

## **Agriculture/Future Farmer or Future Scientist?**

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### **Abstract**

Many parents and students still have the concept that an agriculture education class and agriculture in general is about becoming a farmer. This project is going to take the topic of emerging pathogens and show the relevance of science in agriculture. This unit will create an interest in agricultural research and inspire students to continue to pursue their interest in agriculture using science skills, critical thinking skills, and problem solving techniques and students will understand they have a stake in our future.

Our Agriscience land lab has a herd of Angus cattle and several quarter horses that the students practice good herd health management skills. Zoonotic diseases will be discussed in this unit including how diseases are transmitted from animal to animal and animal to human. A lab will be performed that will demonstrate how an infected animal drinks from a water trough and can easily transmit the disease to other animals. This lab may also relate to students drinking from friends drinks and spreading diseases.

Students will receive a scenario that will involve signs and symptoms of several diseases. The students will conduct an ELISA (enzyme-linked immunosorbent assay) test to determine the correct diagnosis of the disease.

Emerging pathogens will further be researched in this unit. To complete this unit a field trip to the College of Veterinary Medicine is planned to meet with Dr. Gibbs to discuss epidemiology and virology of animal pathogens. Students will also get the opportunity to meet with Dr. Sheppard in the necropsy lab.

### **Mission Statement**

This unit will create an interest in agricultural research and inspire students to continue to pursue their interest in agriculture using science skills, critical thinking skills, and problem solving techniques and students will understand they have a stake in our future.

## Objectives

This unit will

Have students researching emerging pathogens

Discover new techniques in the science laboratory safely

Develop leadership & team work skills when working in groups and speaking skills when reporting to the class.

Students will explore labs and units at the University Of Florida College Of Veterinary Medicine on a class fieldtrip

## Expertise of PI

Bachelor of Science in Agriculture Extension and Education

Masters of Agriculture degree

Twenty-eight years of teaching-23 yrs teaching Agriculture education and five years middle school Life sciences

## Budget

\$200 to use for bus for field trip and IF ANY money is left will use for purchase of a flash drive and paper and Xerox costs.