STEM CLASSES:

DRONES (Q): This course will include an introduction to Drone engineering and computer science. Students will gain an understanding of the components and functions of Drones. The principles of python, engineering design process and advanced prototyping that includes 3D printing. Students will design/engineer an unmanned aerial vehicle. Students will learn about computer and electrical engineering.

INTRO TO AGRICULTURE (Q): Students will gain hands-on experience while learning about basic agricultural practices. Students will work in the John W. Moore Environmental Center to plant and maintain vegetables, fruit, and plants grown in the garden.

VIDEO GAME DESIGN 1 (Q): In this course students will learn the principles and elements of game design. This course will provide students with a foundation of the principles of coding syntax and theory. Students will use their art skills to create aesthetically appealing projects.

FUNDAMENTALS OF COMPUTING PART 1 (S): This class is designed to introduce students to the field of computer science through an exploration of engaging and accessible topics. Through creativity and innovation, students will use critical thinking and problem solving skills to implement projects that are relevant to students' lives.

FUNDAMENTALS OF COMPUTING PART II (S): This course is for high school CP credit. Fundamentals of Computing is designed to introduce students to the field of computer science through an exploration of engaging and accessible topics. Through creativity and innovation, students will use critical thinking and problem solving skills to implement projects relevant to students' lives. Students will gain a fundamental understanding of the history and operation of computers, programming, and web design.

PROJECT LEAD THE WAY CLASSES:

SCIENCE OF TECHNOLOGY 1 (Q) : Science impacts the technology of yesterday, today, and the future. Students apply the concepts of physics, chemistry, and nanotechnology to STEM activities and projects, including making ice cream, cleaning up an oil spill, and discovering the properties of nano-materials. Students need to take Introduction to Agriculture before taking this course.

MEDICAL DETECTIVES (Q): Students play the role of real-life medical detectives as they analyze genetic testing results to diagnose disease and study DNA evidence found at a "crime scene." They solve medical mysteries through hands-on projects and labs, investigate how to measure and interpret vital signs, and learn how the systems of the human body work together to maintain health.

COMPUTER APPLICATIONS (Q): Students will use Scratch, an online block based programming website, to engage with computer science concepts as a way to be creative, communicate, and problem solve. Through a series of real world scenarios, projects and challenges, students are introduced to foundational concepts that they will return to repeatedly throughout the course.

AUTOMATION & ROBOTICS (Q): Students trace the history, development, and influence of automation and robotics as they learn about mechanical systems, energy transfer, machine automation, and computer control systems. Students use the VEX Robotics® platform to design, build, and program real-world objects.

FLIGHT & SPACE (Q) : Get ready to take off! Investigate, innovate, and use creative thinking and problem solving to learn how scientists and engineers make traveling around the world and beyond possible. Students will design, prototype, and test models to learn about the science of flight and what it takes to travel and live in space. Students will solve real-world aviation and space challenges and plan a mission to Mars.

ENERGY AND THE ENVIRONMENT (Q): Students are challenged to think big and toward the future as they explore sustainable solutions to our energy needs and investigate the impact of energy on our lives and the world. They design and model alternative energy sources and evaluate options for reducing energy consumption.

APP CREATORS (Q) : Students will create a mobile app. Students are challenged to be creative and innovative, as they design and develop mobile solutions to engaging, authentic problems. Students experience the positive impact of the application of computer science to society as well as other disciplines, particularly biomedical science.

DESIGN & MODELING (Q) : Students will use the design process to creatively solve problems. Students will design ideas through sketches, solid models, and mathematical models. Students will learn how models can be simulated to represent authentic situations and generate data for further analysis and observations. Tinkercad, a 3D design software, will be used to print designs on the 3D printer.