

## **Components of an SAE Program**

**Entrepreneurship-** The student plans, implements, operates and assumes financial risks in a farming activity or agricultural business. Students own the materials and other required inputs and keeps financial records to determine return to investments in entrepreneurship programs. An SAE Entrepreneurship program provides students the opportunity to develop the necessary skills to become established in their own business or gain employment. Traditionally, agricultural education programs consisted of ownership of supervised agricultural experience programs in livestock and crop production. Today, with the expansion of the agricultural industry and declining number of farmers and ranchers, the nature of entrepreneurship programs has changed. Entrepreneurship programs can be developed in agricultural sales and services, forestry, marketing, horticulture, agricultural mechanics, agricultural processing and other areas of agriculture, in addition to production agriculture. Examples of entrepreneurship activities include: growing an acre of corn, operating a Christmas tree farm, growing bedding plants in the school greenhouse, raising a litter of pigs, owning and operating a lawn care service, or as a group of students growing a crop of poinsettias.

**Placement-** Placement programs involve the placement of students on farms and ranches, in agricultural businesses, in school laboratories or in community facilities to provide a “learning by doing” environment. This is done outside of normal classroom hours and may be paid or non-paid (for a non-profit organization). Students keep records of the number of hours worked, type of work activities performed and wages. Examples of placement SAE include: working after school at a farm supply store, placement in a florist shop, working on Saturdays at a riding stable, working in the school greenhouse after school and on weekends and holidays, or placement on a general livestock farm.

**Research-** As agriculture has become more scientific, there is a need to conduct research to discover new knowledge. There are two major kinds of Research SAE programs.

***Experimental*** - The student plans and conducts a major agricultural experiment using the scientific process. The purpose of the experiment is to provide students “hands-on” experience in verifying, learning or demonstrating scientific principles in agriculture, discovering new knowledge, and using the scientific process. In an experimental SAE, there is a hypothesis, a control group, and variables, which are manipulated. Examples of experimental SAE activities include: comparing the effect of various planting media on plant growth, determining the impact of different levels of protein on fish growth, comparing three rooting hormones on root development or analyzing the effectiveness of different display methods on plant sales in a garden center.

***Non-Experimental (analytical)*** – Students choose an agricultural problem that is not amenable to experimentation and design a plan to investigate and analyze the problem. The student will gather and evaluate data from a variety of sources and then produce some type of finished product. The product could be a marketing display or marketing plan for an agricultural commodity, a series of newspaper articles, a land use plan for a farm, a detailed landscape design for a community facility, an advertising campaign for an agribusiness, and so forth. An analytical SAE is flexible enough so that it could be used in any type of

agricultural class, provides valuable experience and contributes to the development of critical thinking skills deemed so important in education today.

**Exploratory** - This type of SAE is appropriate for beginning agricultural students but is not restricted just to beginning students. This SAE activity is designed primarily to help students become literate in agriculture and/or become aware of possible careers in agriculture. Examples of exploratory SAE activities might include: observing and/or assisting a florist, interviewing an agricultural loan officer in a bank, preparing a scrapbook on the work of a veterinarian, growing plants in a milk jug "greenhouse", assisting on a horse farm for a day, attending an agricultural career day at the university, or preparation of a research report on food science careers.

**Each student in the agricultural education program should have an exploratory entrepreneurship, placement or research SAE or a combination of these. They provide experiential learning activities that will help students learn more about agriculture and can lead to establishment in an agricultural career. In addition to these major SAE activities, there are two minor components of a SAE program – improvement and supplementary activities. These minor components, in and of themselves, do not comprise an SAE program, but they can be valuable supplements to the SAE program. A comprehensive SAE program will include both improvement activities and supplementary activities.**

**Improvement** - Improvement activities include a series of learning activities that improves the value or appearance of the place of employment, home, school or community, the efficiency of an enterprise or business, or the living conditions of the family. An improvement activity involves a series of steps and generally requires a number of days for completion. It may or may not be related to the major SAE activities. Examples of improvement activities include landscaping the home, building or reorganizing a farm shop, computerizing the records of an agricultural business, overhauling a piece of equipment, or renovating and restocking a pond.

**Supplementary** - A supplementary activity is one where the student performs one specific agricultural skill outside of normal class time. This skill is not related to the major SAE but is normally taught in an agricultural program, involve experiential learning and does contribute to the development of agricultural skills and knowledge on the part of the student. The activity is accomplished in less than a day and does not require a series of steps. Examples of supplementary activities include pruning a fruit tree, helping a neighbor castrate pigs, cutting firewood with a chain saw, or staking tomatoes.