



School District of Marshfield

Course Syllabus

Course Name: AS ES – Plant and Soil Science

Length of Course: Semester

Credits: 1/2

Course Description:

An in-depth look at soil origin and development, physical properties, and soil conservation. The greenhouse is used to produce poinsettias for the holidays. By taking cuttings of houseplants and growing vegetables with our state-of-the-art hydroponics equipment, explore plant growth, reproduction, and management. You will also have the opportunity to participate in the county soils evaluation contest.

Learning Targets:

- Explore the role of plant science in the world, and the careers available in it.
- Demonstrate knowledge in soil formation, land classification and fertility.
- Interpret the different functions of the various parts of plant anatomy.
- Identify plant pests and control methods.
- Reproduce plants by using seeds, cuttings, and other asexual methods.

First Quarter (9 weeks)

1. Role of Plant and Soil Science
 - A. Plant and Soil Science in Productive Agriculture (5 days)
 - B. Sustaining Plant and Soil Productivity (5 days)
2. Fundamentals of Soil Science
 - A. Soil Materials and Formation (3 days)
 - B. Land Classification and Use (3 days)
 - C. Soil Fertility and Management (5 days)
 - D. Soil Evaluation (5 days)
 - E. Irrigation (3 days)
 - F. Soilless Plant Propagation (5 days)

Second 9 weeks

1. Fundamentals of Plant Science
 - A. Plants as Living Organisms (5 days)
 - B. Plant Reproduction (7 days)
 - C. Plant Growth (8 days)
 - D. Cultural Practices in Producing Plants (3 days)
2. Plant Pests
 - A. Integrated Pest Management (5 days)
 - B. Insect and Nematode Control (3 days)
 - C. Disease and Control (3 days)
 - D. Weeds and Control (3 days)
 - E. Plants and Their Environment (5 days)
3. Meeting Human Needs With Plants
 - A. Grain Crops (4 days)
 - B. Sugar and Oil Crops (3 days)
 - C. Fiber Crops (3 days)
 - D. Forage and Turf Crops (4 days)

Required Core Resources: Plant and Soil Science, Fundamentals and Applications, Rick Parker.