

An Introduction to the Three-Circle Model: The Ag Games

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Introduction/Need for Innovation or Idea

The three-circle model that represents a balanced and efficient School-Based Agricultural Education (SBAE) classroom has been a staple of SBAE ever since the first printing of the diagram in the 1975 edition of the FFA Advisors Handbook (Croom, 2008). The three-circle model is a Venn diagram that depicts equal implementation of leadership development (FFA), work-based learning through Supervised Agricultural Experiences (SAE), and classroom instruction in a balanced SBAE program (Croom, 2008). The introduction of this model to students has been a focus of high school and middle school SBAE teachers since the inception of activity-based learning in SBAE (Croom, 2008). The need for efficient and well received lessons that encourage student motivation is a pillar of a classroom (Williams & Williams, 2011). The use of gamification in content review is very common; however, the use of game-based learning to introduce and learn content is less prevalent (Hancock et al., 2024).

One way to introduce real-world scenarios for SBAE students across grade levels is by introducing foundational content in a gamified fashion. The Ag Games is an innovative classroom activity for SBAE teachers to introduce to the components of the three-circle model while also meeting the qualifications for FFA's Greenhand Degree. This entails students knowing FFA history, the FFA Mission, FFA Creed, emblem of FFA, and planning for an SAE (Mozo, 2021). The Ag Games incorporates all components of the FFA Greenhand Degree into one gamified unit. There has been a rapid increase in alternatively certified teachers entering the SBAE classroom (Foster et al., 2025) and incorporating lesson ideas like The Ag Games into certification coursework could help these new SBAE teachers build their confidence when introducing the three-circle model to their students and implementing varied teaching techniques.

How it Works/Methodology/Program Phases/ Steps

The Ag Games is comprised of five lessons over five consecutive class days at the beginning of the semester. Each lesson consists of an in-class lecture, a gamified activity, and an individual quiz. At the end of the week the winning team is announced, and victory speeches are given. Students on the winning team receive one free homework pass and free admission to the first FFA football tailgate of the year. The activities are designed as a competition to introduce a new element of the three-circle model to students.

First, divide students into teams of six. At the end of the unit, teams will be ranked based on their team members' quiz scores and the total number of students who earn the FFA Greenhand Degree at the end of the unit. Topics and activities could include:

1. Agricultural Construction Career Development Event (CDE) – Teams work together in three relay-style events: nail relay, tape measure accuracy, and tool identification.
2. Extemporaneous Public Speaking Leadership Development Event (LDE) – Teams are given a random item from around the ag building and have 10 minutes to develop a *Shark Tank* style pitch selling the item.
3. Agricultural Experience Tracker (AET) Scavenger Hunt – Teams complete a scavenger hunt on AET's website, allowing students to establish initial plan for an SAE.

4. Aquaculture CDE – This lesson coincides with the plumbing lesson and connects teams to the plumbing portion of the CDE where they work on using PVC to build out the water control manifold system
5. Creed Speaking LDE – Students individually recite the first paragraph of the FFA Creed. The team with the highest grade on average is awarded the point.

Results to Date/Implications

The Ag Games was implemented with 57 first-year SBAE students. There was a 100% participation rate on the quizzes. The overall average score was 86%. Activities perceived as more *fun* earned higher quiz scores. The Ag Construction CDE relay had the highest average score while the Creed Speaking LDE earning the lowest average score. One of the main focuses of this lesson is for students to begin to meet the requirements of the FFA Greenhand Degree. A total of 49 of 57 students (86%) earned the FFA Greenhand Degree by the end of the semester. However, since this lesson was in the first few weeks of the semester, some students switched classes and did not have the continued opportunity to earn the FFA Greenhand Degree. Overall, students were very receptive to the lessons, and many reported that it was their favorite unit they had in their high school career.

Future Plans/Advice to Others

We intend to continue incorporating the Ag Games into introductory SBAE courses by expanding the activities beyond the initial week. We plan to rearrange the order of the events to be classroom-based first before transitioning to the more hands-on activities in the lab. Based on the positive feedback received from this unit, we intend to incorporate more gamification (Hancock et al., 2024) into other appropriate introductory topics in the future.

While the Ag Games were implemented in a high school SBAE classroom, we believe they would be relevant and useful in courses for pre-service teachers. Teacher educators should consider incorporating a version of the Ag Games for their undergraduate and alternative license students to model gamification. The Ag Games could easily be modified to fit the resources available in the program, format of the course, as well as the time of the lessons. The Ag Games hold the potential to help build student self-efficacy around topics related to FFA and SAE in which students may not be as familiar.

Cost/Resources Needed

To teach this lesson to undergraduate students, time is going to be the most required resource. Not only do the lessons need to be developed, but the Ag Games also require approximately 30 minutes to set up each day, like printing documents and gathering required materials, plus recognizing that activities in the lab for CDE events require additional set up time. Each lesson is designed for one hour and fifteen minutes. The Ag Games can be completed with easily available materials like paper, a classroom, example materials for what each event would look like, example rubrics, and access to PowerPoint/slides. Future resources for this lesson would be less significant as many of them are reusable. Cost is minimal in a pre-service class as the entire unit can be taught with easily accessible materials. The instructor or teaching assistant would need to spend time developing which content to incorporate into the Ag Games and gathering supplies.

References

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