

## VOCATIONAL INTEGRATED AG BIOLOGY

TRI-COUNTY REGIONAL OCCUPATIONAL PROGRAM

CDE COURSE #4642

CBEDS #4020

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### Description:

The Vocational Integrated Ag Biology course is a beginning level course open to freshman and sophomores. Freshman who participate will need to have written permission from the 8<sup>th</sup> grade science teacher from the middle school attended. The course work includes the study of both plants and animals, including an introduction to Ag biology, agricultural research, the study of cells, the interaction of organisms with the environment, the classification of plants and animals, plant and animal physiology, and genetics.

### Performance Objectives:

Upon completion of the Vocational Integrated Ag Biology course, the student will be able to:

1. \_\_\_\_\_ Understand the importance of agricultural biology as it impacts people and the environment and the career opportunities that grow out of this interaction.
2. \_\_\_\_\_ Understand agricultural research and manage and analyze projects.
3. \_\_\_\_\_ Be able to identify plant and animal cells and understand cell structure, respiration, transport, and differentiation.
4. \_\_\_\_\_ Understand the atoms and molecules as they relate to soil, water, and the management of both.
5. \_\_\_\_\_ Understand the interaction of organisms and the environment, including ecosystems, the Food Web, agricultural revolution, demographics, and the environment, and modern agricultural practices.
6. \_\_\_\_\_ Be able to classify plants and animals.
7. \_\_\_\_\_ Understand plant physiology, reproduction, photosynthesis, and growth including sexual vs. asexual reproduction and how biotechnology has changed plant growth.
8. \_\_\_\_\_ Understand animal physiology, reproduction, health and behavior including the digestive process, the respiratory system, the circulatory system, the endocrine system, and the nervous system.
9. \_\_\_\_\_ Understand animal management and feeding strategies, what animals are fed and why, and major diseases that effect animals and the prevention of such diseases.
10. \_\_\_\_\_ Understand plant and animal genetics including how traits are passed on, how cells reproduce, genetic chemistry and physiology, and how genetics effect stock production.

*NOTE: The student has satisfactorily completed the performance objectives initialed by the instructor.*