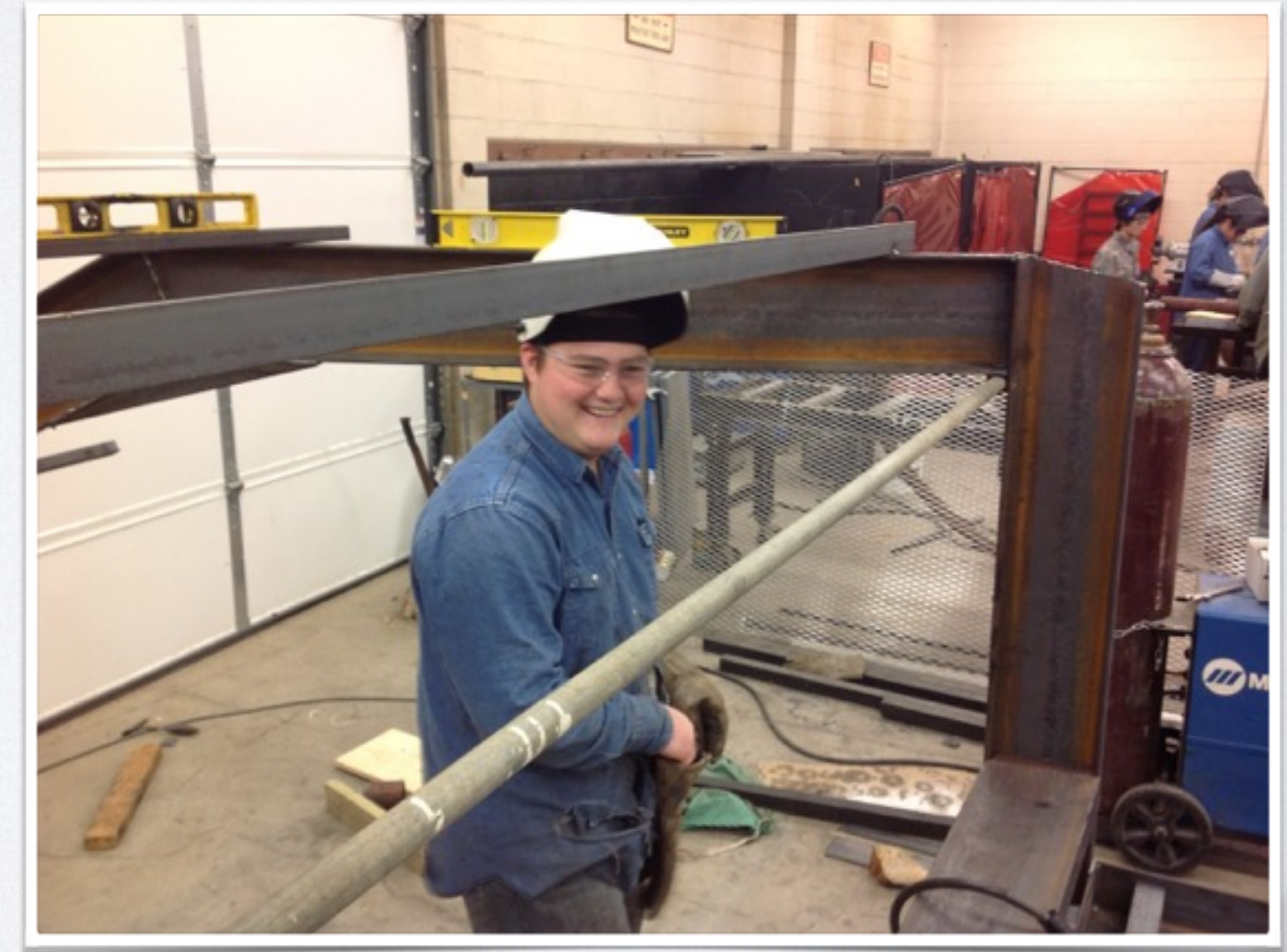


Power, Structural And Technical Systems Interest In A Supervised Agricultural Experience (SAE)

Ideas for developing an ag mechanics-related SAE

Power, Structural And Technical System Overview

- According to the National Council for Agricultural Education, Power, Structural and Technical (PST) Systems is described as:
 - ... the application of principles and techniques for the development and management of power, structural and technical systems.*
- Your interest in this area represents a wide range of opportunities related to agricultural mechanics.



Areas Of Interest In Power, Structural And Technical Systems

- Machinery and Fabrication...which could include:
 1. Fabrication - develop of items from raw materials
 2. Repair / Maintenance - adding value to machinery equipment
 3. Other - testing or evaluation of machinery
- Structures... which could include:
 1. Fabrication - develop of items from raw materials
 2. Repair / Maintenance - adding value to structures
 3. Other - testing or evaluation of structures
- Energy (Power)... which could include:
 1. Repair / Maintenance - adding value to power systems
 2. Development - initiating new power systems or alternative energy solutions
 3. Other - testing or evaluation of power systems



Summary Of Skills Associated With Power, Technical And Structural Systems

The ability to:

- Select energy sources in power generation appropriate to the situation
- Apply physical science laws and principles to identify, classify and use lubricants
- Identify and use hand and power tools and equipment for service, construction and fabrication
- Perform service routines to maintain power units and related equipment
- Create sketches and plans of agricultural structures
- Apply structural plans, specifications and building codes
- Examine structural requirements for materials and procedures and estimate construction cost



Summary Of Skills Associated With Power, Technical And Structural Systems

- Follow architectural and mechanical plans to construct and/or repair equipment, buildings and facilities
- Use instruments and meters to test and monitor electrical and electronic processes
- Prepare and/or use electrical drawings to design, install and troubleshoot control systems
- Use geospatial technologies in agricultural applications
- Applications of math, science, engineering and technology



Connect Your Interests To Your Project

Entrepreneurship	Placement	Research	Foundational
A for-profit venture	A work experience	A research project related	A learning experience, career exploration or other project
Time is invested	Time is invested	Time and money (if applicable) are invested	Time is invested
Money is invested & at risk; Provides opportunity to learn and possibly profit	Provides opportunity to learn & possibly earn a paycheck	Provides opportunity to learn through a research based question	Provides opportunity to learn through exploring the industry



Power, Structural And Technical Systems - Related Projects Ideas:



Entrepreneurship Examples		Placement Examples	
Custom trailer fabrication	...other ideas where your project is related to a business situation, with a goal to develop a profit	Working at a custom fabrication business	...other ideas where your project is working within the power, structural and technical systems area
Equipment repair business		Working for a wind energy company	
Wind Energy Business		Working for a livestock handling equipment dealer	
Wildlife management equipment (Feeders, stands, etc...)		John Deere Tractor dealer	



Power, Structural And Technical Systems - Related Projects Ideas:



Research Examples		Foundational Examples	
Hydraulic pressure of varies lubricants	...other ideas where your project is related answering a research question	Review of the wind energy sector in agriculture	...other ideas where your project is related to learning about the power, technical and structural system through an educational activity
Emission control effects of diesel engines		Job shadowing in the fabrication industry	
Ethanol fuel impacts on small engines		Ag issues in the alternative fuels industry	
Structural integrity of varying structural supplies used in barn construction		John Deere Certification program	



Does Power, Structural And Technical Systems Align To Your Interest?

- Your project should be:
 1. Based upon your interests
 2. Connected to your agricultural education courses
 3. Aligned to your involvement in FFA activities

If YES, continue to the student examples section. Also, complete the "Explore Your SAE" interactive builder tool and finally, develop an SAE Plan draft based on your results.

If NO, explore another area to determine your interests!

