



# Introduction to Agricultural Mechanics

-Curriculum Guide-

Pequea Valley Agricultural Education



**Course Description:** This course is designed to introduce students to the fundamental fields involved in Agricultural Mechanics including plumbing, electricity, welding and small gas engines. The goal of this course is to help students gain the basic skills in each of these areas that will allow them to be successful in advanced courses. Students will be heavily engaged in hands on learning activities that require the use of hand tools and power equipment.

**FFA Membership:** You are an FFA member when you are enrolled in an agriculture class taught by Mr. Masser and/or Mrs. VanSant! You are welcome to attend FFA meetings when they are held on Wednesdays. Keep your ears open for opportunities that may interest you such as...

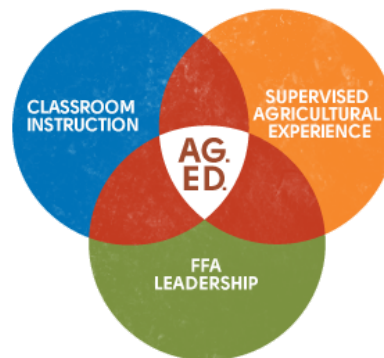
- Career Development Events - See [ffa.org](http://ffa.org) for a complete listing of events!
- Agriscience Research
- Leadership (Conferences, Public Speaking, Parliamentary Procedure)

Events occur throughout the year. Much of the preparation for these events occurs outside regular class time, but your hard work could earn you a free trip to the Penn State campus in June, National FFA Convention in Louisville, KY, or BOTH! Please see Mr. Masser or Mrs. VanSant for details, we would love to share these awesome opportunities with you!

**Supervised Agricultural Experience (SAE):** Looking to earn an additional 1 elective credit for completing a project that interests you? The Agricultural Education department offers 1 elective credit to students who successfully complete an SAE project.

An SAE is ANY project that is student-driven, agriculturally-related, and supervised by an agriculture teacher. These projects could include:

Agriscience Fair Project  
Work Experiences  
Caring for Animals or Plants  
Improvement Projects  
Career Exploration Projects



*Have a cool idea for an SAE?*

Ask your teacher how you can get started. We have connections to local businesses that will hire you, provide you greenhouse space, space to house animals and more!

## **Course Schedule:**

### Unit 1: Shop Safety

- Topic 1: What is Agricultural Mechanics?
- Topic 2: Shop Safety
- Topic 3: Certifications and Careers

### Unit 2: Plumbing

- Topic 1: The Basics of Plumbing
- Topic 2: Plastic
- Topic 3: Copper
- Topic 4: Galvanized

### Unit 3: Electricity

- Topic 1: The Science of Electricity
- Topic 2: Basic Wiring
- Topic 3: Advanced Wiring

### Unit 4: Welding

- Topic 1: The Science of Welding
- Topic 2: Arc Welding
- Topic 3: Oxy-Acetylene
- Topic 4: Tig Welding

### Unit 5: Small Gas Engines

- Topic 1: The Science of SGE
- Topic 2: Parts Identification and Functions
- Topic 3: Tool Identification and Use
- Topic 4: Engine Disassembly and Reassembly