

## **Supervised Agricultural Experience Unit Agriculture, Food, and Natural Resource Texas Education Agency**

### **LESSON:**

SAE Areas of Interest and SAE Categories (Part II)

### **OBJECTIVES:**

1. Identify the components of a Placement SAE and potential student projects
2. Identify the components of an Entrepreneurial and Ownership SAE and potential student projects
3. Identify the components of a Research and Experimentation SAE and potential student projects

### **TOOLS AND EQUIPMENT:**

- Placement SAE video, SAE Builder.com (9:32 minutes)
- Entrepreneurship SAE video, SAE Builder.com (26:13 minutes)
- Research SAE video, SAE Builder.com (15:41)
- SAE Notecards/Review Activity from NAAE Communities of Practice

### **KEY TERMS:**

- Placement SAE
- Training location
- Entrepreneurial and Ownership SAE
- Research and Experimentation SAE
- Scientific method

### **INTEREST APPROACH:** (10 minutes)

Review from SAE Areas of Interest and SAE Categories (Part I):

Ask five students to share their plan for an Exploratory SAE by identifying the project they chose, how they will accomplish the project, what resources are needed, and what they hope to learn from its completion.

### **TEACHING PLAN AND STRATEGY:** (20 minutes)

#### *OBJECTIVE 1: Placement SAE*

Show the first part of the Placement SAE video (3:50). Pause the video periodically to allow students to take notes and discuss topics:



*Placement SAE:* a student is employed for compensation or to gain experience. The purpose is to provide practical experience and develop skills needed to enter and advance in a particular occupation. The location where the student works is called the training location. The major investment made by the student is time. Examples: working at a flower shop, assisting a local veterinarian, employed at a mechanic shop, etc.

Show the first part of the Entrepreneurial SAE video (7:40 minutes). Pause the video periodically to allow students to take notes and discuss topics:

*Entrepreneurial and Ownership SAE:* an enterprise owned and operated in agriculture or a related area by the student. The materials and input are owned by the student, and the risk of ownership falls on the student. The key is that the student assumes all financial responsibility for their project. This type of SAE requires an investment of time and money by students. The main goals are to earn a profit and learn! Examples: raising livestock, raising and selling plants, operating a lawn care business, growing and selling crops, etc.

### *OBJECTIVE 3: Research and Experimentation SAEs*

Show the first part of the Research SAE video (5:15 minutes). Pause the video periodically to allow students to take notes and discuss topics:

*Research and Experimentation SAE:* students learn by following the scientific method in search of an answer. This experience involves students identifying problems, searching for information, and then conducting a scientific experiment or research procedures to arrive at conclusions. Students may cooperate with the science teacher or scientists in the local community to complete this experience. Time is often the only investment required by a student, as the supplies are provided by the school or who they work with. If students do invest their own money, they should keep records of their expenses. Examples: working with a food scientist on projects, collecting and testing water samples, testing rates of fertilizer application, testing different livestock feed rations, using different propagation techniques on plants, etc.

Review briefly the steps of the scientific method if students are not familiar.

1. Identify the problem
2. Research the problem
3. Form a hypothesis
4. Design an experiment
5. Conduct the experiment and collect data
6. Analyze the data and form conclusions
7. Report results

### **APPLICATION ACTIVITY:** (10 minutes)



Identifying potential SAE activities for all categories and areas of interest:

Divide the class into five groups. Assign each group one of the categories of SAE: Exploratory, Improvement, Placement, Entrepreneurship and Ownership, Research and Experimentation. Instruct each group to define in their own words what the category of SAE is that they were assigned, what investment from the student it requires, and an example of a project in that category for each of the seven areas of interest: Agribusiness Systems, Animal Systems, Environmental Service Systems, Food Products and Processing Systems, Natural Resources Systems, Plant Systems, and Power, Structural, and Technical Systems.

Use the SAE Notecards/Review Activity from the NAAE Communities of Practice to help identify potential SAEs projects.

### **EVALUATION/SUMMARY:** (5 minutes)

Choral Response:

Ask the following questions orally to evaluate the learning of SAE categories by the students. If they do not answer correctly the first time, ask probing questions to help students arrive at the correct answer.

1. Which categories of SAE only require a student to invest their time for their project? Exploratory, Improvement, Placement, Research and Experimentation
2. Which categories of SAE might require a student to invest their time and money for their project? Entrepreneurial and Ownership, Research and Experimentation
3. How many areas of interests can SAE projects fit into? Seven
4. What does having an SAE prepare students for? A future career in agriculture or a related area

### **REFERENCES:**

Morgan, E.M., Chewlewski, R.E., & Wilson, E. (2000). Agriscience explorations. Danville, IL: Interstate Publishers, Inc.

National Agriculture Day, <http://www.agday.org/education/careers.php> Texas SAE Builder videos, <http://saebuilder.com/videos.aspx>

The LifeKnowledge Center for Agricultural Education, <https://www.ffa.org/ffaresources/educators/lifeknowledge/Pages/default.aspx>

