

Lincoln High School

Center for Agricultural Technology and Environmental Sciences

CATES

Agricultural Science 1

This class is a logical starting point for students interested in Agriculture and/or Natural Resources. Students will be introduced to the importance of agriculture as well as basic agriculture practice of Animal and Plant Science. The course will include activities in FFA, leadership training, and student projects. Meets a science requirement for graduation.

**Prerequisite: An interest in Agriculture.

Sustainable Agriculture- A Biological Approach to Industry Practices

Sustainable Agriculture is a one year course designed to integrate biological science practices and knowledge into the practice of sustainable agriculture. This is a lab science course designed for the college bound student with a career interest in agriculture and/or environmental studies. Class is held at the LHS Farm and is linked with Special Projects which will meet elective credit.

Meets UC/CSU Lab Science Requirement

**Prerequisite: A or B in 8th Grade Science

Agriculture and Soil Chemistry

This course explores the physical and chemical nature of soil as well as the relationships between soil, plants, animals and agricultural practices. Students will examine properties of soil and land and their connections to plant and animal production. Using knowledge of scientific protocols as well as course content, students will develop an Agri-science research program to be conducted throughout the first semester of the course. Throughout the course, students will be graded on participation in intra-curricular FFA activities as well as the development and maintenance of an ongoing Supervised Agricultural Experience (SAE) program.

*Prerequisite: "C" or Better in Sustainable Agriculture

Animal Science

Animal Science is designed to prepare students for a college degree in Agriculture, environmental, or veterinary science. This course covers the following topics: effects of animals on human lives, animal biology/physiology, and animal industries.

*Meets UC/CSU College Prep Elective Requirement

**Prerequisite: Completion of Agricultural Biology or Biology with a "C" or better or instructor approval

Natural History

This class is a lecture, lab and field study course including life cycles, characteristics, identification and their relationship to man, of insects, fish, amphibians, reptiles, birds and mammals. This course is an ecological study of life zones, pollution, land uses and water systems. This class is taught at the school farm.

*Meets UC/CSU College Prep Elective credit

**Prerequisite: Must pass Agricultural Biology or Biology with a "C" or better or instructor approval

Agricultural Welding

In this class students will begin using welding, drawing, testing and diagramming techniques to hone their skills in Shielded Metal Arc Welding, Gas Metal Arc Welding, Gas Tungsten Arc Welding, and OxyAcetylene cutting and welding. Weld print reading and stress testing techniques will be explored.

Agricultural Welding 2

In this class students will continue using welding, drawing, testing and diagramming techniques to hone their skills in Shielded Metal Arc Welding, Gas Metal Arc Welding, Gas Tungsten Arc Welding, and OxyAcetylene cutting and welding. More advanced print reading and stress testing techniques will be explored. Students may begin certification work.

**Prerequisite: "C" or better in Agricultural Welding

Advanced Welding and Fabrication

May be repeated for mastery. Students enrolled in this class will concentrate on project design, diagram reading and drawing, material selection and general fabrication. Students will use their skills design and build their own projects from scratch.

**Prerequisite : "C" or better in Agricultural Welding

Agricultural Economics/Government

This class is designed for the senior CATES student to meet LHS graduation requirements for Economics and American government. This course will focus on principles of agribusiness management including: business structure, supply and demand, record keeping, the importance of agriculture, governmental processes and how they affect the industry of agriculture at the local, state and national level.

Biodiesel Fuel and Fuel Systems

American River College (ARC) and Lincoln High School have teamed up to offer this cutting edge class. Students can earn credit for American River College (DCDT 102) upon successful completion of the course. This class covers the chemistry, production, and impact of biodiesel technology. It also covers the conversion and warranty implications of use. This class is divided 50% lecture and 50% lab/shop work. This class is one of the introduction classes required for the issuance of a Clean Diesel Technology Certificate from ARC.

Diesel Engine Repair

American River College (ARC) and Lincoln High School have teamed up to offer this cutting edge class. Students can earn credit for American River College (DCDT 110) upon successful completion of the course. This class covers basic principals for repair of diesel engines. It covers disassembly and reassembly of diesel engine systems, including safe removal of engines, fuel injection systems, valve trains, and cylinder heads. This class is divided 50% lecture and 50% lab/shop work. This class is one of the introduction classes required for three different diesel mechanic certifications from ARC

Agricultural Leadership

May be repeated for elective credit. Agricultural Leadership is designed for students in grades 10-12. This class is designed for students interested in the many leadership activities of the FFA. This course is centered on the fundamentals of leadership development. Students will be introduced and expected to participate in areas such as judging contests, public speaking, parliamentary procedure, serving on FFA committees, and as FFA officers.

**9th grade Prerequisite- recommendation from Middle School Agriculture Instructor

Floral Design

This course is designed to allow students to apply an artistic approach to floral design. Students will explore elements and principles of design, history of floral art, arrangement styles, etc. Students will create, design, identify, explain and evaluate all topics of study. May be taken twice as a internship.

**Meets UC/CSU Visual/ Performing Art Requirement

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