – Pre-Algebra 8 builds upon computational, problem solving, graphing, and algebraic concepts previously learned in mathematics. Pre-Algebra provides learning experiences required for Algebra I such as linear equations, functions, graphing, geometry, systems of equations, and bivariate data. It will provide students with problem-solving, reasoning skills, and mathematical concepts necessary to be successful learners in future mathematics courses. Students will take the Grade 8 PSSA. District marking period assessments required. **Full Year Mandatory Course**
- 00202 Honors Algebra I** – **Pre-Requisites: Completion of Advanced Mathematics 7 or Mathematics 7 with a final average of at least 85%. Students must meet district guidelines on placement assessments to take this course.** Students who qualify will take a standardized placement test. Placement test results along with the final exam for the course will be used to determine placement into Algebra I Honors. Honors Algebra I is a course designed for those students able to complete calculus prior to entering college. This course provides an intense study of algebraic theory that will be expanded in Algebra II Honors, Geometry Honors, and additional advanced math courses (3 or 4 credits in high school are required). Honors Algebra I is intended for college-bound students who have an aptitude or interest in mathematics. It provides them with the opportunity to complete an additional year of advanced mathematics. Students will take the Keystone Algebra Exam and the Grade 8 PSSA. Students must pass the Algebra I Keystone Exam with a Proficient or Advanced score to move onto the subsequent course: Honors Algebra II/Geometry Honors. If this state-mandated test is not passed, the student will be required to retake Algebra I the following year, as well as retake the exam. Even though high school credit is not

awarded, by passing the Keystone exam, students will be fulfilling a requirement for graduation. District marking period assessments are required. Students must maintain 80% to remain in Honors Algebra I.

Full Year Mandatory Course

00276 Math Core Elective 6 - Through online software and project-based learning students will focus on the math concepts rational numbers, fractions/decimals/percents, area, coordinate plane, expressions, equations/inequalities, statistics, and ratios/rates. **Semester Elective**

00278 Math Core Elective 7 - Through online software and project based learning students will focus on the math concepts integers, proportions, geometry, probability, statistics, percents, expressions, equations, fractions, and decimals. **Semester Elective**

00279 Math Core Elective 8 - Through online software and project based learning students will focus on the math concepts of exponents, solving equations, functions, writing linear equations, angles and triangles, transformations and similarity, and data sets. **Semester Elective**

SCIENCE

00303 Science 6 – In this sixth-grade general science course, students develop understanding of a wide range of topics that build upon science concepts from elementary school through more advanced content, practice, and crosscutting themes. Through engaging experiments, hands-on activities, and interactive discussions students will explore a diverse range of topics. These include thermal energy, weather, climate, & water cycling, plate tectonics & rock cycling, natural hazards, and cells & systems. Science 6 also includes the required middle level band Meaningful Watershed Educational Experiences (MWEE) that allows for student action and voice. The performance expectations in Science 6 blend core ideas with scientific and engineering practices and crosscutting concepts to support students in developing usable knowledge across the science disciplines. Standards from multiple branches of science and areas of the STEELS standards are integrated to ensure a cohesive and integrated science experience, aligning with the three-dimensional design of the standards. District marking period assessments are required. **Full Year Mandatory Course**

00305 Science 7 – Students in this seventh-grade general science course continue to develop an understanding of key concepts to help them make sense of the world around them. Through engaging experiments, hands-on activities, and interactive discussions students will explore a diverse range of topics. These include chemical reactions & matter, chemical reactions & energy, metabolic reactions, matter cycling & photosynthesis, ecosystem dynamics, and Earth’s resources and human impact. The six units in this general science course blend core ideas with science and engineering practices, incorporating crosscutting concepts. This approach supports students in developing usable knowledge across various science disciplines. Standards from multiple branches of science and areas of the STEELS standards are integrated to ensure a cohesive and integrated science experience, aligning with the three-dimensional design of the standards. District marking period assessments are required. **Full Year Mandatory Course**

00307 Science 8 – In this eighth-grade general science course, students will learn the fundamental principles of the natural world. Through engaging experiments, hands-on activities, and interactive discussions students will explore a diverse range of topics. These include contact forces, sound waves, forces at a distance, Earth in space, genetics, and the concepts of natural selection and common ancestry. The six units in Science 8 blend core ideas with science and engineering practices, incorporating crosscutting concepts. This approach supports students in developing usable knowledge across various science disciplines. Standards from multiple branches of science and areas of the STEELS standards are integrated to ensure a cohesive and integrated science experience, aligning with the three-dimensional design of the standards. District marking period assessments are required. **Full Year Mandatory Course**

- 00301 Exploring Our Environment** - Exploring Our Environment is a one semester elective designed for middle level students. This course is designed to provide an introductory understanding of environmental science and conservation through hands-on activities, group projects, and field experiences. The curriculum is structured around the four stations of the Envirothon competition, providing students with an engaging and interactive learning experience. Focus will be placed on Pennsylvania specific issues and species. **Semester Elective**
- 00321 Science Today** - Students in grades 6-8 will engage in lively discussions and debates, focusing on the STEELS science and engineering practice of arguing from evidence. The course's uniqueness lies in its dedication to connecting the dots between Physical, Life, and Earth Sciences, fostering a holistic approach to scientific understanding while staying updated with the latest scientific breakthroughs. **Semester Elective**
- 00322 CSI Investigations** - Students in grades 6-8 will uncover the intricacies of crime scene analysis, DNA extraction, and soil composition assessment, seamlessly blending the principles of life, physical, and Earth and space sciences. Engage in hands-on activities, cultivating science and engineering practices while deciphering complex cases. Delve into the crosscutting concepts, recognizing patterns, understanding cause and effect, and connecting the scientific dots. This course unveils the interconnected web of knowledge, nurturing curious minds to unravel mysteries and think critically across scientific disciplines. **Semester Elective**
- 00500 Computer Science Discoveries 6** is a semester long introductory computer science course that empowers students to create authentic artifacts and engage with computer science as a medium for creativity, communication, problem solving, and fun. The two coding languages that will be explored include JavaScript and HTML. **Semester Elective**
- 00051 Computer 7 Discoveries of AI and Coding** is an introductory computer science course that engages students to problem solve, discover and explore new technologies, and embrace the world of computer science. Students will explore AI (Artificial Intelligence) and creative coding of JavaScript. **Semester Elective**
- 00502 Computer 8** is a semester course designed to educate and discuss Digital Citizenship and Financial Literacy. Students will engage in Entrepreneurship and the development of a business module, as well as the development of a print and social media campaign. A professional and formal presentation will be instituted, and delivery method skills will be acquired. **Semester Course**

PHYSICAL EDUCATION/HEALTH

- 00603 Physical Education 6** begins to further develop team, dual, individual, and recreational sport strategies, with a focus on concepts and rules of play. The student will also recognize the value and benefits of physical fitness in maintaining a healthy lifestyle. **Students will complete WCSD Fitness Testing. Semester Mandatory Course**
- 00604 Physical Education 7** continues the development of team and individual sport strategies as well as game concepts and rules of play introduced in Grade 6. The student will recognize the value and benefit of physical fitness in maintaining a healthy lifestyle. **Students will complete WCSD Fitness Testing. Semester Course Combined with Health 7 Mandatory Course**
- 00605 Health 7-** will address the Pennsylvania Academic standards for Health, Safety, and Physical Education. Elements of the curriculum will include concepts of health, health and wellness, life skills, body systems, substance use, and stress management. It is hoped that each student will begin to implement and value a personal health maintenance plan. **Semester Course Combined with Phys Ed 7 Mandatory Course**

00607 Physical Education 8 prepares students to develop future personal fitness choices while reviewing and putting to practice the lessons developed in previous grades. The student will recognize the value and benefit of physical fitness in maintaining a healthy lifestyle. Students will complete WCSD Fitness Testing. **Semester Mandatory Course**

ART, FAMILY & CONSUMER SCIENCE, and TECHNOLOGY EDUCATION

00704 Family and Consumer Science 6 is a 9-week required course designed for sixth graders in the Warren County School District. It is an introductory course to the Family Consumer Sciences curriculum offered at the middle and high school level. The course will emphasize child care, entrepreneurial skills, basic sewing skills, beginning kitchen safety, My Plate, meal preparation, decision-making skills, and beginning personal finance. **Nine Weeks Mandatory Course**

00703 Art 6 – Art 6 is designed to satisfy creative instincts and through the manipulation of tools and materials, develop skills, techniques, and the appreciation of art. The course will include perspective drawing, grid enlargement, color theory, Pop Art and OP Art. **Nine Weeks Mandatory Course**

00700 Art 7 – This course is designed to satisfy creative instincts and, through the manipulation of tools and materials, develop skills, techniques, and appreciation of art. The course will include drawing, color theory, sculpture, graphics, crafts, design, and animation. **Semester Elective**

00707 Art 8 – This course is designed to establish a foundation in fine art skills and craft skills. The course will introduce students to concepts taught in high school art. Basic skill development will be in Fine Art Skills of drawing, painting, mixed media, and printmaking and Craft Skills of fibers, sculptures, and paper arts. Experiences with 2D and 3D media and digital art will be explored. **Semester Elective**

00706 Family and Consumer Science 7 – Foods is a middle level semester course providing a basic foundation for Family and Consumer Science. The course provides an introductory investigation of food and nutrition, including the nutrition guide published by the United States Department of Agriculture, basic use of cookery, measurements in the kitchen, appropriate etiquette in the kitchen and the ability to analyze cooking procedures, make food accordingly while following safety and sanitation procedures. It is recommended that no more than five students per kitchen be placed in the class to maintain a safe and sanitary cooking environment. **Semester Elective**

00708 Family and Consumer Science 8 – Sewing is a middle level semester course providing a basic foundation for Family and Consumer Science. The course provides an introductory investigation in Clothing and Textiles with an emphasis on basic clothing care and sewing skills including how to launder clothing, mend a seam, and sew a button. The course provides an introduction to using the sewing machine to complete a project. Students are responsible for all project supplies. **Semester Elective**

00731 Applying Technology (Grade 7) – This is a semester-long, activity-based course that introduces students to Technology by examining the systems of communication, manufacturing, construction, transportation and bio-related technologies. Emphasis will be placed on the design process and the application of using tools and materials to complete various Technology activities. This course provides a foundation for future studies in Technology and is a pre-requisite for 8th Grade Technology Education. **Semester Course**

00740 Creating Technology (Grade 8) – This is a semester long activity-based course in which students will build upon skills and knowledge from 7th Grade Technology Education. This includes the use of tools, machines and materials to create their projects. Emphasis will be placed on wood-working, utilizing the design-model process and 3D printing various products. **Semester Elective**

MUSIC

- 00828 Middle Level Band** is a course in intermediate instrumental music techniques that meets one period each day. The course is open to all students in grades 6-8 that have level appropriate performance skills on a band instrument and have a desire to improve these skills both individually and in an ensemble setting. Middle Level Band will present at least two performances per year. All performances will be scheduled and placed in the school calendar. Concerts are mandatory and will be part of the course grade. Absence from these performances will be allowed at the director's discretion. The course places emphasis on personal improvement in instrumental music skills, and a performance schedule that provides opportunities for demonstration of the level of mastery achieved by the students. **Year-long Elective**
- 00833 Middle Level Orchestra** is a course in intermediate instrumental music techniques that meets one period each day. The course is open to all students in grades 6-8 who have level appropriate performance skills on an instrument and have a desire to improve these skills both individually and in an ensemble setting. Individual or group lessons may be included as a part of this planned course and could be considered a requirement for participation in this course. The Middle Level Orchestra will present two mandatory concert performances each year. **Year-long Elective**
- 00850 Middle Level Chorus** is an elective music course open to middle level students. No musical training or background is required, but all students must have the desire to sing and begin work in understanding the voice as an instrument and singing as an ensemble. Emphasis is placed on improving each student's individual vocal capabilities. Students will be introduced to the basic elements of song writing and theory. The chorus will sing in the holiday and spring concerts and attendance is mandatory. Music is sung from memory and consists of contemporary music in addition to the classics. **Year-long Elective**
- 00812 Middle Level Band/Chorus Combination** is an elective music course open to middle level students. Students would take both band and chorus throughout the school year during the same period. (The student may do three days band/two days chorus and then alter the next week with three days chorus/two days band. Principal discretion pending scheduling ability.) Please view the course descriptions above **Year-long Elective**
- 00803 Music 6** - This non-performance course is designed to enhance students' understanding and enjoyment of music from various genres, historical periods and cultures. The course will cover fundamental concepts in music theory such as melody, harmony, rhythm and form as well as exploring works by famous composers and learning about the cultural and historical contexts that influenced musical development. **Semester Elective**

LIBRARY

- 00043 Research and Study Skills (Grade 6)** – Students will learn research and study skills that will equip them to be ready for a career or college. **Nine Week Mandatory Course**
- 00046 Research and Study Skills (Grade 7)** – Students will learn research and study skills that will equip them to be ready for a career or college. **Nine Week Mandatory Course**

STEM COURSES

- 00794 STEM 6 (CLS – Grade 6)** - In this STEM 6 course, sixth-grade students will further explore topics that are part of their Science 6 curriculum. They will investigate the physical, biological, and environmental principles behind natural disasters and learn about the ways in which extreme weather affects human societies and vice versa. They will also learn how we can prepare for and mitigate the impacts of these increasing phenomena not only for human populations but also for the planet as a whole. They will conclude this unit by designing a multi-part extreme weather arcade game using MakeCode and a weather forecast using Padcaster to demonstrate their new knowledge. In the second part of the course, students

will delve into the mysteries of space. They will investigate the physical and Earth science principles that govern the movement of celestial bodies, such as gravity and orbital mechanics. They will conclude this unit by creating a comic strip about space using the ComicLife program. By the end of the course, students will have gained a deeper understanding of key concepts in all three branches of science, and will have developed their skills in critical thinking, problem-solving, and scientific inquiry. Standards are incorporated from all three branches of science and all areas of the STEELS standards to ensure a well-rounded science experience in accordance with the three-dimensional design of these new standards. **Nine Week Mandatory Course**

00795 STEM 7 (CLS – Grade 7) – In this STEM 7 course, seventh-grade students will further explore topics that are part of their Science 7 curriculum by completing a variety of hands-on STEM activities. The course will explore the various physical, biological, and environmental aspects of green energy systems, including the components, design, and installation. They will investigate both hydrogen fuel cell cars and solar cars. In addition, students will learn about the benefits and challenges of tiny houses, including their affordability, sustainability, and energy efficiency. By the end of the course, students will have gained an appreciation for the importance of sustainable living and the potential of eco-friendly housing and transportation solutions. Standards are incorporated from all three branches of science and all areas of the STEELS standards to ensure a well-rounded science experience in accordance with the three-dimensional design of these new standards. **Nine Week Mandatory Course**

00796 STEM 8 (CLS – Grade 8) – In this STEM 8 course, eight-grade students will further explore topics that are part of their Science 8 curriculum by completing a variety of hands-on STEM activities. Students will learn about the design and construction of robots and drones. They will learn about programming languages and coding principles and will use these skills to program their machines to complete various tasks. In addition to robotics and drones, students will use Vernier sensors to collect and analyze data pertaining to measuring heart rate, motion, temperature, and light. They will use some of their new knowledge to complete an environmental study at their school. By the end of the course, students will have a strong foundation in robotics, drones, and Vernier sensors. They will also have a deeper understanding of the principles of STEM and how these principles can be applied to solve real-world problems. Standards are incorporated from all three branches of science and all areas of the STEELS standards to ensure a well-rounded science experience in accordance with the three-dimensional design of these new standards. In the Medical Detectives unit, students play the role of real-life medical detectives as they collect and analyze medical data to diagnose disease. They solve medical mysteries through hands-on projects and labs, measure and interpret vital signs, dissect a sheep brain, investigate disease outbreaks, and explore how a breakdown within the human body can lead to dysfunction. **Semester Elective**