

Troy High School Agricultural Education

Plant & Soil Science Course Syllabus

Course Description

Plant & Soil Science is a hands-on Career and Technical Education (CTE) course that explores the relationship between plants, soils, and agricultural production. Students will investigate plant growth, soil properties, nutrient management, conservation, and crop production through classroom instruction, laboratory activities, and hands-on projects.

Course Objectives

- Explain the importance of plant and soil science in agriculture.
- Identify the parts and functions of plants.
- Describe soil formation, composition, and classification.
- Analyze soil texture, structure, and fertility.
- Explain plant nutrition and nutrient cycles.
- Demonstrate proper planting, propagation, and plant care techniques.
- Identify common plant pests, diseases, and management practices.
- Apply conservation practices that protect soil and water resources.
- Demonstrate professionalism, teamwork, and responsibility.

Major Units

- Introduction to Plant & Soil Science
- Plant Anatomy and Physiology
- Soil Formation and Properties
- Soil Texture and Structure
- Soil Fertility and Nutrient Management
- Plant Nutrition
- Plant Propagation & Crop Production
- Weed, Insect, and Disease Management
- Soil and Water Conservation
- Careers in Plant & Soil Science

Classroom Expectations

- Arrive on time and prepared for class.
- Participate actively in classroom and laboratory activities.
- Respect classmates, instructors, plants, equipment, and classroom materials.
- Follow all classroom, laboratory, and greenhouse safety procedures.
- Keep cell phones put away unless permission is given.
- Complete assignments and projects on time.
- Clean and organize work areas before leaving.

Laboratory & Greenhouse Safety

- Follow all instructor directions.
- Use laboratory and greenhouse equipment safely.
- Wear appropriate clothing and closed-toe shoes when required.
- Handle plants, soil samples, and tools responsibly.
- Report accidents or damaged equipment immediately.
- Maintain a clean and organized workspace.

Required Materials

- Notebook or binder
- Pencil or pen
- Chromebook or school-issued device (when available)
- Folder for handouts
- Closed-toe shoes for lab and greenhouse activities

Parent/Guardian Communication

Parents and guardians are encouraged to contact Ms. Bruce with questions regarding student progress or course expectations.

Student Acknowledgment

I have read and understand the Plant & Soil Science syllabus and agree to follow all classroom, laboratory, and greenhouse expectations.

Student Name: _____

Student Signature: _____ Date: _____

Parent/Guardian Signature: _____ Date: _____