

Introduction to Agriculture, Food and Natural Resources
Course Syllabus
2025 - 2026

Lexington High School

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Class Purpose

The introductory course for the Agriculture, Food and Natural Resources Career Cluster provides a knowledge base and technical skills in all aspects of the industry. Learners will be exposed to a broad range of agriculture, food and natural resources careers, cluster foundation knowledge and skills, introduction to leadership development, the FFA organization and career exploration. Topics covered include horticulture, natural resource issues and mechanics. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

This semester-length high school course introduces students to the basic scientific principles of agriculture and natural resources. Students recognize and research plant systems, animal systems, government policy, “green” technologies, agribusiness principles, and sustainability systems. In this course, students apply understanding of ecosystems and systems thinking to the management of natural resources to maximize the health and productivity of the environment, agriculture, and communities. Students also analyze community practice or policy development related to sustainability in agriculture, food, and natural resources. Finally, students apply adaptive ecosystem management to a common pool resource problem in a manner that addresses ecological, socioeconomic, and institutional contexts.

The class is also a great opportunity to learn, strengthen and apply knowledge in the following areas:

- Engineering
- Problem solving
- Tool use - common and no common tools
- Physics
- Math
- Communication skills

Objectives

Throughout the course, you will meet the following goals:

1. Learn how societies have met their need for food and other essentials throughout history
2. Investigate sustainable farming practices and the complexity of food distribution systems
3. Examine ecosystems and food chains, and the causes and effects of damage
4. Review the historical events in the U.S. that impacted sustainable agricultural practices and EPA regulation of pesticides, herbicides, fungicides, and rodenticides
5. Learn about the powers of OSHA to help ensure a safe working environment
6. Identify the federal departments that oversee the logistics and transportation of goods
7. Understand the nature and composition of soil and its role in plants
8. Explore plant classification and reproduction, as well as how plants deal with predators
9. Discover how farmers and governmental agencies can track farm animals to locate the source of contamination or disease
10. Study animal genetics, cloning, and the human consumption of cloned meat
11. Discuss animal husbandry, animal behavior, and the protection of animals against cruelty
12. Explore different careers related to animal care and breeding

Learning Modules

1. Agriculture and Society
2. Leadership in Agriculture
3. Agriculture as a Career
4. Agricultural Safety
5. Agriculture Science
6. Agricultural Technology
7. Agricultural Power and Engineering
8. Agricultural Mathematics

Resources

Text Book: Principles of Agriculture, Food and Natural Resources

Grading

Tests/Quizzes (**50%**) + Projects (**30%**) + Homework/Activities (**20%**) = **100%**

Quarter 1 (**45%**) + Quarter 2 (**45%**) + Semester Final (**10%**) = **100%**

Late Work

All assignments have a due date. I expect all work to be turned in on time.

20 points will be deducted for every day it is late. After 4 days it will be counted as a "0%"

Classroom Expectations and Procedures:

- Come to class prepared (Charged chromebook, pencil, paper, etc.)
- Respect one another
- Listen wholeheartedly when others are speaking
- Speak with good purpose
- Be accountable for your actions
- Learn from failure

Beginning of Class:

- Place phones in backpack (No tolerance policy)
- Find your seat, take out supplies needed for class (CHARGED COMPUTER, pencil, etc.)
- When finished, sit quietly and wait for further instructions

During class:

- Actively participate in class
- Keep order
- Be respectful

End of Class:

- Clean up your area (paper on floor around you, your supplies, put extension cords away, etc.)
- Sit IN seat until the bell rings. DO NOT LINE UP AT THE DOOR!!!!
- Push in your chair and leave the room quietly