

ACSHS Animal Science Proposal for Poultry Project

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Introduction

This proposal outlines the plan to integrate a poultry project into the high school Agricultural Education curriculum. With the donation of a pre-constructed chicken coop, located behind the greenhouse at the high school, this project aims to provide students with hands-on experience in animal science. The coop will initially house six hens donated by the teacher, with future progeny incubated using new equipment funded specifically for this project. The eggs produced will also be utilized in the Family Consumer Science nutrition classes. This initiative aligns with Kentucky Animal Science Systems Pathway standards and will offer practical learning opportunities in various aspects of poultry management.

Project Objectives

1. Educational Engagement: To engage students in practical, hands-on learning experiences related to poultry management and animal science.
2. Knowledge Application: To apply theoretical knowledge from classroom instruction to real-world scenarios involving chicken care, nutrition, and health.
3. Skill Development: To develop students' skills in animal husbandry, nutrition formulation, and cooperative work.
4. Facility Utilization: To begin using the coop with an initial flock and introduce students to the facilities, fostering interest and involvement in poultry management.

Alignment with Standards

The project will address the following Kentucky Animal Science Systems Pathway standards:

OC1: Anatomy and Physiology of Digestive Systems - Students will learn about the avian digestive system, including the crop, proventriculus, gizzard, and intestines. They will compare how chickens process food with other digestive systems such as monogastric and ruminant animals.

OC2: Function of the Six Classes of Nutrients - Students will study the role of proteins, carbohydrates, fats, vitamins, minerals, and water in poultry nutrition and how these nutrients affect growth, health, and egg production.

OC3: Impact of Water Quality on Animal Health - The project will involve monitoring and maintaining water quality, emphasizing its importance for poultry health and productivity. Students will test and ensure the cleanliness of the water supply.

OC4: Types of Feedstuffs - Students will explore various feedstuffs used in poultry diets, including roughages, concentrates, and mixed feeds, and identify how these feed types influence the chickens' health and performance.

OC5: Feed Additives and Growth Promotants - The project will cover the use of feed additives such as probiotics and hormonal supplements. Students will learn about their purposes, benefits, and ethical considerations in poultry production.

OC6: Stages and Levels of Production - Students will understand how different stages of production (growth, egg-laying) affect nutritional requirements and manage feeding strategies accordingly.

OC7: Formulation of Animal Rations - Students will formulate rations optimized for nutritional requirements and cost-effectiveness, creating balanced diets for different stages of the chickens' lifecycle and evaluating their impact on health and productivity.

Project Components

Chicken Coop Location and Setup

The donated chicken coop will be located behind the greenhouse at the high school. It will be adapted to house up to 24 chickens, with fencing installed to provide sufficient space for outdoor activity and foraging. The coop will include nesting boxes to facilitate egg production *In the event that the Coop is not donated, there is funding available to assist with this investment.*

Initial Flock

The project will start with six hens donated by the teacher. This initial flock will help students become familiar with the coop facilities and begin the practical aspects of poultry management.

Incubation and Future Progeny

Future progeny will be incubated using equipment funded specifically for this project. The AG department will manage the incubation process, allowing students to observe and participate in the breeding cycle and chick development.

Educational Resources

Provide instruction, online support, and hands-on tools for learning about poultry anatomy, nutrition, and management. Set up a monitoring system for water quality and feed consumption.

Student Involvement

Develop a schedule for students to participate in daily care routines, including feeding, watering, cleaning, and monitoring chicken health. Implement record-keeping practices for tracking growth, egg production, and feed efficiency.

Integration with Family Consumer Science Classes

Coordinate with the Family Consumer Science department to use the eggs produced in the nutrition classes, promoting interdisciplinary learning and real-world application of agricultural knowledge.

Security Measures

Install a security system for the greenhouse and chicken coop to protect against theft and predators.

Assessment and Evaluation

Regularly assess students' understanding and application of animal science principles through quizzes, practical exams, and project reports. Evaluate the success of the project in meeting educational goals and standards.

Budget and Resources

Chicken Coop Maintenance: - Ongoing maintenance and repairs

Initial Flock: - Cost of initial feed and care for the six hens through Perkins funding

Incubation Equipment - Funds secured for purchasing incubator equipment with CTE Enrichment Perkins Funding

Educational Materials - monitoring equipment.

Feed and Supplies

- Start & Grow Chick Feed: Initial feed for the chicks.
- Grower Feed: Feed for growing chickens.
- Feed Storage: Container or space for storing feed.
- Beginner Poultry Set: Includes lights, feeder, and waterer.
- Chick Heater: To provide warmth for chicks.

Security System: Install a security system for the greenhouse and chicken coop.

Fencing - Fencing to provide outdoor space for the chickens.

Nesting Boxes: Included as part of the coop setup.

Maintenance Supplies - Ongoing feed, bedding, and health care supplies.

Timeline

Preparation and Setup: 1 month

- Finalize Coop Setup: Adapt the coop and install fencing to accommodate up to 24 chickens.

- Procure Initial Flock: Acquire six hens donated by the teacher and arrange their initial care.
- Set Up Incubation Equipment: Purchase and set up incubator equipment with funds secured for this purpose.
- Install Security System: Implement security measures for the greenhouse and chicken coop.
- Set Up Feeding and Heating Equipment: Install beginner poultry set (lights, feeder, waterer) and chick heater.

Initial Use of Coop and Incubation: 1 month

- Begin Using Coop: Start daily care routines with the initial flock of six hens.
- Prepare for Incubation: Introduce students to the incubation equipment and prepare for future egg production.
- Begin Feeding: Start with Start & Grow chick feed and set up feed storage.

Ongoing Management: Throughout the school year

- Daily Routines: Implement daily care routines and educational activities.
- Incubation Process: Manage incubation of future progeny, involving students in monitoring and care.
- Utilize Eggs: Coordinate with the Family Consumer Science department to use the eggs produced in nutrition classes.

Review and Evaluation: End of each semester

- Assess Educational Outcomes: Evaluate student understanding and the effectiveness of the project.
- Project Impact: Review the success of the project in meeting educational goals and make improvements for the next phase.

Poultry Project Alignment with Profile of a Patriot

This poultry project provides a dynamic platform for students to develop and demonstrate the Profile of a Patriot competencies, ensuring they leave the program as well-rounded individuals prepared for both academic and professional success.

Resilient Learner

Students will face challenges throughout the poultry project, from managing the health and wellbeing of the flock to ensuring successful incubation and egg production. By working through these challenges, students will learn to adapt and persevere in problem-solving scenarios, developing resilience as they navigate unexpected outcomes, such as dealing with poultry illnesses or adjusting feeding protocols.

Through this hands-on experience, they will also learn to manage their time and resources effectively, reflecting the importance of persistence and resilience in achieving long-term success.

Effective Communicator

Communication is key to the success of this project, both in individual tasks and collaborative efforts. Students will regularly engage in clear communication as they work in teams, reporting on feeding, health monitoring, and incubation progress. They will also have the opportunity to present their findings and share project updates with other classes, including Family Consumer Science, demonstrating their ability to articulate ideas and report on project outcomes effectively.

Additionally, students will practice writing and record-keeping skills, ensuring thorough documentation of egg production, feed consumption, and chicken health, which will hone their ability to communicate in written formats.

Creative Problem Solver

The project will naturally present opportunities for students to engage in creative problem-solving. From troubleshooting issues with water quality or feed efficiency to designing efficient care schedules for the chickens, students will be encouraged to think critically and explore innovative solutions. They may also be tasked with finding creative ways to repurpose materials for the coop, optimize egg production, or enhance the chickens' environment, fostering ingenuity and out-of-the-box thinking.

By managing real-world variables that influence chicken health and productivity, students will strengthen their ability to devise practical and creative solutions to problems that arise in agricultural settings.

Engaged Global Citizen

This poultry project will provide students with a direct understanding of the importance of sustainable and ethical agricultural practices, fostering a sense of responsibility toward global food systems. As they learn about feed sources, animal welfare, and environmentally conscious farming, students will become more aware of how local agriculture ties into broader global issues, such as food security, ethical animal treatment, and environmental impact.

By contributing to the school's food supply (through egg production for nutrition classes), students will also experience the importance of community involvement and responsibility, linking their classroom learning to real-world societal contributions.

Accountable Collaborator

Teamwork is essential in managing the daily care routines of the flock. Students will be expected to collaborate effectively, dividing responsibilities and holding one another accountable for ensuring the well-being of the chickens and the success of the project. By maintaining records, adhering to care schedules, and contributing to group discussions on project improvements, students will learn the importance of accountability, reliability, and cooperative work in achieving shared goals.

This will also encourage students to develop leadership skills, as they take on roles within their teams to ensure project tasks are completed efficiently and with a sense of shared responsibility.

Conclusion

The poultry project will provide high school students at Allen County-Scottsville High with valuable practical experience in animal science, aligning with Kentucky Animal Science Systems Pathway standards, additionally emphasizing key competencies from the Profile of a Patriot. By utilizing a donated chicken coop, starting with an initial flock, and incorporating new incubation equipment and necessary supplies, students will gain comprehensive knowledge in poultry management while contributing to the school's nutrition curriculum. Approval and support for this proposal will enhance students' educational experiences and foster a deeper understanding of agricultural sciences.

Location



This is the proposed location for the chicken coop. It is positioned away from student walkways to prevent tracking manure into the building. The coop will also be out of sight from the general public, providing privacy and creating a calm, nurturing environment for the poultry. However, this location requires surveillance to monitor for theft, malicious actions, and predators. It is conveniently located near existing electricity and water sources. The fence will be built off the established fencing shown in the photo.

