

AGRICULTURE, FOOD & NATURAL RESOURCES


A GUIDE TO PURSUING YOUR CAREER PATH


HORTICULTURE & ANIMAL SCIENCE >>>


Animal scientists conduct research to develop better ways to produce and process meat, poultry, eggs, and milk. Much of the research focuses on the health and breeding of livestock, but domestic animals, such as cats and dogs, are also a research concern. Animal scientists are experts in genetics, nutrition, reproduction, and animal production management. Developing new characteristics to introduce into animals (such as chickens that lay more eggs) and reducing the cost of raising animals and processing animal products are other goals of workers in this pathway.

Employment opportunities in the horticulture field is expected to increase in response to the increasing demand for both products and services by commercial producers, landscape contractors, turf managers and the general public. New avenues of research in biotechnology to develop plant and food crops that require less fertilizer, fewer pesticides and herbicides, and less water will also increase the demand for careers in plant science and horticulture.

HIGH SCHOOL PATHWAY CLASSES >>>

 **BASIC AGRICULTURAL SCIENCE** introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

 **GENERAL HORTICULTURE & PLANT SCIENCE** is designed as an introduction for the Horticulture & Animal Science Pathway Program of Study. The course introduces the major concepts of plant and horticulture science. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities. **This course meets the 4th science requirement and is recognized by the board of regents as such.**

 **ANIMAL SCIENCE TECHNOLOGY/BIOTECHNOLOGY** is designed to introduce students to the scientific principles that underlie the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products. This course introduces scientific principles applied to the animal industry; covers reproduction, production technology, processing, and distribution of agricultural animal products. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities. **This course meets the 4th science requirement and is recognized by the board of regents as such.**



CAPSTONE: WBL INTERNSHIP >>>

WBL (WORK-BASED LEARNING) connects skilled, knowledgeable and driven students to local businesses every year. Students who participate in the AG, Food and Natural Resources program and have been selected to participate in WBL will leave school early to work with our fantastic business partners. Benefits to students include a chance to put skills learned in the classroom to use in an authentic setting, getting a competitive advantage on their career and networking with industry leading professionals all while still in high school. www.hallcowbl.org



CAREER TECH STUDENT ORGANIZATIONS >>>

FFA: Today, the National FFA Organization remains committed to the individual student, providing a path to achievement in premier leadership, personal growth and career success through agricultural education.

FFA continues to help the next generation rise up to meet those challenges by helping its members to develop their own unique talents and explore their interests in a broad range of agricultural career pathways. So today, we are still the Future Farmers of America. But, we are the Future Biologists, Future Chemists, Future Veterinarians, Future Engineers and Future Entrepreneurs of America, too.



POTENTIAL CAREERS >>>

- Animal Scientist
- Nursery & Greenhouse Managers
- Soil & Plant Scientist
- Animal Breeders
- Non-farm Animal Caretakers
- Nursery Workers
- Animal Control Worker
- Farm & Ranch Managers
- Biologist
- Animal Trainers
- Animal Nutritionist
- Artificial Insemination Technician

HORTICULTURE & ANIMAL SCIENCE

CAREER PATHWAY - PLAN OF STUDY

GRADUATION REQUIREMENTS

ENGLISH/LANGUAGE ARTS

4 Units *Must Include:*

9th Grade Literature & American Literature

SOCIAL STUDIES

3 Units *Must Include:*

World History, US History, Government & Economics

MATHEMATICS

4 Units *Must Include:*

GSE Algebra I, GSE Geometry & GSE Algebra II

+

one additional GSE/AP/IB/DE Math course

OR

GSE Accelerated Algebra I/Analytic Geometry A,

GSE Accelerated Geometry B/Algebra II, GSE Precalculus

+

one additional GSE/AP/IB/DE Math course

SCIENCE

4 Units *Must Include:*

Physical Science or Physics; Biology;

Chemistry, Earth Systems, Environmental Science or AP/IB course

+

one additional Science course

HEALTH & PERSONAL FITNESS

1 Unit *Must Include:*

1/2 unit of each

CAREER, TECHNICAL & AGRICULTURE EDUCATION (CTAE)

3 Units *Must include:*

Basic AG Science, General Horticulture & Plant Science,
Animal Science Tech/Biotech

ELECTIVES

4 Units

*Students planning to attend most post-secondary institutions must take 2 units of the same modern language.

TOTAL UNITS REQUIRED

23 Units

PERSONAL APTITUDES

ACTIVITIES THAT DESCRIBE WHAT I LIKE TO DO:

- Learn how things grow and stay alive.
- Make the best use of the Earth's natural resources.
- Hunt and or fish.
- Protect the environment.
- Be outdoors in all weather.
- Operate & maintain equipment & machinery.



PERSONAL QUALITIES THAT DESCRIBE ME:

- Self-reliant
- Nature lover
- Physically active
- Planner
- Creative problem solver

WANT MORE INFORMATION ON YOU?

YouScience is the science of YOU – how your mind is wired, what makes you tick, the skills and knowledge that set you apart. You have talent and there's a path that's right for you – we can help you find it.



Login to Infinite Campus and locate the SLDS Portal link on the left. Once logged in, click on "My Career Plan" then choose "Go to YouScience".

WHAT YOU LEARN IN SCHOOL MATTERS

You're learning skills and knowledge that can make you a qualified candidate for in-demand careers. Industry-recognized certifications, available to all pathway students, are great signals to employers that you have the skills they're looking for. Certifications help validate what you know, so other people know, that you know it.

QUESTIONS?

Contact your CTAE teacher, WBL Coordinator or School Counselor

PATHWAY TO FUTURE CAREER OPTIONS

HIGH SCHOOL

POST-SECONDARY

Pathway Courses

Capstone

Technical College

4 Year College/University

Basic AG Science
General Horticulture & Plant Science
Animal Science Tech/Biotech

WBL Internship
Dual Enrollment

Certificate
Diploma Program
Degree Program

Bachelor Degree
Masters Degree
Graduate Studies