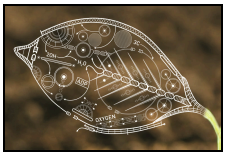
Advanced Scientific Research

-Curriculum Guide-

Pequea Valley Agricultural Education



Course Description: Advanced Scientific Research is intended for students who enjoy exploring a variety of open-ended scientific or social topics. Students in this course will develop a scientific project of interest and present it at the PA FFA Agriscience Fair and the North Museum Science Fair. Along with a strong emphasis on research, this course will allow students to explore different areas of science during field trips and presentations by guest speakers.

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…

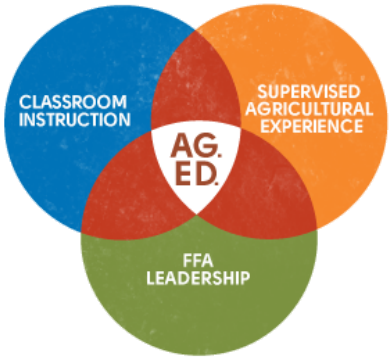
Career Development Events - See ffa.org for a complete listing of events!
Agriscience Research
Leadership (Conferences, Public Speaking, Parliamentary Procedure)

Events occur throughout the year. Much of the preparation for these events occurs outside regular class time, but your hard work could 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 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 Outline

Week	Unit	Topic Areas
Week 1 Week 2	Unit 1: Introduction to the Research Process	Topic 1: Purpose of Research Topic 2: Areas of Research Topic 3: Starting the Research Process
Week 3 Week 4	Unit 2: Review of Literature	Topic 1: Citations Topic 2: Literature Locating Tips and Tools Topic 3: Technical Writing
Week 5 Week 6	Unit 3: Methods	Topic 1: Descriptive/Relational Studies Topic 2: Experimental Studies Topic 3: Qualitative Methods
Week 7 Week 8	Unit 4: Results and Data Analysis	Topic 1: Tables, Charts, and Graphing Topic 2: Descriptive Statistics Topic 3: Correlations Topic 4: Comparison of Means Topic 5: Qualitative Analysis
Week 9 Week 10	Unit 5: Research Dissemination	Topic 1: Methods of Data Dissemination Topic 2: Graduate School and Peer Review Process
End of MP 1		
Week 11 Week 12 Week 13 Week 14	Unit 6: Applied Experimentation	<u>Assignments:</u> Scientific Journal Peer Sharing
Week 15 Week 16 Week 17 Week 18	Unit 7: Applied Data Analysis	<u>Assignments:</u> Scientific Journal Peer Sharing Poster Drafts Final Poster Peer Review Final Poster Printed
Week 19 Week 20	Unit 8: Applied Research Dissemination	<u>Assignments:</u> Agriscience Fair Final Paper Submission Reflection Research Plan of Action
End of MP 2		