PLTW-IT-8-Women in Engineering-Advanced Design and Modeling w/ Mr. Falk:

In this class, girl students will be introduced to Women in a variety of Engineering and Technology Fields. Using teamwork, creativity, and innovation students will create various 3D Models and 3D Printed projects. Students will use equipment utilized in Engineering and Technology such as Inventor, 3D Scanners, and 3D Printers. Students will be making and keeping 3D Models and Prototype 3D Prints of Individual Designs. Examples are cell phone cases, jewelry boxes, key chains, name plates, headphone stands, organizers, houses, toys, and many others. Your imagination is the only limit in Design!! Students will also build and Code/Program a Robot.

Activities:

Design Process-Students will use the Design Process to create individual objects to 3D Model in Inventor and 3D Print using Makerbot 3D Printers

Women's Stem Investigation-Students will cooperatively research and present a Woman's Engineering/Technology contribution to our society

Women's Engineering Careers-Students will view, discuss, and hear from Women in the Engineering/Technology fields

Women's Engineering/Technology Organizations-Students will look at Women's Engineering and Technology Organizations to become aware of the support and demand for Women in those fields

Women's Engineering/Technology Career Brochure Design-Students will create a Brochure outlining a Career in Engineering or Technology that they are interested in

Design Elements-Students will identify and use the Design Elements that help create a successful product/design

Product Design-Students will cooperatively design and build a product of their choosing

Sketching Techniques-Students will create sketches of their ideas using Industry Standard Sketching Techniques

Toy Design-Students will design, create, and build a toy for a child/audience of their choice

Claw Bot-Students will Build, Program, and Drive a VEX Robot

Independent Design-Students will design, create, and build an object for themselves

Drawings and Animations-Students will create Computer Drawings and Animations of their Designs

Portfolio-Students will create a picture Portfolio of their Designs and Creations