ECP

STEM Action and District-Business Partnership Plan

Brentwood School District

February 27, 2019
Our Story...
Brentwood’s STEM Story

Engineering through F1: https://youtu.be/GILtTiQvqag

Vex Robotics: https://youtu.be/7FvXbMVbZtw

Computer Science: https://youtu.be/aoZtCnKuDRw
Discovery From STEM Activities and Readings

- Scientific process
  - Start with a question
  - Conduct research
  - Create a theory
  - Computations
  - Trial and Error
  - Solution
    - Further analysis needed?
Corporate Visit Take-Aways

- Many job opportunities in the STEM fields
  - Global opportunities exist as well
- PPG is
  - Not just paint. Not just glass.
- Experimentation Process
  - Perseverance
  - Negative results are still results
- Advancement available in all fields and at all levels
- More practical applications in the classroom
Colleague Interviews

• STEM
  • Uses higher level thinking skills and 21st century learning skills
  • Peer interaction and collaboration
• Gives students opportunities to understand a career pathway
• Hands on activities
• Technology is more meaningful if used in a purposeful way
• Additional STEM electives
  • Explore STEM curriculum
Practice Standards and CEW Standards

• Integrated currently
  • More collaboration needed to map how we are integrating them across the curriculum
• Identify standards that need further integration
  • Entrepreneurship and Job Shadow Experiences
Authentic Problem-Based Learning Opportunities

Lessons/Units
- Suggest each course incorporate a research-based project
- Create opportunities for students to truly experience the trial and error process

Courses
- Continue to connect with local universities and organizations to build courses of study (TSA, CMU, F1, Pitt) that inherently have PBL content/process
- Offer a summer STEM opportunities through partnerships with other school districts
PPG/Brentwood Partnership
Spring 2019

• Visit to PPG Springdale
  • Brentwood Communications students
    • Create a video to showcase
      • Our partnership with PPG
      • Career paths within the corporation
    • Interview select PPG Springdale employees
      • Career preparation
      • Current responsibilities

• Deliverable
  • Video that will be shown during high school open house next fall
PPG/Brentwood Partnership
Fall 2019

- September 2019
  - High school Open House
    - Showcase partnership through video showing

- November 2019
  - In-House STEM problem-solving event
    - For all 10th grade students
    - Showing of partnership video
    - Complete application-based activities that promote critical thinking and problem-solving
PPG/Brentwood Partnership Spring 2020

- Student Visit to PPG Springdale
- Top four teams of three students
  - Tour and participate in further problem-solving
PPG/Brentwood Partnership
2020-2021 and beyond...

- Job Shadowing/ Network Opportunities
  - Students who participated in PPG event in Spring 2020
  - Hands-on experiences within a field of interest