

# **AGRICULTURAL SCIENCE**

## **T60111 Principles of Agriculture (7117)**

**Open to grades 9-12**

**2 semesters, 1 credit per semester**

**Meets requirements of: THD, AHD, Core 40**

**Dual Credit may be available**

This course prepares students who are interested in the study of Agriculture. Students will complete projects and learning activities that focus on hands-on real life situations in the study of animals, plants, soil, food, and horticultural sciences. There will also be activities studying agricultural business management, landscape management, natural resources and careers in agriculture, leadership and supervised agricultural experience. An activity- and project-based approach is used along with team building to enhance the effectiveness of the student learning activities.

## **T60121 Animal Science (5008)**

**Open to grades 10-12**

**2 semesters, 1 credit per semester**

**Meets requirements of: THD, AHD, Core 40**

**Prerequisite(s): Principles of Agriculture**

**Note: Fulfills Core 40 Science Credit**

**Dual Credit may be available**

This course is a year-long program that provides students with an overview of the field of Animal Science. Students participate in a wide variety of activities and laboratory work, including real and simulated animal science experiments and projects. All areas that the students study can be applied to both large and small animals. Topics addressed include: anatomy and physiology, genetics, reproduction, nutrition, aquaculture, careers related to the industry, and management practices for the care and maintenance of animals.

## **T60151 Horticultural Science (5132)**

**Open to grades 10-12**

**2 semesters, 1 credit per semester**

**Meets requirements of: THD, AHD, Core 40**

**Prerequisite(s): Principles of Agriculture**

**Note: Fulfills Core 40 Science Credit**

Horticultural Science is a two-semester course that provides students with a background in the field of horticulture. Coursework includes hands-on activities that introduce students to the following areas of horticulture science: reproduction and propagation of plants, plant growth, growth-media, management practices for field and greenhouse production, marketing concepts, production of plants of local interest, greenhouse management, floral design, and pest management. Students participate in a variety of activities including extensive laboratory work, usually in a school greenhouse.

## **T60161 Greenhouse and Soilless Production (7114)**

**Open to grades 10-12**

**Meets requirements of: THD, AHD, Core 40**

**Prerequisite(s): Principles of Agriculture, Horticultural Science**

**Dual Credit may be available**

Greenhouse and Soilless Production provides an overview of structural designs and uses of enclosed structures (greenhouses) to grow various plants and food. The course will focus on discussing different types of enclosed structures, management systems, and growing systems used to produce plants and food. The course will also present an overview of soilless growing systems such as hydroponics, aquaponics, aeroponics, and fogponics. Students will utilize the school greenhouse as part of this course.

## **T60131 Advanced Life Science: Animals (5070)**

**Open to grades 10-12**

**2 semesters, 1 credit per semester**

**Meets requirements of: THD, AHD, Core 40**

**Prerequisite(s): Principles of Agriculture, Animal Science**

**Note: Qualifies as a Quantitative Reasoning Course**

**Note: Fulfills Core 40 Science Credit**

**Dual Credit may be available**

Advanced Life Science: Animals is a standards-based, interdisciplinary science course that integrates biology, chemistry, and microbiology in an agricultural context. Students enrolled in this course formulate, design, and carry out animal-based laboratory and field investigations as an essential course component. Students investigate key concepts that enable them to understand animal growth, development, and physiology as it pertains to agricultural science. This course stresses the unifying themes of both biology and chemistry as students work with concepts associated with animal taxonomy, life at the cellular level, organ systems, genetics, evolution, ecology, and historical and current issues in animal agriculture. Students completing this coursework will be able to apply the principles of scientific inquiry to solve problems related to biology and chemistry in highly advanced agricultural applications of animal development.