Welding

Tips and Tricks for Welding

Here are some activities for "virtual welding", because we are a bit limited currently.
Welding Game App - Works on phone, too.

Ag Mechanics CDE - Using Iowa FFA's Ag Mechanics competition, see if you can complete as many of the activities listed. Topics range from plumbing, electrical, welding, and math in the real world.

Welding Symbol Internet Exploration - Research welding symbols (Example here) and sketch out projects including these symbols. Helpful hint: make a key to help you remember the symbols and their meanings.

The History of Metallurgy - An Interactive Timeline

Welding Tips and Tricks - Lots of videos to help evaluate different types of welds, as well as ways to improve your skills!

ESAB North America - Basics of Welding instructions

Properties of Metals - why metal is the way it is and how we take advantage of it.

History Channel: Forged in Fire - Season 1 is available for free

Hypertherm Plasma Cutting - The curriculum is available for download. There should be 10 lessons, but may require you to sign in. Use your school account. If there are issues, please let me know and I will do my best to assist.

Modern Marvels - Disclaimer: I cannot guarantee which videos can be found for free, but if you have never watched this show, it goes through a ton from the creation of metals to Grand Coulee Dam's creation to the Space Shuttle, and so very much more. Even though not all of the episodes may not directly discuss welding, anything being built/forged applies. Some of the things humans have figured out is pretty incredible.

How It's Made - A ton of videos to pick through about how different materials are made. Disclaimer: a bunch are not metal or welding related.

Small Engines

Model Engine

Using the instructions, try to create a basic engine. You should have a toilet paper roll. If not, someone is hoarding some. Challenge someone else in the class to see which engine functions better (build-wise, longest running, etc.). Send Dezellem a picture or video of your completed engine(s).

Blueprints

Scale Models

Create scale models of projects that could then be created in real life. Understand models need to have exact measurements, even if completed at scale. You want to include all the views in order to prevent mistakes. Extra fun: frosting weld (using graham crackers, pretzels, etc.) your models together. Send pictures of completed projects.

Above and Beyond Project: You get to design a "new" school shop. Information to include: draw and design new booths, workspaces, storage area(s), etc. Price out the costs for new equipment (ARC, MIG, etc.) and tools.

Electrical Systems

Sketch out!

Using paper, design an electrical system for a light. This will require research into 3-way and 4-way switches. This link explains the basics of circuits. Challenge project: following instructions for a 3-way switch, see if you can create a wiring model. **Please do not plug in to test. I do not want you getting shocked.**

Community Betterment

Betterment Bingo

The opportunities presented serve as a challenge to help our community during this time of uncertainty and social distancing. Please remember to follow the current rules for staying safe if you are wanting to complete any of these opportunities.

Extra Bonus Stuff

Using Resources

One of my Ag Teacher friends from the West Side is posting videos throughout this time away. Some are ag specific, some can help benefit as a career, but all are meant to help out in this time of uncertainty. Check her videos out, Ms Morrison is awesome. MorningJoewithMo