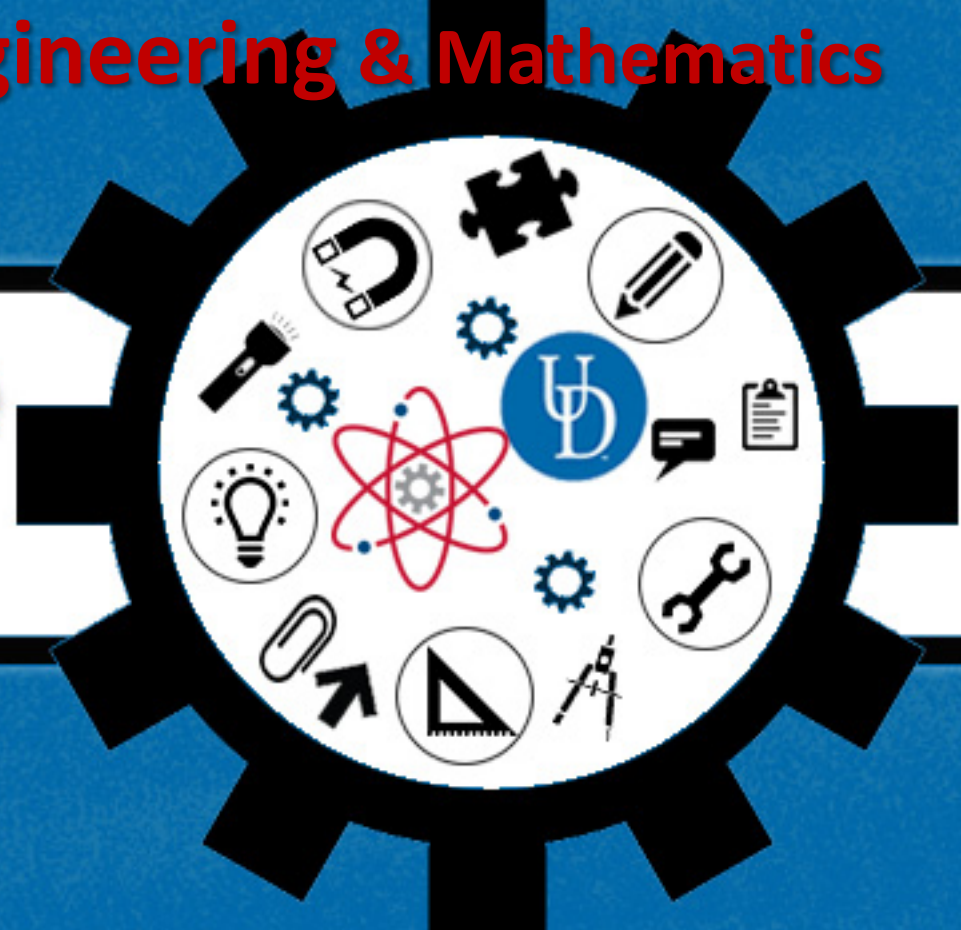


Sharyland I.S.D.

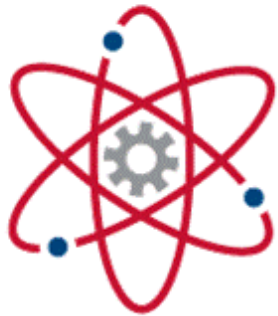
**Project Lead the Way Engineering
Program Presentation**

Science, Technology, Engineering & Mathematics

Emphasizing the **E** in STEM



- ⚙️ PLTW is a nationally-recognized STEM education program which offers a rigorous curriculum
- ⚙️ House Bill 5 (HB5) graduation program requirements dedicate a full endorsement to STEM education
- ⚙️ SISD currently has core-area math and science teachers teaching every PLTW course for added rigor in each course
- ⚙️ EOC exams are administered in all of the PLTW courses, with the exception of GTT (junior high school course) and EDD (high school project-based course)
- ⚙️ Open enrollment process to enter into JH and HS courses, but application is utilized to place some responsibility on the students to follow through with applying, and obtaining teacher recommendations



Texas
PLTW
 PROJECT LEAD THE WAY

Canutillo
 El Paso
 Socorro
 Ysleta
 San Elizario

Amarillo
 Pampa

New Deal
 Lubbock
 Trinity Christian
 Ector Co

Mineral Wells
 Granbury
 Graham
 Abilene

Denton
 Northwest
 Keller
 White Settlement
 Birdville
 Fort Worth
 Crowley
 Burleson
 Mansfield
 Arlington
 Azle

West
 Waco
 Midway
 Copperas Cove
 Killeen
 Belton
 Temple

San Felipe-Del Rio
 Eagle Pass

Judson
 Seguin
 Harlandale
 San Antonio
 South San Antonio
 Brooks Academy
 Lytle

Roma
 Rio Grande City
 Edinburg
 Sharyland
 Pharr SanJuan Alamo
 South Texas

Plano
 Richardson
 Carrollton FB
 Dallas
 Parish Episcopal
 Meadow Oaks Aca
 Hampton
 Grand Prairie
 Red Oak
 DeSoto
 Waxahachie
 Ennis
 Corsicana

Georgetown
 Round Rock
 Leander
 Pflugerville
 Austin
 Lutheran Sch Assoc.
 St. Dominic Savio
 Holy Family Catholic
 Austin Jewish Aca
 Del Valle
 Bastrop
 Lake Travis
 Burnet
 Hays
 Sinton
 Corpus Christi
 St. John Paul II
 CC Sch Sci/Tech
 Flour Bluff
 Bishop
 San Diego

Lasara
 San Perlita
 Harlingen
 Brownsville
 IDEA Public Schools

Melissa
 McKinney
 Little Elm
 Frisco
 Lovejoy
 Garland
 Forney
 Terrell



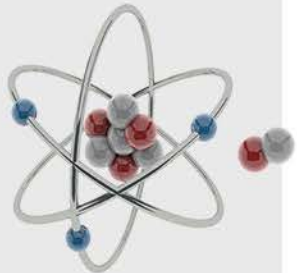
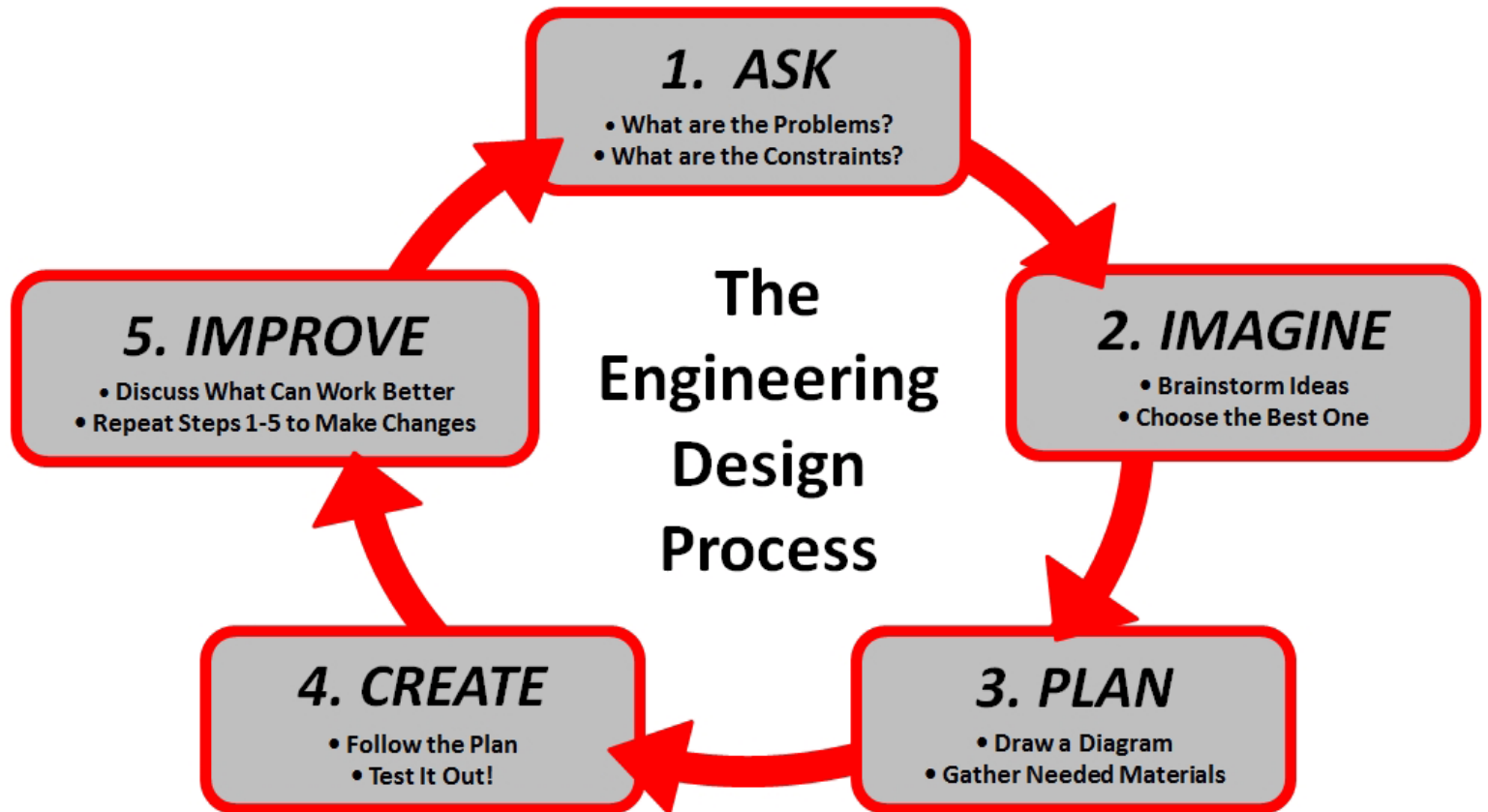
Mount Pleasant
 Longview
 Tyler
 UTT Innovation Academies
 Palestine

Little Cypress Mauriceville
 Huffman
 New Caney
 Montgomery
 Tomball
 Spring
 Aldine
 Cypress Fairbanks
 Houston
 Harmony Schools
 Southwest Schools
 Spring Branch
 Alief
 Katy
 Lamar
 Royal
 Sealy
 Stafford
 Fort Bend
 Galena Park
 Goose Creek
 Friendswood
 Pearland
 Alvin
 Clear Creek
 Galveston

2015-16 Programs 126 Districts

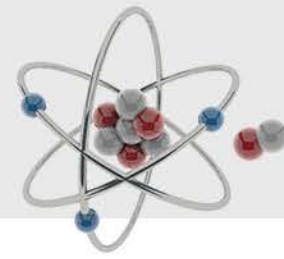
217 Engineering **64 Biomedical Sciences**
216 Gateway **14 Computer Science**
48 Elementary Launch

Science, Technology, Engineering & Mathematics

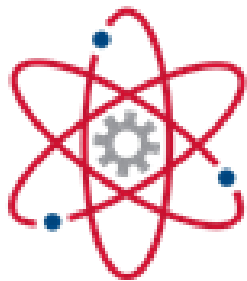


<https://youtu.be/yyDn9dXJ3MI>

Sharyland I.S.D. Current PLTW Course Sequence



8 th Grade	Freshman Year 9 th	Sophomore Year 10 th	Junior Year 11 th	Senior Year 12 th
Gateway to Technology (GTT)	Introduction to Engineering Design (IED)	Civil Engineering and Architecture (CEA)	Engineering Science (ES) <i>(Science Credit)</i>	Digital Electronics (DE) <i>(Math Credit)</i>



PLTW
PROJECT LEAD THE WAY



Junior High Course

Gateway to Technology (GTT) – Two Modules DM & AR

DM

Design & Modeling

Students apply the engineering design process to solve problems and understand the influence of creativity and innovation in their lives. They work in teams to design a playground and furniture, capturing research and ideas in their engineering notebooks. Using Autodesk® design software, students create a virtual image of their designs and produce a portfolio to showcase their innovative solutions.

AR

Automation & Robotics

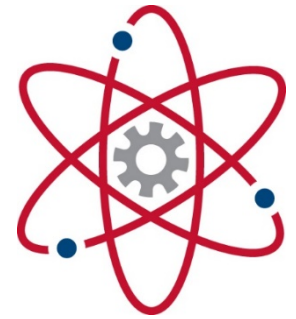
Students trace the history, development, and influence of automation and robotics as they learn about mechanical systems, energy transfer, machine automation, and computer control systems. Students use the VEX Robotics® platform to design, build, and program real-world objects such as traffic lights, toll booths, and robotic arms.



<https://youtu.be/qQq6Fu8VK3A>

Foundation Course

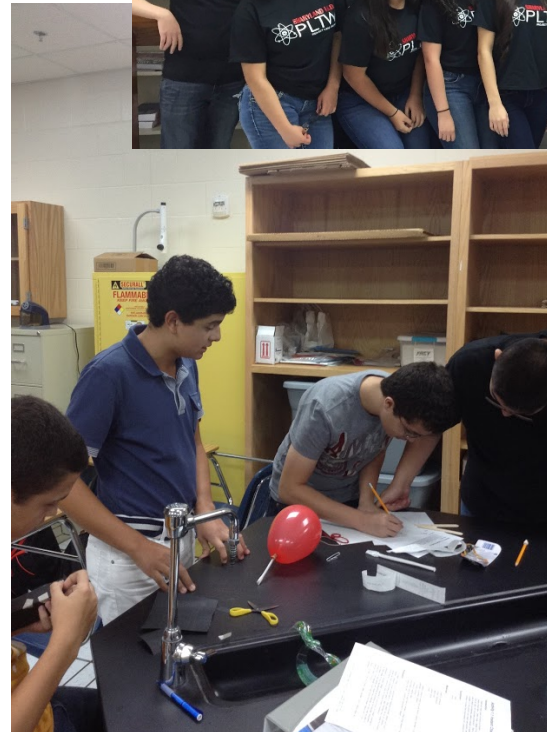
High School Course



IED

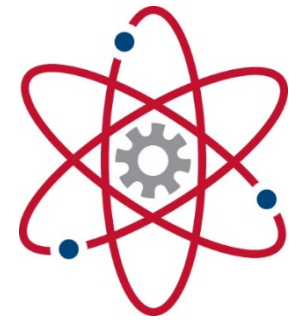
Introduction to Engineering Design

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software and document their work in an engineering notebook.



Specialization Course

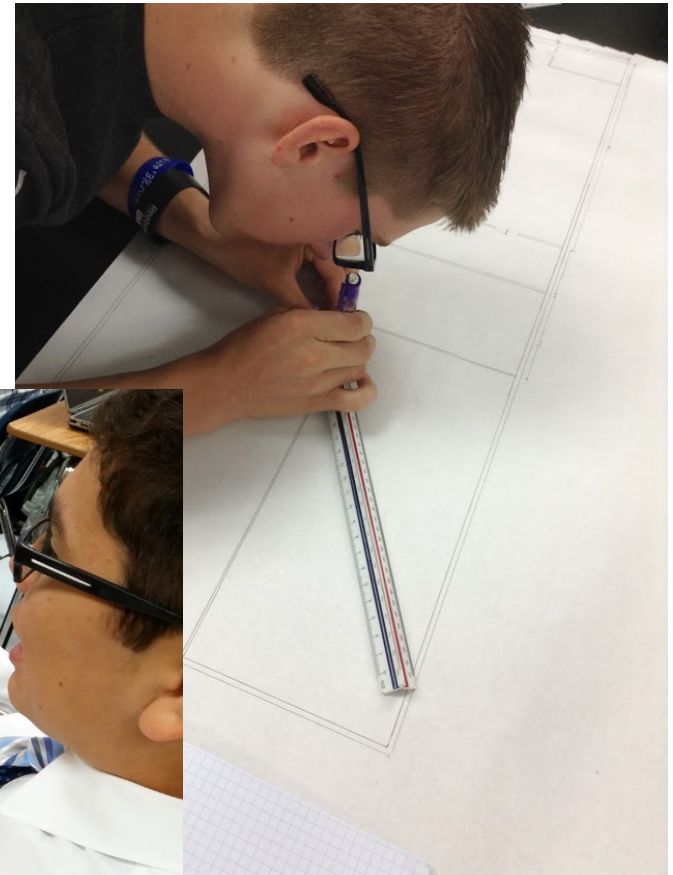
High School Course



CEA

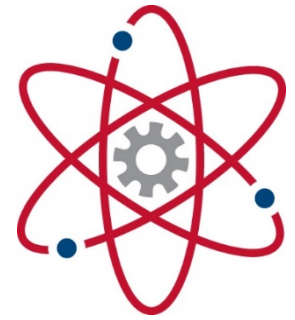
Civil Engineering and Architecture

Students learn important aspects of building and site design and development, applying math, science, and standard engineering practices to design both residential and commercial projects. Students will document designs using 3D architecture design software.



Foundation Course

High School Course



ES

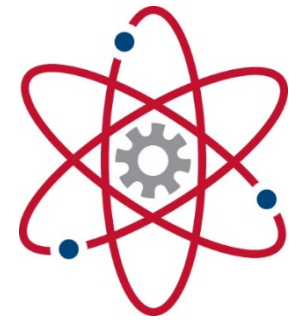
Engineering Science

Through problems that engage and challenge, students explore a broad range of engineering topics including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.



Specialization Course

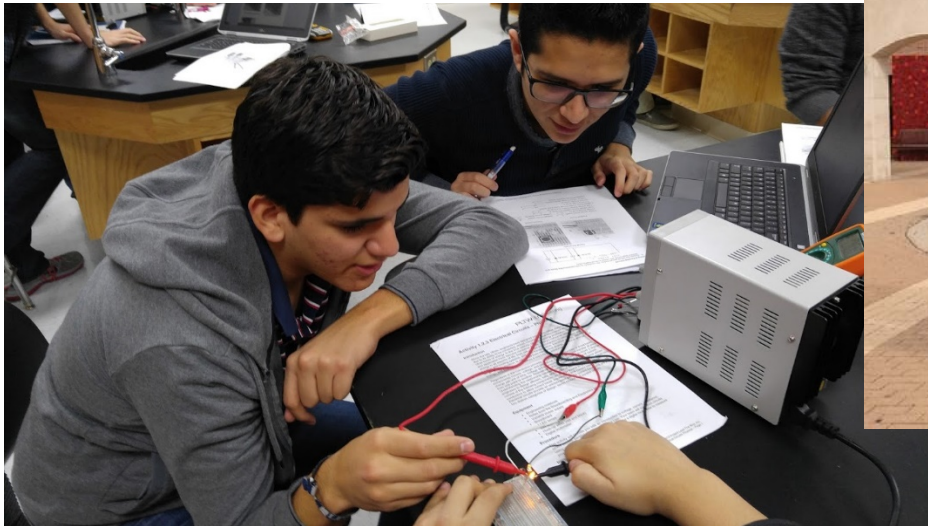
High School Course



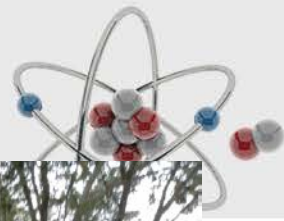
DE

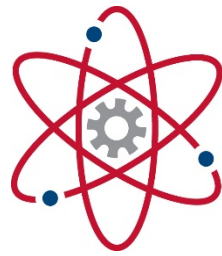
Digital Electronics

From smart phones to appliances, digital circuits are all around us. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry including logic gates, integrated circuits, and programmable logic devices.



Other Engineering Activities





PROJECT LEAD THE WAY

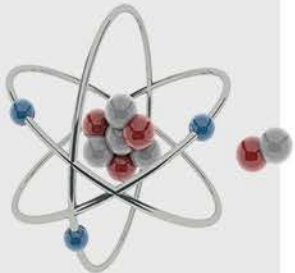
PLTW



**We are proud to have certified programs
at both of our high schools!**

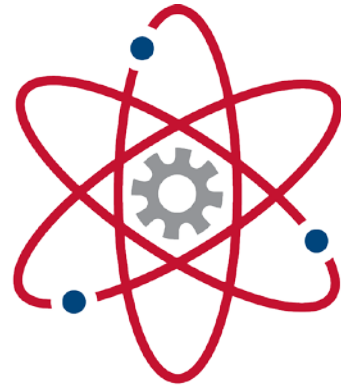
Benefits of a Certified Program:

- Demonstrate to industry and post-secondary partners an investment in students and a commitment to student success beyond the classroom;
- Increase the likelihood of a teacher in our district being selected as a Master Teacher;
- Provide students with the opportunity to receive college-level recognition such as college credit, scholarships, and admissions preference; and
- Grow visibility of our program within the school and community





Join our Sharyland ISD PLTW Program
Today!



PROJECT LEAD THE WAY

PLTW

Contact your school counselor for more information.