Mr. Embrick

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**Conference Period:  4th Period**

Welcome to David Crockett Middle School PLTW:  Gateway to Technology.  This class covers STEM topics in the areas of Design and Modeling, Automation and Robotics, Magic of Electrons, and Science of Technology.  Students will learn to use advanced 3D modeling software including 3D printing, programming in RobotC, design and building solutions using VEX robotic kits, using Snap Circuit boards and building nightlights and am/fm radios, learn and build motors, electromagnetism, nanotechnology, designing and building drag cars and solar cars, and robotic dragsters, finding solutions to real world problems such as oil spills, making ice cream, and many other STEM related topics.

**Supplies:**  The Engineering Room will provide students with rulers, color pencils and markers, scissors, robotic equipment and hardware and other basic supplies such as paper clips, rubber bands, yarn, construction, craft sticks etc... for engineering projects.  Students are responsible for the following:

Engineering notebook:  Composition or otherwise with graphing pages

Period 1 – will need to bring 2 pack of straws (100 count) and 2 4oz elmers glue $4/$1 = $5 at Walmart

Period 2 – will need to bring 1 bag (15 to 30 pack) Hot Glue Sticks (large diameter the size of a nickel) $5 at Walmart

Period 6 – will need to bring 4 pack of scotch tape (or similar) $5 at Walmart

Period 7 – will need to bring 36 count round 7” assorted color balloon pack or

 Rubber band ball, 2 pack assorted rubber bands, 600ct rubber bands (choose 1) or

 100 piece thumb tack’s box or

 100 count paper file fasteners

All all $5 at Walmart – choose one item to bring.

Lab Fee - $25 (includes a PLTW team shirt) All students will be invited to participate in the 2016 Texas A&M University Engineering competition on December 03, 2016. Transportation, lunch and another team shirt will be included in the event with no charge to students.

Students may be involved in additional field trips, events, guest speaks and demonstrators and various other extracurricular activities - TBA

**Important information**

This course is awarded .5 high school credits for completion of GTT 1 in the first semester.  Students who do not pass GTT 1 will not be able to continue to GTT 2 in the second semester.  GTT 2 is awarded .5 high school credit upon completion of the course at the end of the year.  GPA's are on a 100 point scale and will transfer with the student to the high school.  It is ***EXTREMELY VITAL*** that students DO NOT miss classes with suspensions or in-school suspensions.  The hands-on nature of this class prevent students from being able to work from home.

Term 1 Grading Period (August 22 – October 14, 2016)

 Progress Report 1 (August 22 – September 9, 2016)

Major – Project 1.1.3 Stem Investigation

Students must dress up to present in Church-like attire. Collared shirts for gentlemen or ladies and no jeans. Khakis or dress pants acceptable. Presentations will be either on September 8th or 9th. 10% of grade is based on dress/confidence. Dress for success.

Minor – Activity 1.1.2 Introduction to Engineering

 Activity 1.1.5a Engineering Careers – Scavenger Hunt

 Activity 1.1.5z Engineering Careers/Vocabulary terms - Bumper Stickers

 Progress Report 2 (September 12-30, 2016)

 Progress leading to end Term 1 (October 3 - 14, 2016)

Term 2 Grading Period (October 18 – December 16, 2016)

 Progress Report 3 (October 18 – November 4, 2016)

 Progress Report 4 (November 7 – December 2, 2016)

 Progress leading to end Term 2 (December 5 – 16, 2016)

Term 3 Grading Period (January 3 – March 10, 2017)

 Progress Report 5 (January 3 – 23, 2017)

 Progress Report 6 (January 24 – February 10, 2017)

 Progress leading to end Tern 3 (February 13 – March 10, 2017

Term 4 Grading Period (March 20 – June 1, 2017)

Progress Report 7 (March 20 – April 7, 2017)

 Progress Report 8 (April 10 – 28, 2017)

 Progress leading to end Tern 4 (May 1 – June 1, 2017

**GRADING RUBRIC**

Major Grades: 50% of the grading period average

 (Projects and Presentations)

Daily Grades: 50% of the grading period average

 (Activities, written assignments, problems)

Semester Exams are cumulative assessments and are 15% of the semester grade.

**All notices of major grade assignments will be posted on my webpage two weeks in advance.** Students will also get notice in the classroom one week prior to the major assessment.

**LATE WORK POLICY**

Students will be allowed to submit late work. Late work must be submitted before the last week of the each reporting period before progress reports and the final report card. Late work is typically penalized by 10-20 points depending on the # days it is late.

**CLASSROOM EXPECTATIONS/ROUTINES**

Students will exhibit Care, Commitment, and Trust towards each other, the teacher and the classroom and equipment. Students will follow the safety guidelines when using tools as signed by each student.