



# Power Technology

-Curriculum Guide-

Pequea Valley Agricultural Education



**Course Description:** This course is an in-depth look at the structure and function of two and four stroke engines. Additional topics such as alternate fuel sources, electric motors, and student projects may also be included based on student interest.

**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!

- Agricultural Technology and Mechanical Systems
- Small Gas Engines

Agriscience Research

Leadership Event (Conferences, Public Speaking, Parliamentary Procedure)

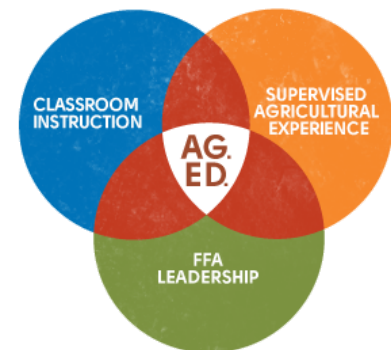
Events occur throughout the year. Much of the preparation for these events occurs outside regular class time, but your hard work could get you a trip to the Penn State campus in June, National FFA Convention in Indianapolis, IN, or BOTH! See Mr. Masser or Mrs. VanSant for details.

**Supervised Agricultural Experience (SAE):** Looking to earn an additional elective credit for completing a project that interests you? The Agricultural Education department offers 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 Outline

Week	Unit	Topic Areas
Week 1	Unit 1: Intro to Internal Combustion Engines	Topic 1: Introduction to Ag Education
Week 2		Topic 2: Shop Safety Topic 3: Classification of Engines Topic 4: Basic Terminology and Principles
Week 3	Unit 2: Tools and Measurement	Topic 1: Measurement
Week 4		Topic 2: Application of Measurement Topic 3: Tool Identification
Week 5	Unit 3: Basic Engine Operations	Topic 1: 2-Stroke Engines
Week 6		Topic 2: 4-Stroke Engines Topic 3: Parts Identification
Week 7	Unit 4: Compression	Topic 1: Purpose of Compression
Week 8		Topic 2: Piston Function Topic 2: Piston Rings Function
Week 9	Unit 5: Fuel System	Topic 1: Types of Fuel
Week 10		Topic 2: Carburation
<b>End of MP 1: Mid-Term Exam</b>		
Week 11	Unit 6: Starter and Ignition Systems	Topic 1: Sparkplugs
Week 12		Topic 2: Electric Starters Topic 3: Rewind Starters
Week 13	Unit 7: Cooling and Lubrication Systems	Topic 1: Engine Cooling
Week 14		Topic 2: Oil Types Topic 3: Engine Lubrication
Week 15	Unit 8: Engine Anatomy	Topic 1: Engine Disassembly
Week 16		Topic 2: Gaskets and Seals
Week 17		Topic 3: Engine Reassembly
Week 18		
Week 19	Unit 9: Troubleshooting	Topic 1: Engine Troubleshooting
Week 20		Topic 2: Customer Service
<b>End of MP 2: Final Exam</b>		