

Plant Science

Course Number: 2.4410001

Instructor: Mr. Reaves

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Room: 712

Planning: 3rd

Course Description: Plant Science is a basic component of the agriscience pathway. This course introduces students to scientific theories, principles, and practices involved in the production and management of plants for food, feed, fiber, conservation, and ornamental use. Classroom and laboratory activities are supplemented through agricultural experiences and leadership programs and activities.

Units of Instruction: Employability Skills, Work Safety in Agriculture Lab and Work Sites, FFA and the Supervised Agricultural Experience Program (SAEP), Plant Science In Biotechnology, Scientific Plant Classification, Parts of Plant Cells, Technological Advancements In Plant development and Reproduction, Plant Nutritional Needs, Soil Characteristics for Production Capability, Life Cycles of Plants and Reproduction, Genetics In Plant Breeding, Environmental Requirements Of Plants, Use of Plants, Classifying Weeds and Control Methods, Impacts Of Insects On Plant production, Diseases and Physiological Disorders Affecting Plants, Water-plant Relationship, Environmentally Controlled Plant Growth Systems, Effect of Plant Production On the Environment.

Course Standards:

Standard	Description
AFNR-PSB-1	Demonstrate employability skills required by business and industry
AFNR-PSB-2	Relate the role of the FFA student organization in the students' personal development, and implement the Supervised Agricultural Experience (SAE) program.
AFNR-PSB-3	Define and explain the importance of plant science in biotechnology.
AFNR-PSB-4	Differentiate between plants utilizing scientific plant classification.
AFNR-PSB-5	Identify the parts of plant cells and describe their physiology.
AFNR-PSB-6	Explain technological advancements in plant development, reproduction, and protection.
AFNR-PSB-7	Identify and describe plant nutritional needs.
AFNR-PSB-8	Evaluate soil characteristics for production capacity.
AFNR-PSB-9	Diagram the life cycles of plants and explain plant reproduction.
AFNR-PSB-10	Explain the importance of genetics in plant breeding.
AFNR-PSB-11	Analyze the environmental requirements of plants.
AFNR-PSB-12	Explain the uses of plants in medicine, food crops, animal feeds, and ornamental applications.
AFNR-PSB-13	Propagate plants using methods of vegetative cloning and sexual reproduction.
AFNR-PSB-14	Identify and classify weeds, prescribe control methods, and describe the economic and environmental effects that weeds have on agricultural production.
AFNR-PSB-15	Identify, determine control methods, and define the environmental and economic impact insects have on plant production.
AFNR-PSB-16	Identify diseases, related organisms, and physiological disorders affecting plants, and prescribe methods of prevention and control.
AFNR-PSB-17	Analyze the water-plant relationship and describe how water and other materials move through the plant.
AFNR-PSB-18	Evaluate environmentally controlled plant growth systems.
AFNR-PSB-19	Analyze the effect of plant production on the environment.

Student Materials: Each student is required to have a three-ring notebook with loose-leaf paper, a composition book, and a blue or black ink pen or a pencil. These materials should be brought to class DAILY. A small pack of colored pencils or markers, a highlighter, and a basic calculator will be helpful, but there will be a class set provided so students are not required to purchase their own.

All students are asked to bring \$10 to cover the expense of classroom supplies. This will cover individual use items for the course for the year. Fees can be paid online or in person at the main office. Fee also covers membership dues for FFA. Students who wish to become active members of FFA will be required to purchase an FFA t-shirt for \$20.

Labs: Dress appropriately for lab situations (no flip flops, clothes that can't get dirty, etc). Failure to participate in labs will result in a '0' for the lab activity.

9 weeks grades will be weighted as follows:

- 25% Classwork... daily journals, daily grades (worksheets/handouts), minor presentations, minor SAE grades (Teacher Approval Form, SAE Plan, Progress Checks), Participation

- 35% Tests/Quizzes... unit tests, daily quizzes, notebook checks

- 40% Projects/Laboratories... major projects & presentations, laboratories & performance assessments, major SAE grades (Proficiency Application, Presentation, folder check)

Supervised Agricultural Experience (SAE): The Supervised Agricultural Experience (SAE) is a project that is state mandated and carried out through the nation. This serves as an opportunity for the student to venture on his/her passion in learning something career related that sparks their personal interests. Each student will develop and plan an SAE project in which they will spend at least 30 hours outside of class completing. We will discuss the SAE in detail during the first few weeks of the school year. Many examples/ideas will be shared during this time. Check point grades will be taken periodically throughout this course to ensure projects are continuously and adequately completed. This is a large portion of the student's grade and will require some parent involvement and supervision. Data is the keyword. This project's objective is to teach students how to keep information and present it in an appropriate manner. SAE paperwork will be made available for you to reference.

- VISIT – The instructor will be available ANY time to come and assist you with your project. Students must sign-up for visitation appointments. Agreement Forms should be signed by the parent and student. The instructor will make visits through the year.
- RECORDS – These are to be kept on your projects and will be graded. You must include a minimum of 6 working (student is actively working on the experience) photographs of project work.
- CONTENT – You may choose from a wide array of agriculture experiences for the SAE. However, the teacher and a parent must also approve the projects.
- PRESENTATION – At the end of the semester the student will be required to give a presentation on his/her SAE project.

FFA: Agriculture Education's student organization is a co-curricular component of Basic Ag. Students will review the history of FFA and the activities, awards, and benefits of being an FFA member. Students are encouraged to participate in all three areas of the Agriculture Education program including classroom instruction, SAE, and FFA membership. Students participating in FFA career development events must be a current member of the FFA chapter. Active participation is strongly encouraged to get the full output of the course.

Professionalism: Students are to come to class every day to work for the entire time just as if the classroom was a job location. Professional development would include among other things an attitude of teamwork, punctuality, dress appropriate to the work environment, courtesy and respectful language. This portion will be graded in the class participation section of your final grade.

Make-up Work: Work missed when absent is to be made up within 5 days if the absence is excused. After an absence the student is to ask what was missed and complete the work. Students may schedule tutoring sessions by appointment before or after school when necessary.

Disclaimer: The content of this syllabus is subject to change.

Course Syllabus School

Lee County High

My signature on the below indicates that I have read this syllabus.

Student's Printed Name: _____

Student's Signature: _____ Date: _____

Parent's Printed Name: _____

Parent's Contact Information: Cell: _____ Home: _____

Work: _____ Email: _____

Parent's Signature: _____ Date: _____