

## **Integrating Animal Science Courses in High School Agricultural Education Programs in North Carolina**

### ***Poster Abstract***

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The National Research Council (1988) revealed that much of the curriculum in agricultural education was outdated. In 1995 a survey was conducted by agricultural teachers in North Carolina to ascertain what new courses they would like to see offered in high school agricultural education programs. A series of animal science courses was selected and ranked on top as to the perceived courses to be added to the program of study.

A cross section of educational professionals was assembled in 1996 to begin developing competencies and objectives for animal science (1), animal science (2), and equine science. The committee consisted of agriculture teachers, extension agents, university faculty members from animal science, agricultural education, and agribusiness.

The Agricultural Education Team from the Department of Agricultural and Extension Education at North Carolina State University released curriculum course outlines, blueprints and competency-based evaluation test item banks in the Fall of 1998. Currently there are more than 200 high schools offering animal science in North Carolina with many more making plans to pursue this specialty area.

### **Purpose and Objectives**

Animal science is vital to the food chain for all people and affects agribusiness as well as technology. In North Carolina the farm income as reported by the North Carolina Department of Agriculture is a billion-dollar industry. Swine production is ranked 2<sup>nd</sup> in the nation, turkey production is ranked 1<sup>st</sup>, dairy is in the top 10 and the equine industry is enjoying tremendous growth.

The purpose of this project is to prepare educators who are interested in developing new courses or programs of study for high school agricultural programs. It is designed to provide opportunities for sharing existing course outlines, blueprints and competencies with fellow educators; develop specific educational objectives for agri-science programs; develop a delivery method utilizing multimedia instruction; improve collaboration between extension agents and high school agriculture teachers; and finally, to develop competency-based measures for students, teachers, state department specialists, and university faculty.

## Procedures

Animal science is a year-long course for the traditional seven period day schedules or the new four-by-four semester block schedule. This course is designed for students 9-12 in North Carolina Public Schools. Essential elements for this course and units and topics of instruction are listed. The curriculum committee recommended a primary textbook to be used for this course. There are also secondary references. All essential elements will be met by using designated references from both primary and secondary sources.

A course blueprint provides information regarding the recommended hours of instruction for each unit title/competency and objective statement as well as information indicating the percentage of weight each objective statement has in relation to both the course and the unit of instruction. Type of outcome behavior is identified as either “cognitive 1,2,3,” “psychomotor,” or “affective” for each competency and objective statement. Additionally, related skills were identified for arts, communications, health/safety, math, science, and social studies, as well as vocational or JPTA skills. The blueprint is designed to provide 108 hours of teaching content. Twenty-seven additional hours of teaching time remain for local adaptation by the teacher if the course is offered on a block four 135 hour unit, and 72 additional hours of teaching time remains for local adaptation by the teacher if the course is offered on a traditional 180 hour unit.

## Outcomes

The project has proven to be very successful. Many agricultural education programs have either added animal science or substituted the traditional agricultural production for animal science. In less than two years, North Carolina went from 0 to > 200 animal science programs. Student numbers are up with a more diverse class make up. Equine science continues to attract a large number of females and bright students. Parents are very supportive and have elected to make numerous donations of animals, equipment and personal time to these programs. Many programs are beginning to get science credit and are co-teaching with science teachers. New teachers and student teachers are utilizing technology by teaching with Power Point and Web-based materials such as Oklahoma State Animal Science Department’s Breeds of Livestock. Finally, the agribusiness industry has been a tremendous support providing classroom resources, lab equipment and job opportunities for the students in North Carolina. The addition of animal science to the North Carolina Agricultural Education Program of Study has improved our positioning to meet the needs of students preparing for careers in the twenty-first century.

## References

National Research Council. (1988). Understanding agriculture: New direction for education. Washington, DC: National Academy Press.