IN-CITE-FUL CONNECTIONS

Connecting Students to the *Real World*

November, 2017

CITE

Career Internship Technical Education

SPRINGS CHARTER SCHOOLS

SYSTEMS DIAGNOSTICS, SERVICE, AND REPAIR

PATHWAY COURSES

CTE Small Engine Maintenance & Repair

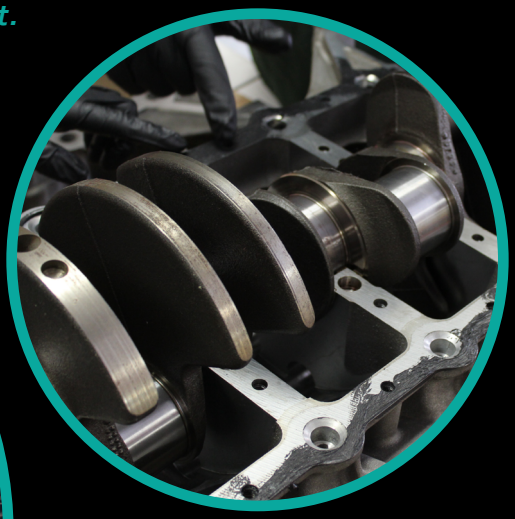
CTE Maintenance & Repair Vehicle Systems

CTE Maintenance Control Center Operations

Project based learning focus for students in this pathway at ***Flabob Airport Preparatory Academy*** is aeronautical transportation, while students at the ***Temecula Student Center*** will practice with an emphasis on automotive transportation.

WHO IS THIS PATHWAY FOR?

The Systems Diagnostics, Service, and Repair pathway prepares students for postsecondary education and employment in the ***transportation industry***, which includes but is not limited to ***motor vehicles, rail systems, marine applications, and small-engine and specialty equipment.***



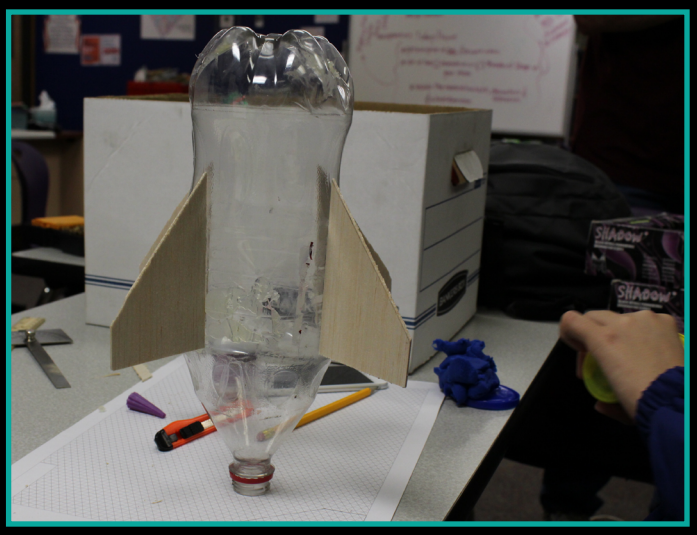
Isaac Smith drives his ***1931 Chrysler Touring Car*** to his CTE class every Wednesday. He starts it with a ***hand crank!***

Sample occupations associated with this pathway:

- Service Technician/Maintenance Worker/Shop Foreman
- Technical Writer
- Dispatcher
- Engineer
- Investigator/Inspector

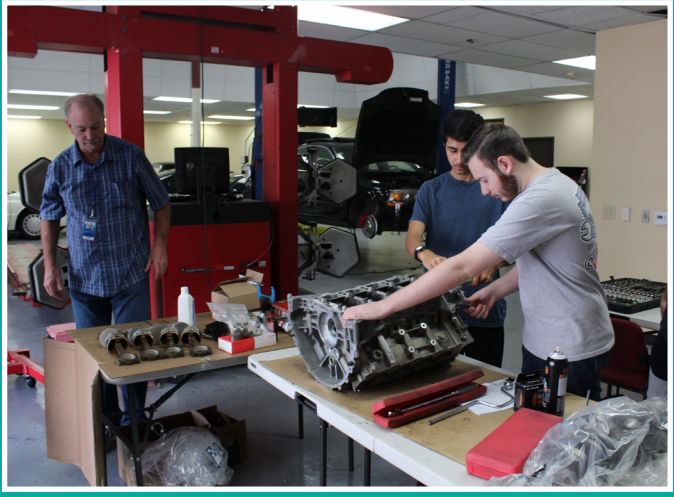
BLAST OFF!

Students Construct and Deploy Bottle Rockets!

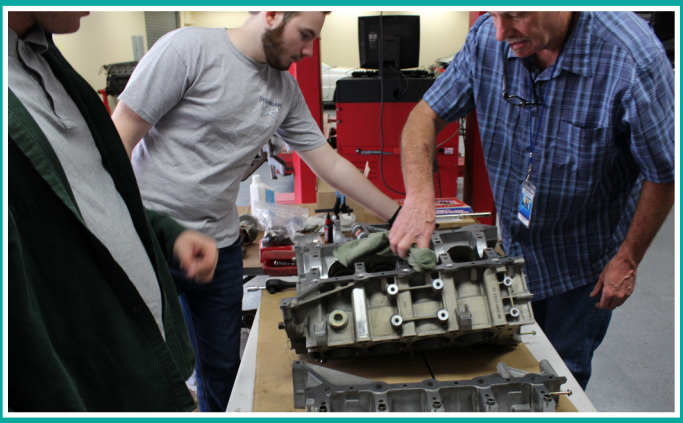


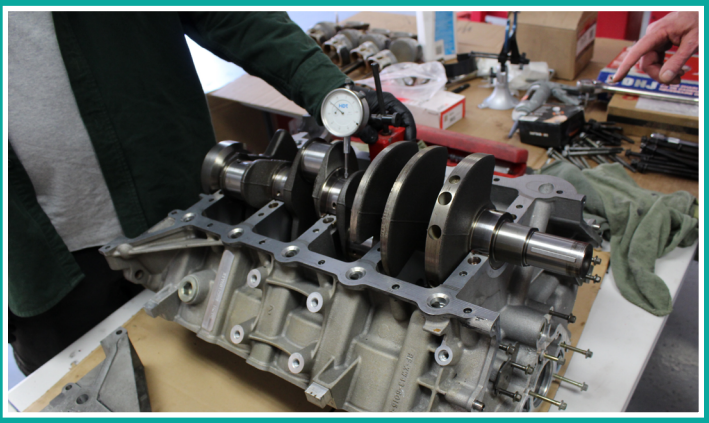
REAL WORLD EXPERIENCE!

Students enjoy hands-on learning in our new Automotive Classroom

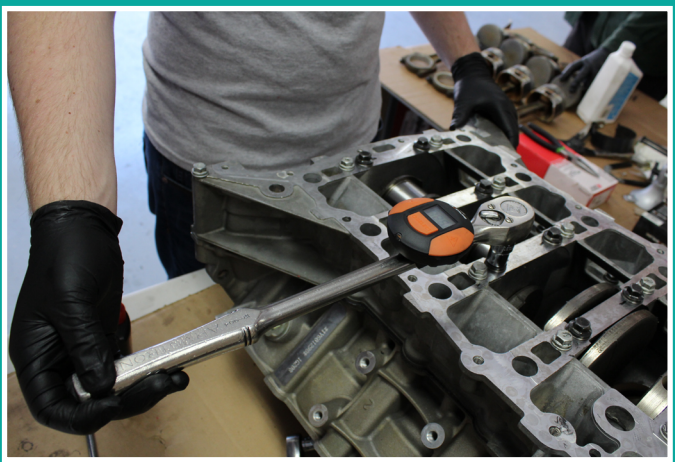


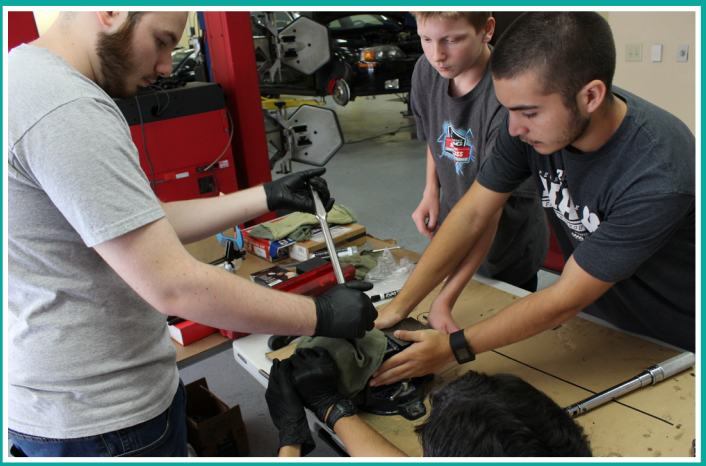
Students assembling an engine





Using a dial indicator to check crank shaft straightness





Students using a torque angle gauge

THE AIRPORT AS A CLASSROOM!

FAPA Students enjoy on-site learning at Flabob Airport in Riverside!

Flabob Airport has been the home to numerous teen airplane restoration projects for over 15 years. ***I have been part of the most recent project, the Stinson 108 Project for the last three years. Throughout this time, I have learned innumerable mechanical skills, from fabric work, to engine design and function, to circuitry.*** Over my time there, the Stinson has changed from a couple of skeleton wings and the frame of its fuselage, to a fully covered and painted aircraft. All that remains is for some touching up and of the interior, engine work, and the final testing of all the instruments and control surfaces.

In recent years, many students such as myself from Flabob Airport Preparatory Academy, a school with deep connections to the historic airport, have worked on these projects throughout high school. This year, the Systems Diagnostics class is partnering with the Build-A-Plane project to have students work on airplanes there as part of their actual curriculum. Starting in November, students will be working with Airframe and Powerplant mechanics in the Starduster Hanger at Flabob Airport as often as every other week. ***This program can help foster relationships for the high schoolers with the airport and supply them with real life experience and mechanical knowledge that can be used in future careers.***

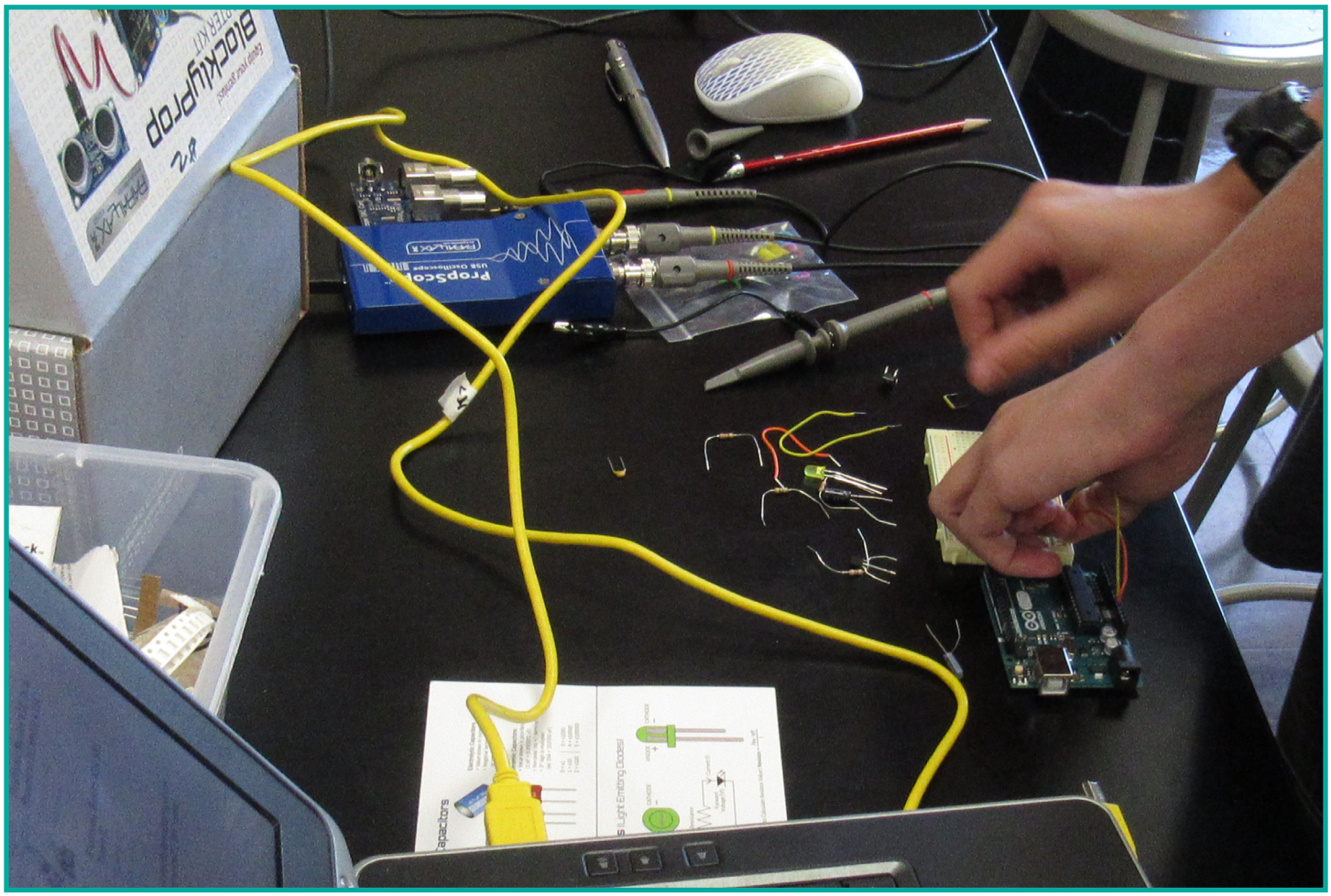
-John Greene, FAPA student in the Systems Diagnostics, Service, and Repair CTE Pathway

CITE

Career Internship Technical Education

SPRINGS CHARTER SCHOOLS

ENGINEERING TECHNOLOGY



PATHWAY COURSES

Engineering Essentials

Electrical and Computer Engineering

Mechanical Engineering Design with CAD

The ***Engineering Technology*** pathway provides learning opportunities for students interested in preparing for careers in the design, production, or maintenance of mechanical, electrical, electronics, and computer and ***electromechanical systems and products***.

GREETINGS FUTURE ENGINEERS!

A message from Engineering Teacher and Industry Professional, Paul Purczynski

Hello all,

I thought that because this is the first article for my Engineering Pathway that we should start at the beginning. I believe that is describing what engineering is and what careers it can become.

Engineering is the real world problem solver. We use our understanding of science to solve problems in our world. You can see the results of this just about anywhere you look. ***Even the device you are using to read this article was at one time a problem for engineers to solve.***

What careers do engineers take? Well, it's really too many to list completely. But here is a short one that might get you thinking about them.

Mechanical Engineer:
Mechanical engineering is the study of motion, energy and force. The mechanical engineer designs using these elements along with many different materials like metals and plastics to solve problems that help satisfy the needs and wants of society. A really good example of Mechanical Engineering is the modern automobile.

Software Engineer:
Software engineers are specialists who are in charge of the testing, design, development and maintenance of computer software for business and or personal use. They are the ones that created such applications as Google search, Microsoft Word and Excel. They apply the principles of mathematics, engineering and computer science in creating and managing software.

Electronics Engineer:
Electronics engineers design devices like cell phones, PC's and stereos, using smaller devices like microprocessors, transistors, resistors, capacitors and inductors. They use these smaller devices to exploit the electron to do useful work in the forms of the devices we take for granted everyday.

The dependence on technology today and in the future is only helping to expand the field of engineering.

So if you didn't notice any spelling or grammatical error in this article, ***you might be an engineer.***

STUDENTS AT WORK!

Engineering Technology students at the Temecula Student Center are learning ***Ohms Law and applied electronics*** through ***building*** and ***trouble-shooting*** series, parallel, and series-parallel circuits.