KEY PENINSULA MIDDLE SCHOOL

7th GRADE ELECTIVES

You may select either one year long elective and one trimester elective OR 4 trimester electives. Just in case your top choice doesn't work with your schedule, you will also choose alternates.

Year Long Electives

BAND: Beginning (MU010), Intermediate (MU020) and Advanced (MU030). Band classes perform at several events throughout the year including concerts at KPMS, assemblies, band festivals, field trips and parades. Both Intermediate Band and Advanced Band are for second and third year band students and placement in these bands is based on instructor approval and playing ability. Some school instruments are available for those students who cannot rent or purchase their own. Playing in the band is a one year commitment.

AVID: (EL075) AVID (Advanced Via Individual Determination) is a program that helps students to focus on their goals and improve their grades for high school/college readiness. Weekly binder checks and note taking strategies help students to achieve their short and long term goals. The purpose of AVID is to teach students basic skills to improve their class performance.Admin-pre-approval required. This class is by invitation only and students must complete an application.

CHOIR: (MU045) Join the choir and learn how to improve your singing voice, music reading skills and musicianship. We will perform at several events at KPMS and in the community. Singing in the choir is a one year commitment.

LEADERSHIP: (LE011) This class is open to only 7th and 8th grade students. It is a year long class focused on positive leadership and communication skills. This class will focus on ASB projects, recognition activities, personal goal-setting skills, community service, leadership reports, and defining the characteristics of an effective leader

YEARBOOK: (YR010) Learn how to take photos, organize, edit and create the layout of a yearbook. This class is a year long class.

Trimester Electives

APP CREATORS (CS020) Introduces students to the field of computer science and the concepts of computational thinking, through the creation of mobile apps. Students are challenged to be creative and innovative, as they collaboratively 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. ("Computer Science for Innovators" is recommended first, but not required.)

ART: (ART 010) In this introductory course, students learn about the elements of art and the principles of design through a variety of hands-on projects and activities such as sketching/drawing, painting, plastic sculpture, graphic design and clay/ceramics

ADVANCED ART: (AR013) Open to 7th and 8th grade students. Students will continue along their creative journey, incorporating fundamental elements of Visual Art taught in Beginning Art, while building skills with new mediums and furthering project sophistication/conceptualization/implementation. Art History and written evaluation of art part of this course.

CREATIVE ART (AR040) Many different creative projects and techniques will be explored, and may include sketchbooks, journals, working with colored pencils, oil pastels and watercolors, printmaking, relief printing and much more.

CAD: (CT065) Computer Aided Design The goal of this exploratory class is to inspire a new generation of engineers and architects. In this class students will learn to use industry-standard 3-D modeling software and apply the engineering design process to solve real world problems. The course emphasizes critical thinking, creativity, innovation, computer-generated technical drawings, and the use of computer-controlled rapid prototyping equipment (like 3-D printers) to complete their projects. It also promotes communication and collaboration by emphasizing a teaming approach in the instructional units while offering students individual learning challenges at all ability levels.

COMPUTER SCIENCE FOR INNOVATORS (CS019)- This course teaches students that programming goes beyond the virtual world into the physical world. Students are challenged to creatively use sensors and actuators to develop systems that interact with their environment. Designing algorithms and using computational thinking practices, they code and upload programs to microcontrollers that perform a variety of authentic tasks. The unit broadens students' understanding of computer science concepts through meaningful applications. Teams select and solve a personally relevant problem related to wearable technology, interactive art, or mechanical devices.

INTRO TO ENGINEERING DESIGN I & II: (IA021 & IA1022) This is an engineering course that teaches problem-solving skills through “hands-on” design and construction. Using their imagination and creativity, students will learn how engineers and technicians use math, science and technology to research, design, and construct solutions to open-ended engineering problems. Students will become familiar with basic technical drawing and construction methods along with industry leading technologies (such as 3-D Printers) to complete their projects. It also promotes communication and collaboration by emphasizing a teaming approach in the instructional units while offering students individual learning challenges at all ability levels.

INTRO TO ROBOTIC ENGINEERING: (CT060) This course is a hands on introduction to the field of robotics which brings together computer science and engineering. Students will work in small teams to build robots using Lego robot building kits and program them using microcontrollers. They will have the opportunity to complete multiple investigations involving inquiry and guided research, problem solving and integrating math, science and technology as it relates to programming robots, using NXT software and hardware to navigate their environment.

ROBOTICS II: (CT062) Open to 7th and 8th grade students. Students will learn advanced application of robotic engineering. The students will also learn the foundations and fundamentals of engineering and materials in robotics, as well as the engineering design process and the steps one follows for successful design planning. Additionally, students are introduced to the advanced concepts of 3-D sketching and modeling with CAD software. **Prerequisite: Beginning Robotics.**

MANUFACTURING I: (IA010) Students who like creating and building, operating traditional machines like a scroll saw and high-tech tools like a laser cutter/engraver and working with their hands and mind are sure to enjoy this class? Intro to Manufacturing Technology I covers product design and development, measuring tools and layout, fabrication processes, safety practices and quality control. This course primarily deals with

woodworking, although other materials such as plastic or composites will be introduced. No prerequisite required.

MANUFACTURING II: (IA013) Is a course offered to students in grades 7-8 who have successfully passed Manufacturing Technology I. It is a more advanced course that expands learning by broadening experiences and process knowledge. Students will explore in depth techniques and larger scale projects using familiar machinery as well as equipment new to them. Course includes instruction in materials, manufacturing processes, automation, communication and employability skills, and safety. **Prerequisite: Manufacturing**

MEDICAL DETECTIVES (CT030) Become medical detectives and solve medical mysteries! Apply experimental design, creative thinking, and problem-solving to investigate the inner-workings of the human body, diagnose disease, and improve human health. In this new course, 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. Students will also have the chance to solve forensic mysteries playing the role of a crime scene investigator that may include sketching a crime scene, lifting fingerprints, creating casts of shoe or tire prints, and analyzing an array of evidence in field and lab settings.

MULTI-MEDIA PRODUCTIONS; (MM012) This course is designed to teach students the basic principles surrounding the creation and use of digital media in the workplace. Students will use industry standard tools to produce graphics, images, advertisements and multimedia displays. Classes may use software programs including but not limited to Microsoft Word, Scratch, PowerPoint, Google Docs, and Photoshop. Students also will use a variety of online multimedia tools to create YouTube videos, explore Stopmotion Animation, write computer code, and investigate other forms of media for professional use. Students will learn the basic operation of digital still and video cameras. Advanced students will take a multimedia perspective involving the convergence of text, graphics, audio and video, and the distribution of these assets over the internet. This course requires critical thinking, information literacy, communication proficiency, and self- and peer-evaluation. students will move beyond the basics of digital and still and video cameras to work with Digital Photo, Graphic Design, Virtual Reality Design, Digital Video, Computer Coding. App Development, enter media contests, and explore careers in media.

OFFICE ASSISTANT: Students wanting to work as an Office Assistant must pick up and application front the Main Office, complete it and return it back to the office.

P.E. ELECTIVE: (PE078) Be involved in athletics and physical fitness by adding an extra trimester of P.E**.**