Creating Awareness of the Turkey Industry Through STEM-Based Online Curriculum

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Abstract

As the food industry has evolved over the years, consumers have more accessible and convenient outlets to buy groceries, dine in, or carry out. While there are many advantages to this ever-changing industry, a large gap exists in the understanding of food production from farm to fork. Consumer perceptions are influenced beginning at an early age. Education is the solution to bridge this gap between farm to fork; however, there are limited STEM-based agricultural resources available for teachers to implement in their classrooms. Creating these agricultural resources provides teachers the opportunity to share the story of the agricultural industry with students, while providing them with the knowledge they need to create their own scientifically-based perceptions. The objective of this presentation is to provide teachers with strategies to incorporate a STEM-agriculture approach into their current curriculum. We will discuss the development of the online Elementary Turkey Module program and the outcomes from our previously implemented E.G.G. programs. Using a STEM-based approach, the Elementary Turkey Module Project provides insight on the turkey industry and encourages participants to explore various aspects of food production. The ultimate goal of this presentation is to provide STEM-based classroom materials to teachers that will stimulate student excitement and interest, as well as increase agricultural literacy.

Previously Developed E.G.G. Program

Purpose

Contextualize STEM learning in poultry science to support K-12 students in developing STEM skills and increasing agricultural literacy.

Elementary Program Curriculum Components

- Five online modules
- Simulation game
- Interactive notebook
- Team project

High School E.G.G Program Curriculum Components

- Seven online modules
- Simulation game

Teacher Support

- Program Facilitator Guides
- Student Content Quizzes
- Module alignment with Indiana State Standards

The E.G.G. program is free to the public and can be accessed at:
<https://ag.purdue.edu/ansc/learnpoultry>

Program Objectives

- Provide teachers with online STEM-based classroom materials.
- Encourage 4th and 5th grade students to explore various aspects of food production and understand the farm to fork process.
- Develop fun and meaningful ways for students to learn about agriculture and turkey production.

Turkey STEM-Based Elementary Curriculum

Need for STEM-based Agriculture Curriculum

- A large gap exists between the understanding of the farm to fork process in food production.
- Informed consumerism starts with scientifically-based decisions.
- Agriculture and the turkey industry play a large role in the Indiana economy and work force.

Learning Materials

- Five online modules
- Simulation game
- Interactive notebook
- Class project

1	Introduction to the Turkey Industry
2	Turkey Production: From Farm to Fork
3	Turkey Anatomy and Physiology
4	Animal Welfare: Healthy and Happy Turkeys
5	Why Eat Turkey?

Curriculum is aligned with Indiana State Standards for 4th and 5th grade students.

Program Implementation

In the summer of 2021, 4th and 5th grade teachers across the state of Indiana will be contacted to participate in the Turkey STEM-Based Elementary Curriculum program. After teacher recruitment, the program will be implemented in classrooms in the fall of 2021. Students will complete one thirty minute module and the accompanying interactive notebook each day for five consecutive days. Questionnaires will be administered to measure student interest and progress towards the curriculum learning outcomes.

Conclusion

- Like the E.G.G. Program, the Turkey Program will provide online STEM-based materials for teachers to implement in their classrooms.
- Students will learn about agriculture, turkey industry, and food production through completion of the five online modules, interactive notebook, and class project.

Interested in Learning More?

Complete this survey for updated information on the program and how to enroll:
https://purdue.ca1.qualtrics.com/jfe/form/SV_brVNvSK8DJuZpuR

For questions contact
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Fall 2020:
Design online
modules

Spring 2021:
Develop
assessments

Summer 2021:
Teacher
recruitment

Fall 2021:
Implement in
classrooms

Spring 2022:
Analyze results
and feedback