



Department of Agricultural &  
**Environmental Sciences**  
Orion High School

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# ORION HIGH SCHOOL

Department of Agricultural & Environmental Sciences



## Supervised Agricultural Experience (SAE) Project Handbook

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EZ Records User Name and Password:

User Name: \_\_\_\_\_

Password: \_\_\_\_\_



AET user name and password:

User Name: \_\_\_\_\_

Password: \_\_\_\_\_

# **Supervised Agricultural Experience Handbook**

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## References for Completing This Handbook:

SAE Handbook CD- National FFA Organization  
Illinois FFA Chapter Resource CD- Illinois Association FFA  
Illinois CORE curriculum CD- Project of FCAE, ISBE  
LifeKnowledge CD- National FFA  
University of Missouri Agricultural Education Program Planning Handbook  
U2041b Keeping Illinois Supervised Agricultural Experience Program Records- ITCS University of Illinois  
[www.ffa.org](http://www.ffa.org)- National FFA Organization Website  
[www.illinoisffa.org](http://www.illinoisffa.org)- Illinois FFA Website  
<http://ezrecords.aces.uiuc.edu>- University of Illinois EZ Records Website  
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<http://www.senecahs.org/vnews/display.v/SEC/Departments%7CAg%20Education%3E%3ESAE%27s>- Seneca High School Ag Department  
<http://ag.cusd3.net/Agric/homeagri/HomeAgri.htm>- Cuba High School Ag Department  
<http://wuhsag.weebly.com/>- Waterford High School Ag Department  
National FFA Agriscience Research Resource- National FFA  
National FFA Agriscience Fair Handbook- National FFA  
Illinois Association FFA Agriscience Fair Handbook- Illinois FFA  
AET Website

# What is a Supervised Agricultural Experience Project (SAE)?

## Defining Supervised Agricultural Experiences (SAE) Programs

The supervised agricultural experience (SAE) program involves practical agricultural activities performed by students outside of scheduled classroom and laboratory time. SAE's provide a method in agricultural education for students to receive real-world career experiences in an area of agriculture that they are most interested in.

The SAE project is a mandatory, year-long school project for all students in agricultural classes. This type of experiential learning is the 100% "hands-on" portion of the total agricultural education program. The SAE is designed and carried out by the student with the support of the parent and the supervision of the agriculture teacher and/or employer. The SAE could involve the student working for an employer, starting their own small business, or some other type of agricultural activity or research based on agriculture. The student will then keep accurate records (hours worked, money made, etc.) of their experience and compile it in the online SAE record book.

## The Importance and Benefits of the SAE Program

The importance of SAE programs extends far beyond the agricultural education classroom. An SAE is a catalyst for personal growth, career development and responsible citizenship that leads to individual, group and societal benefits not possible through formal education alone. Skills, knowledge, experiences and connections gained through SAEs remain with students for a lifetime and positively influence others along the way. An SAE is more than an integral part of agricultural education; it is tangible learning with an applied purpose and measurable results. Having a SAE is essential for the student to succeed in the agricultural education program. SAE programs benefit students, schools, employers, communities, parents, and teachers. Refer to figure 1 for benefits of the SAE Program.

### **BENEFITS OF SAE**

#### **Benefits to Students**

- Assists with career and personal choices while building self-esteem.
- Applies business practices such as record keeping and money management.
- Nurtures individual talents and develops a cooperative attitude toward others.
- Builds character and encourages citizenship and volunteerism.
- Developing self-confidence and a good work ethic.
- Providing educational and agricultural experiences in a specialized area of agriculture.
- Giving practical meaning to courses studied in school.
- Providing an opportunity to earn money while learning.
- Developing employability and thinking skills.
- Helping to develop the ability to assume responsibility.
- Assisting in making the transition from school to work.
- Providing an opportunity to become established in an agricultural business/career.

#### **Benefits to School and Teachers**

- Strengthens relations between the school, community and agriculture program.
- Serves as a motivational tool for student learning and scholastic achievement.
- Creates familiarity with and promotes new technologies and agricultural practices.
- Expands agricultural competencies learned in the classroom and laboratory.

#### **Benefits to Employers and the Agricultural Industry**

- Provides a labor force skilled in technical and applied agricultural practices.
- Keeps young people involved in the local community and/or the agriculture industry.
- Serves as an effective venue for on-the-job training and career preparation.
- Assists schools in keeping instruction relevant based on industry needs.

**Figure 1. Benefits of the SAE Program**

## Types of SAE Projects

There are four major types of SAE projects students' may participate in. They include:

Option 1. **Placement**- Student will work for an employer of their choice. This can include the student earning a wage for their labor or volunteer work with the business.

This can involve work on a farm or ranch, an agricultural business, government agency or community facility, as well as laboratory work and experimentation. These programs allow students to develop skills and gain knowledge in an area of interest while preparing them for future academic and professional endeavors. It also permits students to take what they have learned in the agriculture classroom and apply it to a real world situation. These SAEs, which can be paid or unpaid, may be conducted in any area of agriculture, agribusiness or natural resources.

One of the primary advantages of placement is that students receive supervision and instruction by their employer/mentor outside the classroom. They also have a chance to explore agricultural careers, build a resume and earn money. For employers, placement programs offer an enthusiastic and capable work force with the potential to benefit their business and the community. The placement SAE is very much a team effort between the student, parent or guardian, agriculture teacher and employer.

Option 2. **Entrepreneurship**- Student will run and operate his or her own business. This can be either related to animal production, crop production, or agribusiness.

Through entrepreneurship SAE programs, aspiring entrepreneurs have an opportunity to create, own and manage a business. Within this SAE category, students acquire skills and competencies needed for a production agriculture or agribusiness enterprise while gaining valuable hands-on experience and, in most cases, earning a profit. Entrepreneurship programs require students to learn all aspects of business ownership including planning, implementation, operations and financial risk, as well as the production, management and distribution of goods and/or services.

These programs may be developed on a farm or ranch, in an agricultural business or in the field of Agriscience. Entrepreneurial SAE opportunities range from traditional livestock ownership and farming operations to agricultural sales and service, agricultural processing and several others. It is not uncommon for these programs to blossom into future careers!

Option 3. **Agriscience Research**- This is a science based experience using laboratory procedures to study a problem related to agriculture. This can be either a placement or entrepreneurship enterprise. Students enrolled in an agriscience class will be required to complete an agriscience research project during their year.

For scientific-minded students, research-based SAE projects and programs offer opportunities for innovation and new discovery in the growing area of Agriscience. This type of SAE allows students to examine an agricultural/scientific issue, question or principle using experimental or non-experimental methods. In an **experimental** program, students conduct and develop scientific experiments to solve a problem or gain new knowledge. For **non-experimental** SAEs, students assume the role of "detective" to address a problem or answer a question through extensive research. In either case, the use of scientific principles, literature review, experiment/activity planning, data collection and information analysis is applied to arrive at a final conclusion. The FFA recognizes student research achievements in Agriscience through the FFA Agriscience Fair Program and various proficiency categories.

Option 4. **Exploratory SAE**- This type of SAE was designed for the "short term" FFA member that does not plan on taking an additional agriculture class or compete in proficiencies; however, any student may wish to complete an exploratory project. Students completing an Exploratory SAE will complete several career related activities throughout the school year.

An exploratory SAE program is designed to increase student career awareness. Activities within an exploratory program will include a job shadow, researching a career, looking at college or other post-secondary training opportunities, and completing a career portfolio which will include a resume and cover letter.

## Proficiency Areas and Descriptions

### Introduction

Proficiency Areas are the categories your Supervised Agricultural Experience (SAE) must fit in (if you have a placement, entrepreneurship, or agriscience research SAE). It is necessary that your SAE fits in one of the following categories to compete in proficiency interviews at all levels. The following is a list of the proficiency areas with a brief description describing each area. If you are not sure what area your project will apply to either refer to the Supervised Agricultural Experience Quick Reference Listing or ask Mr. S.

**AGRICULTURAL COMMUNICATIONS** – typically includes programs in which a student is placed at a newspaper or other agricultural print (such as magazines) facilities to obtain training and practical experience in writing and publicizing in preparation for a writing communications career. Programs may also be at radio, TV stations, fair media rooms, or other businesses requiring speaking skills and knowledge of agriculture. The student may also own and produce an agriculture related broadcast or show. This area also includes any use of technology (such as websites and blogs) aimed at communicating the story of agriculture.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**AGRICULTURAL EDUCATION** - for students with SAE's related to education and extension, including, but not limited to: youth mentoring, agricultural education departmental assistants, PALS mentors and student coordinators, students developing and conducting informational materials and presentations for civic organizations and school age youth, and students who are involved in SAEs surrounding educating the public about the broad topics of agriculture, agriculture education and the FFA.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**AGRICULTURAL MECHANICS DESIGN and FABRICATION** - involves the design, and construction of agricultural equipment and/or structures or the structural materials selection and/or implementation of plans for utilizing concrete, electricity, plumbing, heating, ventilation, and/or air conditioning into agricultural settings.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**AGRICULTURAL MECHANICS ENERGY SYSTEMS (Agricultural Power)** - involves the adjustments, repairs, and maintenance of agricultural power systems including mechanical power, electrical power, chemical power, wind power, solar power and/or water power. **NOTE:** Electrical wiring for general construction, restoration of tractors, general engine repair is more appropriately covered in other agricultural mechanics proficiency award areas.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**AGRICULTURAL MECHANICS REPAIR and MAINTENANCE** - involves the repair and maintenance of agricultural equipment, (including lawn equipment) and/or structures.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**AGRICULTURAL PROCESSING** - involves students working in assembling, transporting, processing, fabricating, mixing, packaging, and storing food and nonfood agricultural products. Programs may include the processing of meat, milk, honey, cheese, raisins and other dried fruits, maple syrup and/or other food items. Non-food products can include the processing of by-products such as meat, bone, fish and blood meal; tallow; making compost, hides, processing of wool and cotton, cubing and pelleting of forages, producing bird seed and other pet foods. **NOTE:** The processing of forest products is not a part of this proficiency area. See Forest Management and Products

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**AGRICULTURAL SALES** - involves students owning or working at a business (not covered in a more appropriate proficiency award category) that may include enterprises such as: the sales of feed, seed, fertilizer, agricultural chemicals, agricultural equipment, machinery or structures. Activities can also include the merchandising (which is buying an item with the sole purpose to resell it in a short time frame) of crops, livestock, processed agricultural commodities, horticultural (including quarry rock), floricultural and forestry items. **NOTE:** SAE's that include the production or processing of the previous items, it does not belong in this award area.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**AGRICULTURAL SERVICES** - involves students owning or working in an agricultural business, not covered in any of the existing award categories. This would include enterprises such as: custom equipment operation and maintenance, agricultural management and financial services, animal breeding services, custom baling, crop scouting, implementing integrated pest management programs, horse shoeing, taxidermy services, auction services (including working at or owning an auction house), custom and contract feeding or other appropriate services offered through agricultural enterprises. Students applying for placement in agricultural services must work for company or individual whose key function is to provide agricultural services. **NOTE:** Activities related to lawn care, landscaping, mowing or other landscape and care activities are not included in this area. Students with these types of enterprises or activities need to apply in other more appropriate areas related to turf care, horticulture or nursery landscape.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**AGRISCIENCE ANIMAL SYSTEMS RESEARCH** - Research into the study of animal systems, including life processes, health, nutrition, genetics, management and processing through the study of small animals, aquaculture, livestock, dairy, horses and/or poultry

**Record book use:** Entrepreneur – Basic Book & Agriscience Insert  
Placement – Basic Book & Agriscience Insert

**AGRISCIENCE PLANT SYSTEMS RESEARCH** - Research into the study of plant life cycles, classifications, functions, practices, through the study of crops, turf grass, trees and shrubs and/or ornamental plants.

**Record book use:** Entrepreneur – Basic Book & Agriscience Insert  
Placement – Basic Book & Agriscience Insert

**AGRISCIENCE INTEGRAL SYSTEMS RESEARCH** - (Must fit one of the following descriptions)

- Diversified Research - Research studies in two or more of the Agriscience research areas.
- Environmental Service Systems/Natural Resource Systems Research - Research into the study of systems, instruments and technology used in waste management and their influence on the environment.
- Food Products and Processing Systems Research - Research into the study of product development, quality assurance, food safety, production, sales and service, regulation and compliance and food service within the food science industry.
- Power, Structural and Technical Systems Research - Research into the study of agricultural equipment, power systems, alternative fuel sources and precision.
- Social Sciences Research - Research of leadership, personal growth and career success skills necessary for a chosen profession while effectively contributing to society.

**Record book use:** Entrepreneur – Basic Book & Agriscience Insert  
Placement – Basic Book & Agriscience Insert

**BEEF PRODUCTION** – includes programs that use the best management practices available to efficiently produce and market beef. This award area is for any beef animals, including miniature Herefords, Zebu, etc. **Note:** Dairy calves being fed out for the meat market are part of beef production.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**DAIRY PRODUCTION** - includes programs that use the best management practices available to efficiently produce and market dairy cattle and dairy cattle products.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**DIVERSIFIED AGRICULTURE PRODUCTION** - includes programs that use the best management practices available to produce and market a combination of two or more livestock and crop related proficiencies. Must include at least one livestock and at least one crop related proficiency. **Note:** It is not required that the student have the livestock enterprise and the crop enterprise within the same calendar year.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**DIVERSIFIED CROP PRODUCTION** - involves the use of the best management practices available to produce and market efficiently two or more crop related proficiencies such as grain production, fiber/oil production, forage production, fruit production, specialty crop production, or vegetable production. **Note:** It is not required that the student have two crop enterprises within the same calendar year.

**Record book use:** Entrepreneur – Basic Book & Multiple Production Inserts  
Placement - Basic Book & Multiple Agribusiness Inserts

**DIVERSIFIED HORTICULTURE** - using the best management practices available to efficiently manage an SAE program that includes two or more of the following proficiency areas: Landscape Management, Nursery Operations, or Turf Grass Management. **Note:** It is not required that the student have two horticulture enterprises within the same calendar year.

**Record book use:** Entrepreneur - (all ownership activities related to the production of plants and trees used principally for ornamental, recreational and aesthetic purposes) – Basic Book & Multiple Production Inserts  
Placement - Basic Book & Multiple Agribusiness Inserts

**DIVERSIFIED LIVESTOCK PRODUCTION** – using of the best management practices available to efficiently produce and market a combination of two or more livestock related proficiency areas, such as beef, dairy, sheep, swine, equine, specialty animal, small animal production and care, or poultry. **Note:** It is not required that the student have two livestock enterprises within the same calendar year.

**Record book use:** Entrepreneur – Basic Book & Multiple Production Inserts  
Placement - Basic Book & Agribusiness Insert

**ELECTRICAL TECHNOLOGY** - involves programs that will develop the FFA member's interest and knowledge of basic electricity used in agriculture and the home. Activities include, but are not limited to the hard wiring of 120/240 circuitry, energy management, electric motors, and safe use of electricity. This category also includes experience activities where a student is placed to obtain training and practical experience in preparation for an electrical career. Students whose SAE is devoted to electronics are not eligible for recognition in this category.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**EMERGING AGRICULTURAL TECHNOLOGY** - involves programs where students gain career experiences in new and emerging agricultural technologies such as engineering, remote sensing, hand held device technology, precision agriculture, agrobotics and other new and emerging technologies that are not covered in any of the existing award categories.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert



**ENVIRONMENTAL SCIENCE and NATURAL RESOURCES** - typically results in FFA members receiving practical experiences in the principles and practices of managing and/or improving the environment and natural resources. Activities may include: the management of agriculture waste, recycling of agriculture products, environmental clean-up, serving in the conservation corps, managing (not building or maintaining) energy usage, multiple uses of resources; land use regulations that pertain to soil, water and air quality; preservation of wetlands, shorelines and/or grasslands; wildlife surveys; erosion prevention practices; public relations and education concerning pollution.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**EQUINE SCIENCE** - typically provides insights into horse production, breeding, marketing, showing and other aspects of the equine industry. Programs may also include calf roping, barrel racing, rodeo, racing, training, riding lessons and therapeutic horseback riding if horses are owned and/or managed by a member. This also includes activities related to the production, sale and/or training of miniature horses.

**Record book use:** Entrepreneur (all ownership activities related to the production of horses) – Basic Book & Production Insert  
Entrepreneur (all equine ownership activities such as but not limited to calf roping, barrel racing and rodeo) – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**FIBER and/or OIL CROP PRODUCTION** - using the best management practices available to efficiently produce and market crops for fiber and/or oil; such as cotton, sisal, hemp, soybeans, sesame seed, flax, mustard, canola, castor beans, sunflower, peanuts, dill, spearmint and safflower.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**FOOD SCIENCE AND TECHNOLOGY** - involves students working for wages and/or experiences in applying microbiology, biochemistry or food product development to improve taste, nutrition, quality and/or the value of food. Programs can include the development of new products, food testing, grading and inspecting. Work experience could be obtained at research facilities, in classroom/lab facilities or through the quality and safety testing of milk or other foods. **Food science does not** involve the processing, marketing and sale of food products or food preparation and/or service.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**FOOD SERVICE** – involves students working for wages and/or experiences in food preparation and/or service. Work experience could be obtained at restaurants, fast-food facilities, delicatessens and other establishments that prepare and serve prepared food to customers. This area does not include enterprises that are recognized in the Ag Processing or Food Science proficiency areas, nor does it relate to activities that are not directly related to food preparation or directly related to the serving of prepared food. **(Note: Examples of activities not recognized are serving as: a host or hostess, activities limited to cashier duties, dishwashing, general sanitation, etc.)**

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**FORAGE PRODUCTION** - using the best management practices available to efficiently produce and market forage crops such as: sorghum not used for grain, alfalfa, clover, brome grass, orchard grass, grain forages, corn and grass silage, and all pastures.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**FOREST MANAGEMENT** - using the best management practices available to conserve or increase the economic value of a forest and/or forest products through such practices as thinning, pruning, weeding, stand improvement, reforestation, insect and disease control, planting and harvesting. It can include experiences with the Forest Service, Christmas tree farming, as well as making and selling cedar shakes, firewood and wood chips/mulch. **[Note: A forest product is any material derived from a forest for commercial use, such as lumber, paper, or forage for livestock. Wood, by far the dominant commercial forest product, is used for many industrial purposes, such as the finished structural materials used for the construction of buildings, or as a raw material, in the form of wood pulp, that is used in the production of paper.]**

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**FRUIT PRODUCTION** – using the best management practices available to efficiently produce and market fruit crops such as stone fruits (includes peaches, nectarines, plums, apricots and cherries), pome fruits (includes apples, mayhaws and pears) and citrus fruits; pineapples; coconuts; berries; watermelon; grapes; nuts and all common fruits.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**GOAT PRODUCTION** - using the best management practices available to efficiently produce and market goats and all goat products.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**GRAIN PRODUCTION** - using the best management practices available to efficiently produce and market grain crops such as corn, barley (including the malting types), millet, buckwheat, oats, grain sorghum, milo, wheat, rice and rye. Grain Production does not include any of the aforementioned crops with an intended use for forage.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**HOME AND/OR COMMUNITY DEVELOPMENT** - typically involves improving and protecting the beauty of an area by using natural vegetation or commercial ornamental plants and/or modernizing the home for better health and comfort by installing or improving water and sanitary facilities, heating and air conditioning or labor-saving devices. It also includes community betterment and development activities such as volunteerism to improve the community.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**LANDSCAPE MANAGEMENT** - typically involves experiences of planting and maintaining plants and shrubs; landscaping and outdoor beautification; grounds keeping, installing sprinklers and improving recreational areas.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**NURSERY OPERATIONS** - typically provides students with job-entry experience in areas such as turf, plants, shrubs and/or tree production for the purpose of transplanting or propagation. It can include water garden plants if produced for sale.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**OUTDOOR RECREATION** - typically strives to develop outdoor recreational activities as the primary land use. Some activities best suited to family use or as income-producing enterprises are vacation cabins and cottages, camping and/or picnic areas, fishing, water sports (**not including lifeguard activities**), winter sports, hunting, shooting preserves, guide services, riding stables, trail rides, vacation farms and guest ranches, natural scenic or historic areas and rodeo events where the student does not own or manage horses. **Note:** This award recognizes students who provide recreational activities to others and is not open to students recording their personal competition in school athletic and community sporting activities or recreational activities for personal enjoyment.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**POULTRY PRODUCTION** - using the best management practices available to efficiently produce and market chickens, turkeys, domestic fowl such as ducks, geese and guinea, and their products.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**SAFETY** - typically strives to encourage improvement in safety skills. These may include programs in fire drills, poisoning, childcare, vehicle safety, water usage **and lifeguarding**, bicycling, livestock handling or machine use. This safety program should help reduce the accident rate through individual involvement in safety activities.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**SHEEP PRODUCTION** - using the best management practices available to efficiently produce and market sheep, sheep products and wool.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**SMALL ANIMAL PRODUCTION and CARE** - using the best management practices available to efficiently produce, care for and/or market small pet animals such as rabbits, cats, dogs, mice, hedgehogs, guinea pigs, lizards, etc. and programs that typically provide a service in caring for the well-being of pets. Programs could include working at a pet shop, grooming pets, training dogs, or providing pet sitting services, working at a kennel or preparing guide and assistance dogs.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**SPECIALTY ANIMAL PRODUCTION** - using the best management practices available to efficiently produce and market specialty animals not covered by any of the existing award categories, such as: aquaculture (if an Aquaculture Proficiency area is not offered), bees, mules, donkeys, mink, worms, ostriches, emus, alpacas or llamas. Placement could include zoo worker or placement at any specialty animal production facility. In their supervised work experience, students will participate in hands-on activities including feeding, inoculating, performing basic animal care, weighing, measuring, showing and possibly marketing animals in an entrepreneurial or work placement environment.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**SPECIALTY CROP PRODUCTION** - using the best management practices available to efficiently produce and market crops not covered by any of the existing award categories, such as: native prairie plants, sugar beets, dry edible beans, gourds, tobacco, bittersweet (if not a greenhouse crop) specialty corn (such as: popcorn white corn, Indian corn, corn nuts), all grass seed production, herbs and spices, mushrooms, sugar cane, hops, sorghum cane, confectionery sunflowers, production of crop seed or specific floriculture production.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**SWINE PRODUCTION** – using the best management practices available to efficiently produce and market swine.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**TURF GRASS MANAGEMENT** - typically involves the planting and maintaining of turf for outdoor beautification, providing a lawn-mowing service, improvement of recreational areas, sod produced for sale and sport field or golf course management.

**Record book use:** Entrepreneur (all ownership activities related to the production of sod for sale) – Basic Book & Production Insert  
Entrepreneur (all ownership activities related to the planting and maintaining of turf for outdoor beautification and recreation, including lawn mowing services) – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**VEGETABLE PRODUCTION** – using the best management practices available to efficiently produce and market crops such as edible beans; potatoes, sweet potatoes, yams, pumpkins; sweet corn; tomatoes; onions; zucchini; hot peppers; as well as all canning and common garden vegetables.

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Placement - Basic Book & Agribusiness Insert

**VETERINARY SCIENCE** - SAE enterprises working with veterinarians in clinical practice, research facilities, colleges of veterinary medicine, animal health industry, or any other environment in which they assist veterinarians in performing duties related to the health of people and/or the health and welfare of large and small animals. This experience may include wage earning, entrepreneurial or exploratory activities not limited to: hands-on care of animals, management of business aspects of a veterinary practice, or working on legislation or regulations relating to animals.

**Record book use:** Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

**WILDLIFE PRODUCTION and MANAGEMENT** - typically involves activities to improve the availability of fish and wildlife through practices such as land and water habitat improvement, development of new land and water habitat, trapping, or the stocking fish and wild game. This proficiency can include experiences with Fish and Wildlife Departments and the Department of Natural Resources. The production of wild species for the stocking of ducks, geese, quail and pheasants are eligible in this area if used as an income enterprise. **Note: Student records, limited to keeping a journal of hunting and/or fishing activities for personal enjoyment, are not eligible for consideration.**

**Record book use:** Entrepreneur – Basic Book & Production Insert  
Entrepreneur – Basic Book & Agribusiness Insert  
Placement - Basic Book & Agribusiness Insert

## Innovative Ideas for SAE Projects

### Introduction

Probably the most difficult part of the SAE is picking out the right project for you. Some students will naturally fall into a SAE if they live on farm, already have a part-time job at an agribusiness, or a hobby related to agriculture. Other students may have to be more creative when deciding what to do for their project. On the next few pages I have compiled a list of possible ideas for SAE projects. They are listed by career cluster area, not by proficiency award area.

Before you begin to browse through the list of ideas you should review a number of factors that should be first considered when selecting a SAE program.

### Factors to Consider Before Selecting a SAE Project

1. **Cost** – How much money will be required to buy the supplies and equipment for the SAE? If a substantial amount of money is required to start the SAE, where will it come from?
2. **Potential for profit** – If the SAE is an entrepreneurship type of SAE, is there a reasonable chance to make a profit? Will people want to buy the product or service? The goal is to make money.
3. **Marketing** – Where will the product be sold? Is there a demand for the product or service? How will the product or service be advertised and marketed?
4. **Space or land required** – Some SAE programs require land, pens, greenhouse bench space, lab space, etc. Is space or land available? Will you have to pay rent for the space? Who will provide the space or land?
5. **Availability of equipment** – In order to conduct the SAE, is specialized equipment required? Some Agriscience research projects may require microscopes, scales, Petri dishes, etc. Is that equipment readily available for your use? Some farming activities also require specialized equipment such as combines, tractors, planters, etc. Is this equipment available for your use? Is it possible to lease the equipment or pay someone to do some of the activities for you?
6. **Length of time to completion** – How long will it take to complete the SAE activity? Will it become a long-term project? The SAE should provide opportunity for growth in scope and size throughout your high school career.
7. **Amount of time student has available** (how many other extracurricular activities are the student involved in?) – How much time does the student have available to dedicate to the SAE activity? Some SAE programs may require minimal time commitments, while others may require substantial amounts of time. The timing of when most activities occur in the SAE also must be examined. If a student plays a lot of baseball, then this could interfere with a lawn care SAE since both occur during the same time.
8. **Will you learn something new?** – The goal of the SAE is to learn – preferably to learn something new
9. **Is the SAE of sufficient scope to be challenging but not overwhelming?** – Some SAE activities could be very simple to do and some can be very, very challenging. The secret is to select an SAE activity that is in the middle. It will require some effort but will not be overwhelming.
10. **Legal Issues** – There are certain legal issues that must be considered in selecting an SAE. Child labor laws prevent 14- and 15-year-old students from doing certain types of work. In selecting an SAE, you want to make sure it is legal to do what you have in mind.
11. **Availability of transportation** – If a student considers a placement type of SAE, how would she or he get to the place of employment? Transportation must be available.
12. **Related to Career Choice** – Perhaps one of the **most important factors** to consider in selecting an SAE is, “Is this SAE related to my potential career?” Ideally, the SAE will have some relationship to the career choice of the student.
13. **Personal Interest** – One of the most important factors in selecting an SAE is personal interest. One should select a project that appeals to him or her and will be enjoyable.



On the next few pages are some innovative SAE ideas you could use for your project. This however is NOT a complete list of all activities you can do! There are hundreds of other opportunities you can do for the SAE. If you also have something in mind feel free to discuss it with Mr. Solomonson. However, before you begin your project make sure you fill out the SAE Planning Guide and get your project approved by Mr. Solomonson first.



You may want to check out [www.exploresae.com](http://www.exploresae.com) to learn more about various opportunities?

### **Career Area: Agribusiness Systems**

- Become an agricultural consultant for farm news for local radio or newspapers
- Conduct a study of commodity trading over a period of time
- Operate custom combining service.
- Operate custom heifer raising service.
- Operate custom hog raising business.
- Work at a seed corn dealership.
- Operate a poultry litter clean out service.
- Operate a lawn maintenance/ mowing service.
- Start a franchise of existing fruit/vegetable stand.
- Start service that cleans leaves from gutters.
- Operate a hay hauling service.
- Operate a custom spraying service.
- Work as a service provider in grocery store.
- Work for local cement company that installs ag applications.
- Work as a grain tester/handler for a local elevator.
- Be a sales associate at a garden or farm supply store.
- Work at the local feed store.
- Work for a local tax accountant that handles ag customers.
- Work for the local ag insurance agency.
- Work for an ag marketing services company.
- Work as an intern for the local agriculture department.
- Work for an irrigation service provider.
- Work for an ag auctioneer service.
- Work as an assistant sales manager at a turf equipment company.
- Work as a teaching assistant for you local agricultural teacher and FFA advisor.
- Conduct insect scouting for a seed corn company.
- Volunteer to do website and brochure development for local Ag businesses.
- Produce a weekly column for the local newspaper about agricultural issues.
- Create a custom labor venture: mow pastures, remove undesirable weeds from crops paint outbuildings, etc.
- Design a computer application plan for some agricultural facility or program
- Job placement in food distribution, restaurant, etc.
- Job placement with local florist
- Job-shadow agribusiness professionals, visits to agribusinesses to interview personnel, educational tours, etc.
- Marketing Christmas trees (at home or school provided facilities)
- Offer a custom parts and supplies delivery business to farms in your county
- Pre-sell fresh meat to clients on a weekly basis
- Pre-sell fresh seafood to clients on a weekly basis.
- Pre-sell fresh vegetables in family portions delivered weekly
- Preserve food for home use
- Processing creamed corn in a food processing facility
- Provide a custom barbecue service for community
- Provide a custom feed for livestock. Tap the organic, all natural, no-chemical market.
- Provide a hand weeding crew for local peanut /vegetable farmers
- Provide a sausage making business at home; can be sold if regulations are met.
- Provide custom hay baling and/or hauling
- Provide farm sign business (manufacture, sale, install, and maintain)
- Provide livestock hauling
- Provide small engine maintenance and repair service
- Provide systematic maintenance and service on outdoor power equipment at home or at school provided facilities
- Purchase and resale aerial photographs from tax office to local landowners
- Package fresh fruit or vegetable gift packs
- Remove pesticide jugs monthly from farms and transport to landfill
- Sell ready to freeze processed vegetables.
- Start a composting business by buying cow manure from local farmers, bagging for resale
- Start a farm sitting business for vacationing farmers.
- Start a kerosene route for homeowners (probably little demand in the summer time)
- Start a MSDS compliance business by compiling and maintaining current sheets for farms and in business in your county
- Start a recycling business (collecting and selling newspapers and plastics to recycling plants)
- Start an agricultural business promotion business. (Sell custom caps, T-shirts with farm or Ag business names or logos to clients.)
- Operate a business that computerizes farmers' records.
- Start an agriculture photography service (Animals, equipment, barns, families, children with animals, show animals)
- Make business cards, stationary, etc., for businesses or chapter members.
- Start local farm produce sale paper and sell ads to farmers
- Design custom computer programs using Excel or other software to solve problems for producers.
- Start a basic computer help service for area Ag producers.
- Provide basic internet and email training to producers to increase their level of confidence in using technology.
- Form a cooperative with other students and share in profits of a greenhouse crop
- Write "How To" pamphlets to sell at local garden supply stores. (Ex. How to Grow Tomatoes, etc.)
- Create digital video programs about FFA.
- Create and produce a weekly television or radio show about FFA and agriculture.
- Maintain the chapter webpage.
- Volunteer to design a website for a local agriculture group.
- Research the differences among farm management software systems.
- Write news articles on agriculture or FFA for local newspaper for Ag. Communications

### **Career Area: Mechanical and Technical Systems (Ag Mechanics):**

- Build a patio for the home
- Restore a tractor and sell it or restore a tractor for someone else.
- Design, build and sell lawn ornaments.
- Operate a lawn mower service and repair business.
- Build garden sheds for homeowners.

- Start a custom spraying service that utilizes GPS.
- Map fields, weeds, etc. for producers using GPS and GIS.
- Install electrical circuits or wiring system at home
- Run a custom fence building and repair business.
- Work as a diesel mechanic assistant.
- Work for an irrigation service company.
- Assist with GPS mapping for an agronomic services company.
- Work in a welding shop.
- Work as an assistant for an auto, truck or tractor mechanic.
- Conduct general home maintenance
- Work for a local electrician.
- Pour concrete forms for machine sheds or other buildings.
- Work on plumbing waste systems, air and water systems.
- Wire buildings for lights and receptacles.
- Provide maintenance for school shop equipment.
- Manage the steel inventory in the Ag shop.
- Machine and rebuild engine parts.
- Work with county soil and water engineers - assist in measuring and engineer design.
- Work for a small engine repair shop overhaul and repair.
- Work as a surveyor assistant.
- Work for a plumbing business.
- Complete home or farmstead improvement construction activities.
- Construct prototypes of hydraulic systems.
- Create a teaching model to show how a small gas engine works and sell to FFA chapters.
- Create a demonstration model that shows proper and improper welding techniques.
- Test the strength of different types of welds.
- Research the energy use of different types of lighting systems in farm buildings.
- Research the water savings accomplished by new irrigation technologies.
- Research the biggest challenges producers face when adopting new technology.
- Research the differences in various styles of tillage equipment.
- Build frames for raised beds for gardeners
- Build handicap ramps in local community
- Build picnic tables / sale to schools and local community
- Construct a utility building
- Construct a hydro ram pump and calculate the efficiency and water delivery rate
- Construct a wind powered generator and show it's applications to agriculture
- Construct and sale birdhouses and feeders
- Construct and sale lawn furniture made of PVC.
- Construct compost bins to sell
- Construct concrete projects for the home or farm
- Construct or recondition a welding project (such as a trailer, cooker, etc.) at home or in school provided facilities
- Construct pre-fabricated wooden fence panels for sale to local hardware, building supply stores.
- Construct spray rigs for four wheelers
- Constructing and marketing woodworking projects (birdhouses, dog houses, etc.)
- Constructing metal projects
- Contract with local EMCs or Power Companies to remove bolts, wire, etc from old power poles. (Sell copper for recycling.)
- Contract with school system to maintain and service lawn care equipment
- Cut out and paint lawn figures for sale
- Electrical repair service
- Install plumbing fixtures or plumbing system in your own building
- Lawn mower maintenance service
- Making craft items from wood, metal, or concrete to sale at arts and craft shows
- Making personalized signs for sale
- Paint agricultural buildings and farm houses.
- Placement in a parts store
- Provide a poultry house maintenance preparation business
- Provide custom painted mailboxes and stands.
- Repair and rebuild damaged pallets for businesses
- Start a chain saw basic maintenance & service business
- Start a custom vehicle refurbishing or painting business.
- Start a detailing business for cleaning farm equipment on the farm (wash, wax, clean, maintain)
- Start an equipment locating business. Match folks with something for sale with folks who want to buy something
- Start a farm equipment tire disposal business. (Turn old tires into livestock feeders.)
- Start a farm fence maintenance business (cleaning fencerows, repairing)
- Start a farm fencing company for custom work
- Start a pallet manufacturing business.
- Start a small engine repair service.
- Wire a home shop, utility room, barn, or tree house
- Work as an agricultural mechanics aide
- Work at a welding operation
- Working at a building supply business
- Working with a farm equipment dealer

#### **Career Area: Animals Systems**

- Provide a beehive rental service for farms and gardens
- Buy and show a calf at fairs.
- Form a cooperative with other students to raise broiler chickens.
- Grow catfish for sale to local cafes.
- Operate a pet sitting service.
- Compare weight gain of chicks fed different feed rations
- Organize and/or run a petting zoo at local fairs or farmers markets.
- Provide a kennel cleaning service.
- Provide equine training services.
- Provide fishing and hiking services for area youth groups and elementary students.
- Raise and sell farm fresh eggs.
- Raise and sell purebred dogs.
- Raise and train hunting dogs.
- Raise chinchillas, hamsters, gerbils and sell them on the Internet.
- Raise fish for the state fish and game department.
- Raise game birds to sell for the training of bird dogs.
- Raise game fish for sale to stock ponds.

- Raise indigenous snakes and release into the wild (at approved area) each summer.
- Raise market pigs.
- Raise pheasants or quail to be released into the wild.
- Raise your own livestock or specialty animals.
- Run a trapping business.
- Start a dog obedience training service.
- Start a dog walking business.
- Assist a horse group that assists handicapped students.
- Assist at a horse stable.
- Create a classroom pet adoption program with elementary schools.
- Maintain the school's aquaculture system.
- Manage a small aquatics lab.
- Participate in a mentorship program with a taxidermist.
- Take care of classroom animals.
- Work as a beef feedlot assistant.
- Work as a veterinarian assistant.
- Work as a wildlife outfitter or guide.
- Work at a university research lab caring for small animals.
- Work at livestock farms or a ranch.
- Work at pet shop.
- Work at the local livestock auction barn.
- Work for a pet sitting service.
- Work for a predator control service.
- Work for a rodeo company caring for animals and assisting with rodeos.
- Work for the state game and fish department.
- Work in the grocery store meats department.
- Work on a dairy farm or heifer raising farm.
- Work on an exotic animal farm.
- Conduct feed trials for growing broiler chickens.
- Research cage layers versus floor layers for egg production.
- Research effectiveness of various estrus synchronization hormones.
- Research feed trial testing differing swine diets.
- Research methods of predator control, methods of trapping.
- Discover the number of pet owners in community and their priority concerns.
- Research the best diet to help obese pets lose weight.
- Study the effects of genetic selection in groups of animals over time.
- Test the selection of young pigs based on grade and lean yield at slaughter.
- Assist at local animal shelter.
- Conduct a survey of all livestock operations in your area.
- Conduct surveys of wildlife populations.
- Coordinate and conduct a horse safety camp.
- Maintain aquariums for local businesses.
- Manage livestock show and supplies for FFA chapter.
- Plan and implement a "hands on" livestock field trip.
- Provide a lost home for homeless pets.
- Staff FFA displays that have farm animals at county and state fairs.
- Take small animals to nursing homes for visits.
- Volunteer to assist with a livestock show or county fair.
- Raise a dog for show
- Raise dairy goats
- Raise dogs for sale
- Raise fish in tanks or floating cages - research the rate of growth based on factors such as temp. and amount of feed given.
- Raise llamas
- Raise market goats for show
- Raise meat birds (chickens, turkeys, ducks) to the desired weight and sell to consumers
- Raise meat goats
- Raise mice, hamsters, or gerbils
- Raise miniature cattle
- Raise miniature horses
- Raise quail or other game birds for flight and meat
- Raise rabbits for pets or meat animals.
- Raise special breeds of dogs
- Raise tropical fish
- Raise tropical fish in aquariums
- Raise worms, collect and sell to bait stores.
- Start a crawfish farm
- Start a cricket ranch
- Start a dog and cat boarding business for vacationing families.
- Start a dog exercising business for elderly folks or sick people.
- Start a dog obedience school.
- Start a fish bait farm (mealworms, golden grubs, etc.)
- Start a gopher tortoise relocation service for landowners
- Start a honey production business (would work well with above hive rental)
- Start a pet grooming business.
- Start a turtle farm (sale to pet stores and pond owners)
- Train sporting dogs. (quail, rabbit, and retrievers dogs).
- Work at a dog kennel
- Work at a pet store
- Work at a veterinary hospital
- Board horses
- Build a backyard poultry research project
- Contract finish swine
- Develop a cow-calf operation
- Develop a small swine operation
- Develop a stocker cattle operation
- Raise replacement heifers
- Raise dairy replacement heifers
- Produce feeder pigs
- Provide a deer processing service
- Provide a home animal care service
- Provide a horse training service
- Provide a horseshoeing service
- Provide a meat processing service
- Provide a poultry processing service
- Raise a beef heifer for show
- Raise a horse for show
- Raise a market hog for show
- Raise a market steer for show
- Raise breeding sheep for show
- Raise breeding swine for show or breeding
- Raise dairy heifers for show
- Raise market lambs for show
- Raise poultry for show
- Start a small animal care business
- Start an Easter egg business



- Work at a horse operation or stables
- Work at a poultry processing operation
- Work in the egg industry – packaging and distribution
- Work on a beef cattle operation
- Work on a dairy operation
- Work on a poultry operation
- Work on a sheep operation

- Work on a swine operation
- Operate a pay-to-fish business
- Provide fish pond management
- Raise catfish in cages
- Raise fish in an aquaculture system
- Raise fish in cages in a pond or other body of water
- Care and incubation of hatching eggs

### **Career Area: Plant and Crop Systems**

- Organic Vegetable Production
- Grow flowers for sale at a local farmers market.
- Rent land from a neighbor and grow soybeans.
- Conduct a plant growth and physiology experiment in school Agriscience lab
- Plant and maintain a research plot on different types of turf grasses.
- Research project on how light intensity affects plant growth
- Research project on how light quality affects plant growth
- Study effects of herbicide type and varying concentrations
- Conduct a plant growth and mineral deficiency experiment
- Conduct a supervised control burn and assess plant growth in the area
- Start your own pruning business.
- Start your own spraying business.
- Start your own forage testing service.
- Start your own soil sampling business.
- Start your own lawn mowing business.
- Grow and sell plants through the high school greenhouse.
- Raise Christmas trees.
- Raise and sell pumpkins.
- Raise and sell strawberries.
- Provide services to fertilize lawns, till garden spots, prune trees, etc.
- Grow organic vegetables for a local café.
- Grow and sell the red worms used to produce compost.
- Sell and install water gardens.
- Work as a range consultant.
- Grow crops with different mechanical/chemical applications, fertilizer, growth regulator, etc. Observe/report results.
- Work for a sprinkler installation business.
- Work for a grain farmer.
- Conduct timber cruise and mark timber to be thinned.
- Work for an agronomy service and collect soil samples.
- Work for a lawn and landscape care business.
- Work in and monitor the school forest.
- Work at a nursery.
- Work at a golf course.
- Work for a local flower shop doing design, plant care, deliveries, etc.
- Work at the grain elevator during the summer.
- Work on turf farm.
- Work in an orchard.
- Work with county soil scientist to map soils.
- Work at an area garden center.
- Research the best turf grass varieties for your area.
- Develop a test plot for various types of crops.
- Use the school lab to manage small vegetable crop variety plots.
- Test forage samples under various conditions to determine feed values.
- Test organic versus inorganic fertilizers on plant development.
- Research the effect of various planting times on yields of green beans.
- Research the effectiveness of GM crops.
- Discover the best types of artificial lights for plant growth.
- Research plant propagation techniques.
- Test drought tolerance of different types of watermelons.
- Take care of flower beds/gardens on school property.
- Build and maintain the compost units at the school.
- Volunteer to work with landowners to improve their forest lots.
- Provide forestry walk-thru tours for elementary students.
- Plan plant-related activities and laboratories for your class.
- Do a garden projection for school land and have it mapped out four years in advance.
- Collect and laminate plants from a nursery landscape CDE at various stages of growth.
- Create a brochure about common houseplant diseases and how to take care of them.
- Complete a report on 10 food plants that includes origin, uses and cultivation practices.
- Take pictures and make a CD for plant or insect identification.
- Produce vegetables for decoration, Indian corn, mini pumpkins, gourds, etc.
- Produce farm crops (at home or school provided facilities)
- Produce forage crops (at home or school provided facilities)
- Produce watermelons
- Adopt a community building for beautification
- Adopt an area of school campus for beautification
- Collect and sale dry/preserved native plant materials (acorns, leaves, wiregrass); especially for floral design retail/wholesale
- Collect, press, mount and identify plants that are growing on campus
- Construct a garden arbor
- Construct backyard water gardens
- Container gardening ornamental plants
- Container gardening vegetables
- Create and market custom floral designs
- Develop a business making dried arrangements to sell.
- Grow liriopie for sale
- Grow herbs
- Produce daylilies
- Develop a park on public property
- Entrepreneurship in floral design
- Establish a community roadside wildflower planting
- Garden plots at home or at school; produce crops to market
- Grow and sale mushrooms
- Grow and sell produce crops
- Grow greenhouse plants on rented school greenhouse/coldframe space.
- Grow, harvest and can or preserve fruits and vegetables.
- Grow organic cut flowers for farmer's market

- Horticulture therapy
- Indoor plant rentals and care service for businesses and offices
- Landscape maintenance
- Landscape pruning enterprise
- Native plant materials
- Offer a shrub care service (pruning, trimming and cutting back shrubs, fertilization).
- Produce fruit crops (at home or school provided facilities) i.e. watermelons
- Produce greenhouse crop (at home or school provided facilities) i.e. ferns
- Produce perennials from seed
- Produce turf grass (at home or school provided facilities)
- Propagate and market shrubs
- Provide a fruit tree pruning service
- Provide a mulching service for urban gardeners.
- Provide landscaping materials for local businesses (Pine straw and rocks.)
- Raise a trial garden plot on school grounds (similar to UGA); seed companies may donate seed/plugs
- Raise tomato seedlings and replant into one-gallon pots to sell

- Rent indoor plants to teachers in your school.
- Rent houseplants to homeowners. (care for plants, change plants weekly)
- Rent-A-Plant -- rent plants for wedding, banquets, parties i.e.; ferns and tropicals
- Start a commercial flower up-keep business. Change hanging baskets, potted plants, and window boxes for business.
- Start a floral design business by creating table centerpieces for sale at farmers markets, grocery stores, and vegetable stands.
- Start a garden photography business
- Start a hydroponics vegetable business
- Start a lawn irrigation installation business
- Start a renovating houseplant business
- Start a turf grass establishment business (seeding, sodding, hydro seeding, etc.)
- Start a vegetable transplant seedling business.
- Work at a florist
- Work at a garden center
- Work in a nursery business
- Scout cotton or peanuts for producers

#### **Career Area: Food Products and Processing Systems**

- Sell gourmet popcorn products.
- Raise trout and sell to local restaurants.
- Process and sell specialty products--bison, wild flowers, ostrich.
- Conduct food science experiments
- Process wild game for jerky, etc.
- Collect wild mushrooms and sell to local vendors.
- Sell picked vegetables.
- Make jams and jellies for sale at a farmers market.
- Start a service to grow gardens for the elderly.
- Work for and/or operate a wild bird processing service.
- Work at local bakery.
- Work at a meat production plant.
- Work at a produce facility that repackages and sells produce.
- Work at a vegetable or fruit canning factory.
- Work at a cranberry farm.
- Work for an agricultural seed cleaning and bagging company.
- Work in a deli or bakery at a grocery store.
- Help at a local fruit/vegetable stand.

- Assist at an herb farm.
- Deliver sweet corn to customers for a local grower.
- Assist with produce selection at a grocery store.
- Research genetic crossings in winter squash.
- Research the environmental effects on milk.
- Research genetic changes in various vegetables.
- Test ideas for new food products.
- Research incidents of food borne illnesses in a community.
- Study the impact of various styles of labels on people's perception of the food product.
- Research why new food products fail to sell.
- Research the development and use of edible soybeans.
- Work to establish a community vegetable garden.
- Grow vegetables to give to local food pantry.
- Start and manage a farmers produce market in town.
- Ask farmers for permission to glean fields for food to give to homeless shelters.

#### **Career Area: Environmental Service Systems**

- Start a leaf collection service in the fall and sell mulch in the spring.
- Own and operate a water systems farm drainage (tiling) company.
- Start a service to collect used pesticide containers.
- Sell shop safety equipment door to door.
- Create service to remove algae from area lakes and fishing ponds.
- Monitor local air quality; record and report
- Sell radon detectors and collect samples.
- Start a water sample collecting service.
- Start a manure removal business for acreage owners.
- Start a wood chipping service for people and/or sell the chips as mulch.
- Assist local agencies with data collection for watersheds.

- Work for a company that installs plastic drainage tile farm fields.
- Work for a testing laboratory.
- Develop marshlands for game.
- Work as a trencher for waste water lagoons.
- Work at a fishery monitoring water quality.
- Work for the natural resource and conservation district.
- Assist landowners with installation of soil conservation practices.
- Conduct a local water quality study.
- Research area pollution concerns.
- Research rate of accidents on area farms and compare to national averages.
- Research methods for preventing common accidents in agriculture dept. laboratory.

- Monitor dust levels in air at various sites and various times throughout year.
- Research the effects of livestock feed on waste issues.
- Monitor pollen counts in an area by working with labs and weather stations.
- Research the effects of various cover crops on erosion.
- Work as a water quality lab assistant.
- Conduct a tour of area farms and ranches that practice effective pollution control.
- Develop plan to manage school food waste.
- Lead farm safety program for elementary students.

- Volunteer to monitor water quality for community pond.
- Assist community watershed action groups.
- Collect water samples for local or state agencies.
- Conduct workshops for homeowners on composting.
- Develop and implement a farm safety class for elementary school students.
- Establish green belts along streams on your farm.
- Put together a town safety package---mark all signs, fire hydrants and water drains.
- Take part in a mentorship program with the local soil and water conservation district.

#### **Career Area: Natural Resources Systems**

- Adopt a local stream to monitor water quality
- Raise wild game fowl for sale to local hunters.
- Stock and maintain fish populations in ponds.
- Raise Christmas trees and sell at Christmas time.
- Cut fire wood and sell at local stores.
- Raise fish for the state fish and game department.
- Operate a trapping business.
- Contract with landowners to plant food plots for wildlife.
- Soil conservation project on private or public land
- Study effect of fertilizer run-off into a stream or pond
- Research pines planted on tight spacing, water and fertilize, and compare with regular spaced planted pines
- Study effect of manure run-off into a stream or pond
- Construct and sell game feeders.
- Create and sell soil survey maps for area farmers and land owners.
- Build bat, bird, duck, squirrel houses for use or sale.
- Develop hunting ranges; set up indoor/outdoor ranges for bow competitions.
- Develop a forest/wildlife management plan for a local landowner.
- Clean and prune orchards.
- Work in the logging business.
- Bale and market pine straw
- Buy unusable lumber from builders supply and building sites; grind up or chip for mulch to sell
- Collect green pine cones (for seeds in the fall)
- Collect used Christmas trees and yard trimmings. Grind, compost, bag and sale as organic fertilizer.
- Collect/market natural supplies (i.e. pine cones, acorns, nuts, corn shucks, etc.) to sell to craft stores
- Container Pine Seedling Production
- Contract with a tree removal service to cut firewood and remove fallen trees.
- Contract with local timber companies and landowners to maintain boundary lines by painting and chopping.
- Cut and sell firewood provided free by national forests and state and local parks
- Cutting and/or marketing firewood
- Grow longleaf pine seedlings
- Measure timber on school forestry plot; determine volume and establish a management plan
- Provide a soil sampling service for farms and lawns.
- Purchase bulk pine bark from sawmill, bag and resale
- Purchase seedlings from GA Forestry Commission and pot and grow out to sell.
- Remove lightning strike trees (insect damaged, mechanical injuries) for landowners
- Start a custom forest herbicide application crew. (Must have forest commercial pesticide license.)

- Start a forest tree planting business
- Start a ornamental tree care service
- Start a small Christmas tree plot.
- Work for a landowner to plant habitat for wild game.
- Serve as hunting guide.
- Maintain and supervise the school prairie or grounds.
- Provide outdoor education material at camps.
- Work at a saw mill.
- Work for a park service during the summer.
- Work for a nature center.
- Assist Christmas tree farmers with planting and trimming.
- Assist local city management with summer programs as a guide.
- Work for the fish and game department.
- Work for parks and recreation in maintenance.
- Work at a bait shop.
- Assist a timber stand improvement specialist.
- Start a fish pond and teach small children and adults to fish.
- Habitat construction, make brush piles, plant wildlife habitat.
- Develop habitat trails for walking or hiking.
- Woodlot management and improvement including firewood, habitat, etc.
- Process and deliver seedlings to elementary school students.
- Create activities or laboratories for a natural resources class.
- Organize and participate in a wildlife field day.
- Volunteer to assist at campgrounds with cleanup and maintenance.
- Research best practices for improving fish habitat in local ponds.
- Research the benefits of using GIS mapping for natural resources.
- Create a brochure on creating wildlife habitat in backyards to share with community.
- Study soil profiles from multiple locations in your community and develop a soil map.
- Study the effects of excessive lawn chemicals on wildlife.
- Research the effectiveness of habitat restoration projects in your community.
- Research the impact of various insects on woodlot management.
- Discover the native plants for your ecological area and determine how prevalent they are currently.
- Research impact of using ATVs on public lands.
- Collect water run-off from school parking lot and analyze for various pollution indicators
- Collect, mount, and identify insects found on school campus
- Conduct a research project on how to prevent deer damage to a home garden.
- Conduct a water quality study on area lakes or streams.

- Conduct endangered plant surveys for landowners
- Construct deer stands for sale. (Portable and stationary)
- Construct duck nesting boxes for sale to landowners.
- Construct turtle traps for pond owners (Use this in conjunction with turtle farm as a source of breeding stock.)
- Develop a backyard bird habitat.
- Develop a backyard wildlife habitat.
- Develop a schoolyard wildlife habitat.
- Develop and/or maintain a wildlife food plot on private or public land
- Develop and/or maintain wetland area on private or public land
- Measure land for the local FSA office
- Monitor success rate of bluebird houses.
- Plan and develop a school nature trail.
- Plan and develop an outdoor classroom.
- Plant a butterfly garden at school.
- Provide a debris removal service along rivers and streams; sell driftwood and other items to consumers.
- Provide a pond fertilization and testing service
- Provide custom dove shoots or quail hunts
- Raise mallard or wood ducks for sale to pond owners.
- Raise popular game birds; sell them for meat and as taxidermy products.
- Start a bullfrog farm. (Sell fresh frog legs to local restaurants.)
- Start a fish fingerling nursery. (Catfish, trout, bream)
- Start a Red Cockaded Woodpecker relocation service
- Start a rock store; sell for landscaping purposes. (Gravel, pebbles, stones)
- Start a wildlife food plot and native plant enhancement business for local landowners and hunting clubs.
- Start an equipment trailer fabrication business.
- Trap nuisance animals.
- Provide non-game wildlife management

## Financing My SAE Project

### Financing a SAE

Many SAE projects and programs, especially those that are entrepreneurial, require financial assistance. As with operating any business venture, students should be aware of resources available to assist with start-up costs, livestock purchases, new equipment, etc. A good idea or program should not be cut short because of lack of funding! Following are a few financial options:

#### - SAE Grants <https://www.ffa.org/participate/grants-and-scholarships/sae-grants>

These grants are offered through the National FFA Organization.

#### - Local Financial Institutions (*Banks or lending centers*)

Many local or regional banks and agriculturally-related financial institutions offer loans for FFA projects. For example, Farm Credit Services offers financing programs for young, beginning and small farmers ([www.farmcredit.com](http://www.farmcredit.com)). You could also secure a small loan through a local bank such as BankOrion. This would probably require a co-sign from a parent or guardian. \*Loans from these institutions might require a high amount of interest associated with the loan.

#### - Parents

Many times parents of the FFA member will help with the start up cost of a SAE project. You could also provide a trade of labor for supplies and other costs associated with your project. Example: Student will work on the family farm in exchange for livestock or supplies.



# Record Keeping and the Components of the SAE Record Book

## Introduction

Welcome to the wonderful world of SAE record books! Keeping accurate records of your project is critically important for the development of a successful SAE experience. Record Keeping is the most important tool you will have in your SAE experience.

## What is Record Keeping?

*Record keeping*, simply put, is the process of keeping a journal or record of what you have done. In your SAE experience, you will need to make notes whenever you do or learn something new. You will document the time and money you spend in your experience. Learning the record keeping process will tool for you in the future as you enter your career.



need to  
be a great

## What are reasons for keeping SAE records?

Records provide a wealth of information for the agricultural student. They are used for the following:

- *To see if you made or lost money -*  
You need to know if your SAE is making or losing money. We don't want to continue doing things that lose money.
- *So someone else can't cheat you out of what you have earned -*  
An employer may forget to record the number of hours you work. If you have a partner in a business enterprise, good records are critical to make sure you receive your fair share of the profits.
- *To determine which parts of the business are doing well and which parts are not -*  
A farm market recently decided to keep detailed records on their business and discovered, to their surprise, that the ice cream operation was losing money, but the bakery was making money. This led to an overhaul of their operation.
- *To make management decisions -*  
Records will help you decide whether you need to hire additional people, reduce or increase acreage, switch to a different crop, etc.
- *For documentation purposes when seeking a loan -*  
Bankers want to see a net worth statement before loaning money. If you don't have financial records, it is hard to develop a net worth statement. A net worth statement is a snapshot of your current financial situation and will give you important clues about where you should concentrate your financial planning efforts. Net worth statements are also useful for other purposes, such as when applying for a mortgage, credit card, car loan or college financial aid.
- *To prepare your tax returns -*  
You need to know how much money you made or lost and what items can be deducted in order to file a tax return.
- *For planning for future events -*  
If you record the dates on which animals were bred, you can anticipate when the offspring will be born. If you record the dates on which crops were planted, you can anticipate when they will start growing and/or be ready to market.
- *To document your activities for FFA recognitions and degree purposes -*  
To compete for FFA Proficiency Awards and for FFA degrees, you have to have the records of what you did on your SAE.
- *For legal purposes -*  
You keep records to document when certain agricultural practices were performed in case there is a problem (i.e., crops all die after you apply a chemical) or to determine when a crop can be harvested after it has been treated with an agricultural chemical.
- *To help plan a budget for the next year -*  
If you know how much supplies costs this year, you will have a good idea of the costs for next year and can plan your budget accordingly. You will also know how much income to expect.

You will receive a grade for your accuracy and attention to detail in your SAE record books. The components of the SAE record book are on the following pages. You should update your SAE record books after every experience, on a weekly basis, or after every pay period. You will be given some class time to work on this throughout the year. You can also work on it at home.

## EZ Records- OPTION 1

### Components of the SAE Record Book (Entrepreneurship, Placement, and Research)

The Illinois EZ Records SAE record book is divided into two main parts- the “**CORE**” book and the **enterprise book**.

Every student, no matter what their project is, will complete the CORE pages of the record book. The core record book contains sections for capital inventory, miscellaneous income, personal expenses, a depreciation schedule, income and expense summary, financial statement (net worth statement), narrative, skills/tasks learned, safety activities, show record, and a section for participation in FFA and other leadership activities. Students only have to complete this section once no matter how many enterprises the student may be involved with each year.

The second component to the record book is the enterprise pages. Once the student has identified what type of SAE they will become involved with, the record book sections may be chosen. The 4 main enterprise sections are agribusiness, animal, agriscience, or crop pages. Students completing either a placement SAE or agribusiness SAE will choose the agribusiness enterprise book. Students completing an animal entrepreneurship project will choose the animal enterprise books and likewise students completing a crop entrepreneurship project will choose the crop enterprise book. Students completing a research project will choose the agriscience area. If a student wishes to have more than one project, they will need to complete separate enterprise pages for each project, but will still only have to complete the CORE pages once. (Example: If the student plans on having a turf grass entrepreneurship enterprise, a swine entrepreneurship enterprise, an agricultural sales placement book, and a vegetable entrepreneurship enterprise the student will need 4 separate books, but only one set of core pages.) If you are unsure what enterprise pages you will need you should refer to the proficiency area section of this handbook or ask Mr. Solomonson.

The components of the enterprise pages will vary somewhat by book, but are basically the same. The basic components of each book are the business agreements, planned activities, a budget, record of experiences, wage/labor summary, receipts, expenses, inventory, labor and management earnings, and an enterprise analysis. The production (entrepreneurship) enterprise books also contain sections on production records. Agriscience pages also contain information pertinent to completing a science fair project.

On the next few pages of this section of the handbook we will give a brief description of each of the sections of both the “CORE” and all of the enterprise books in detail. The next section of the handbook will focus on how to use and complete these different sections of the Illinois Online SAE record book.

#### A. Description of the “CORE” Pages

**1 -1 – CAPITAL INVENTORY** – This is where you record any capital item transactions. (Examples- machinery, equipment, breeding livestock, buildings, etc.) (Done anytime you purchase or sell a capital item)

**1-2 -- MISCELLANEOUS INCOME** – This is where you would put any money you earned or were given from any source other than your SAEP Project. Includes jobs not SAE related, money gifts from parents or others for birthdays, Christmas, or special events. This is important to record if you ever plan on applying for you state degree. (Done throughout the year as the money is received.)

**1-3-- PERSONAL EXPENSES** -- This is where you record any money that you spend that is not related to your SAE Project and especially if it is an FFA event such as national or state conventions, or for educational expenses. If you purchased a vehicle it would also go here. (Done throughout the year as the money is spent.)

**3 -- DEPRECIATION SCHEDULE** -- This is where you record any capital items you own worth value. (machinery, equipment, breeding livestock, buildings, etc.) DONE AT THE BEGINNING OF THE YEAR and AT THE END OF THE YEAR ONLY. Your teacher will need to help you with this page generally.

**4 -- INCOME AND EXPENSES SUMMARY / ENTREPRENEURSHIP** -- This page fills in automatically when each enterprise Labor and Management Page is completed for entrepreneurship projects. (End of the Year)

- 5 -- INCOME AND EXPENSES SUMMARY / WAGE EARNING** -- This page fills in automatically when you have page 7A,B, C, or S completed in your enterprise records. (End of the Year)
- 6-1 -- SUMMARY OF ASSETS** – This is where you record the value of everything you own including cash, checking accounts, savings accounts, animals, feed, crops, etc. THIS IS DONE AT THE BEGINNING OF THE YEAR AND AT THE END OF THE YEAR ONLY.
- 6-2 -- SUMMARY OF LIABILITIES** – This is where you record any money that you owe. If you owe money for your SAE project it goes here. If you owe for feed you haven't paid for yet it goes here. THIS IS DONE AT THE BEGINNING OF THE YEAR AND AT THE END OF THE YEAR ONLY.
- 7 -- NARRATIVE** -- On this page write a description of your project and what major activities you were involved in. Also include what you learned from doing your project. This is done at the end of the year.
- 8-1 -- SKILLS AND TASKS LEARNED** - List any skills or tasks that you learned or became more proficient ( got better at) while doing your SAE. You should try to have at least five or six for a single SAE and 3 or 4 for each enterprise if you have more than one enterprise. (This is done as you learn the tasks throughout the year)
- 8-2 -- SAFETY ACTIVITIES** -- List any special precautions you should take to keep yourself or others safe while doing your SAE project. (Use of guards, special safety equipment, etc) Try to have at least 5 per project. This is done at the beginning of the year (you may add it to if you wish throughout the year).
- 9 --SHOW RECORDS** - Record any shows that you go to and the placings you received. The money from premiums goes on the receipts page of the enterprise sections. This is done as you go to shows with your project throughout the year.
- 10 -- FFA LEADERSHIP AND PARTICIPATION** – Record when you receive any FFA degrees, all leadership activities that you attend, all awards you receive, all committees you are on, all offices you are elected to, and all CDE teams that you are a member of on this page. This page is done at the beginning of the year and as you do activities throughout the year.
- 11 -- OTHER FFA ACTIVITIES** – Put any FFA activity that does not belong on page 10 here. Examples are monthly meetings, fundraisers, barnyard zoos, FFA Week activities. Etc.  
This page is done as you do activities throughout the year.
- 12 -- LEADERSHIP OUTSIDE FFA** -- Record all school extra- curricular involvement ( sports teams, clubs, national honor society, etc) along with church activities, community service activities etc here. This page is done at the beginning of the year and as you do activities throughout the year.

## B. Description of the Enterprise Pages

(A, B, C, S PAGES)

**1A,B,C, S – BUSINESS AGREEMENT (RESEARCH AGREEMENT)-** This is an agreement between you, your parents, you teacher, and anyone else involved in your project. You put the percentage of income you expect to receive and expenses you expect to pay. This is DONE AT THE VERY BEGINNING OF THE YEAR.

**2A -- PLANS AND GOALS/ BUDGET–** This is where you estimate the animals you expect to raise and the money you will take in from an animal enterprise and the money you will pay out. DONE AT THE VERY BEGINNING OF THE YEAR.

**2B-1/2B-2 -- SCHOOL INSTRUCTION/ PLANNED ACTIVITIES/ BUDGET -** This is where you record any instruction you receive in school related to your project. DONE AT THE VERY BEGINNING OF THE YEAR and estimate money you will take in from your project (including wages) and money you expect to pay out (DONE AT THE VERY BEGINNING OF THE YEAR.)

### **2C – PLANS AND GOALS/ BUDGET/ TEST RESULTS**

This is where you put the size of you crop project ( acres or square feet), the plans you have for growing the crops, and an estimate of the money you expect to take in and expenses you expect to pay out during production of you crop. There is also a place to write in soil test results if you have had soil test done on the ground you are planting. (DONE AT THE VERY BEGINNING OF THE YEAR)

### **2S-1/2S-2 – RESEARCH PURPOSE/ GOALS/BUDGET**

This includes space for your research project title, hypothesis, purpose, etc. It also provides students the space to record their expected income and expected expenses throughout the year. The purpose of the budget is to determine if the SAE has an expected profit or loss. (DONE AT THE VERY BEGINNING OF THE YEAR)

**3A-1/3A-2 –PRODUCTION RECORDS & DEATH LOSS --** This is where you put in animals that you have that you expect to have young. Put in the date they were bred and are due, when the young are actually born, and when the animals are weaned. Any animals that die are also recorded on this page. (This page is done through out the year as animals are bred or death loss occurs)

**3B – TRAINING AGREEMENT** ( Only done if you are doing the work for someone else) Fill out your information and the business you are working for information ( even if it's a parent) and fill out the agreement. DONE AT THE VERY BEGINNING OF THE YEAR.

**3C – PRODUCTION RECORDS –** This is where you put in information about what you plant and record how much it produces. ( Done throughout the year as you plant and harvest)

**3S -- RESEARCH PLAN** - This is an agreement between the student, parent, teacher, and supervisor regarding specifics for the research project. (DONE AT THE BEGINNING OF THE YEAR)

**4A-1 - QUANTITY OF ANIMAL PRODUCTS –** This is where you enter the amount of an animal product (example wool from sheep, eggs from chickens, or milk from dairy cows) that are produced. ( Done throughout the year as the product is produced).

**4A-2 – PRODUCTION AND RETURNS –** This is where you record all animals produced and sold. Line 4 total numbers must equal line 8 total numbers. (Done at the end of the year when closing out books)

**4B -- TRAINING PLAN** - This is a list of the the jobs you will be expected to perform while working for an employer (even if it's a parent). (DONE AT THE BEGINNING OF THE YEAR)

**4C -1 -- CROP PRODUCTION --** This is where you record all crops produced and all crops sold ( Done at the end of the year as you close out record books)



- 4C-2 -- ENTERPRISE ANALYSIS** – This is where you analyze how your crop project did. These figures will be carried to your enterprise analysis paper that must accompany your record books for chapter, section and above proficiency award competition. (Done at the end of the year when closing out books).
- 4S -- PROCEDURE USED** -- On this page include your research title, all materials used, and a step-by-step instructional procedure on how to complete your research project. (Done at the beginning of the project)
- 5A,B,C, S -- RECORD OF EXPERIENCE – VERY IMPORTANT PAGE** - Record all of the time you spend on your project along with an explanation of what you did on this page. If you are paid for the work put the hours under the paid column if you are not paid put the hours under the unpaid column. Items you do for a small amount of time daily (like chores) can be entered by weekly. The hours you spend on your project should be totaled by months and transferred to page 7 A,B, C, or S. (Done throughout the year as activities occur)
- 6S -- RESEARCH SKILLS, COMPETENCIES, AND KNOWLEDGE** -- Lists all major skills, competencies, and knowledge gained during the completion of the research project including the date, skill, and hours. (Done at the end of the project)
- 7 A,B,C, S – WAGE/ LABOR SUMMARY** -- Information on this page comes from page 5 A,B, or C. For crop and livestock books you will most likely only be transferring monthly totals of unpaid labor to this page. For Business books in which you get paid for work you will need to enter your hours from page 5B that you were paid for to this page by week, month, or whatever is convenient for you and enter the wages you earned and any deductions taken from your checks. Information on this page transfers to page 14B. (Done throughout the year as you total activities (usually monthly))
- 9 A,B,C, S – RECEIPTS**  
 9A -- This is where you would record money received from sale of animals and animal products.  
 9B -- This is where you would record any money earned from a business which was not a wage paid for work. Any products you made in your business and sold would go on this page. (If you mowed yards and received money by the yard instead of by the hour you would record income here instead of in the wages page)  
 9C -- This is where you would record the sale and value of your crops that you raised and harvested.  
 (Done throughout the year as the money is received.)
- 11 A,B,C, S -- CASH AND NONCASH EXPENSE** -- On this page you record any money you spend on your project. There are columns that you can put a caption in for any expense that you have many times. (such as feed for livestock, seed for vegetable gardening, fertilizer, insecticides, etc.) Figures from this page will automatically go to summary pages at the end of your records. (Done throughout the year as money is spent)
- 12S-- SCHOOL INSTRUCTION/ REVIEW OF LITERATURE** - The school instruction column is for students to record the units that were presented in either agriculture class or a Non-Ag class that relates to their project. The planned activities column is for students to record the activities/experiences they plan on doing during certain months.  
 The Review of Literature section wants you to list all sources used in completing your research and explain how it is relevant to your project. (Done at the beginning of the project.)
- 13 A,B,C, S – INVENTORY OF NON-DEPRECIABLE ITEMS** -- On this page you record any items you have at the beginning of the year that are used in your project and have a value and are not a capital (depreciable) items. (ie. Feed, seed, fertilizer, chemicals, small tools, fuel, market animals, crops not sold, ) At the end of the year you again record any items that you have of value. (Note – the end of year inventory from a year will become the beginning inventory of the next year)  
 (DONE AT THE BEGINNING OF THE YEAR AND THE END OF THE YEAR.)
- 14 A,B,C, S – LABOR AND MANAGEMENT EARNINGS** – Items on this page are automatically transferred from other pages when they are finished. All you have to do is put in student's share (Done at the end of the Year)
- 15 A, – ENTERPRISE ANALYSIS AND COMPARISON** – This is where you determine how your enterprise compares to other enterprises. You will have to calculate many of these figures. These figures will be used to help fill out your evaluation guide that must accompany your book for consideration for any proficiency award at the chapter or higher level. (Done at the end of the year after all the rest of your book is completed.)

**15 B, S -- EVALUATION FACTORS** – This is where you summarize your hours worked, wage earned, total wages earned, sales of products, and expenses you might have with a business project. These figures will be used to help fill out your evaluation guide that must accompany your book for consideration for any proficiency award at the chapter or higher level. (Done at the end of the year after all the rest of your book is completed)

**16S-19S -- ABSTRACT & OTHER FORMS** – The abstract is a one page summary of the entire project. It should include the purpose, procedure used, data collected, and conclusions drawn. The endorsement and waiver forms are for the Agriscience Fair. (Done at the end of the year after all the rest of your book is completed)

\*Key: Pages with an A behind the number means an Animal Book.  
Pages with a B behind the number means a Business or placement book  
Pages with a C behind the number mean a Crop Book.  
Pages with a S behind the number mean a Science Project Book.

# How to Use and Complete the EZ Records Illinois Online SAE Record Book Program

## Introduction

This section of the handbook will describe in detail how to fill out the different sections of the online SAE record book. This section will only explain how to complete the records for an entrepreneurship, placement, or research SAE project area. The exploratory project is self-explanatory and will not be addressed further in this handbook. (If questions persist regarding the exploratory project, please ask Mr. Solomonson.) After you have chosen the type and kind of Supervised Agricultural Experience project you will be completing, you can start your SAE record book. Before you actually get assigned a user name and password for the program, you must complete the SAE Planning Worksheet and get your project approved by the instructor.

## How to Get Started with the Illinois Online SAE Record Book

1. To use and update your records for your SAE project you will need access to a computer that has internet capabilities. I suggest using a computer that has a high-speed connection. Dial-up internet will work, but it will be a lot slower. You will be given some class time to complete the project, but a majority of the project will have to be done on your own. If you do not have high-speed internet available at home, you should feel free to use the computers at school during a study hall (You will need a pass from me to go to the lab during those times).  
To get started, you need to log onto the actual website: <http://ezrecords.aces.uiuc.edu> or <http://ezrecords.aces.illinois.edu>.
2. The next step is to sign in using the user name and password you were assigned. The user name is "firstnamelastname" your password is the same thing. Example for John Smith: User name: johnsmith Password: johnsmith. You can change it if you wish, but you are responsible for remembering what it is.
  - a. The first time you go to the website it will ask you for an access code. Mr. Solomonson will provide this. It will then have you enter in some personal information (name, email, school, address, phone number, and instructor assigned to your project).
  - b. Make sure to enter in your assigned user and name and password.
3. The next step is to create a new record book. To do this click on "Create New Record Book." Name your record book using the following method: Type your name and put the current year behind it. Example for John Smith: John Smith 2012. You only need to create a new record book at the beginning of every year. You should not click on "create a new record book" if you plan on having more than one enterprise.
4. To add enterprises (types of projects you plan on completing), click on "Add an Enterprise." Type in the name of one project in the space provided. Example: If John Smith wants to complete his project on turf grass entrepreneurship, he would type in Turf Grass in the blank. He would then select a "business" book from the category pull down menu. Likewise if the project was an animal entrepreneurship project, the student would select "animal" from the pull down menu, or if it was a crop entrepreneurship project, the student would select "crop" from the pull down menu, etc. Then click "Save." Always type in the broad category (You could use the proficiency area- but they can change from year to year) in this section. If a student plans on completing a placement project, type in your category and then type in "Placement" behind it. Example: John Smith is going to work for a feed store so he would type in "Feed Store - Placement." Placement projects would also select "business" from the enterprise pull down menu.
5. Repeat step 6 for every enterprise you plan on completing.
6. Once you have created all of your enterprises for your book, you are ready to begin putting in information into the record book.  
\*Note- Never "Delete an Enterprise" in your book. If something happens where you might have to delete a project (An animal dies toward the beginning of the year, you get fired early in the year, etc), you need to get permission to delete the record book from the instructor before you proceed to do it. Remember you must still have at least one project.

## Managing CORE Records

Every student, no matter what their project is, will complete the CORE pages of the record book. The core record book contains sections for capital inventory, miscellaneous income, personal expenses, a depreciation schedule, income and expense summary, financial statement- summary and assets and liabilities (net worth statement), narrative, skills/tasks learned, safety activities, show record, and a section for participation in FFA and other leadership activities. Students only have to complete this section once no matter how many enterprises the student may be involved with each year.

All of the CORE Record Pages can be accessed from the Record Book Main Page.

### Capital Inventory 1-1

*How to Complete this Section:*

- Click on "Capital Inventory".

- Click on "Add Record."
- Enter the date you either bought or sold a capital item or got a loan. Choose which enterprise the capital inventory applies to from the pull down menu. Type in a description of the item and then enter in the monetary value of that item. Click "Save Record."
- These items will carry over year-after-year.

#### Misc. Income 1-2

*How to Complete this Section:*

- Click on "Misc. Income."
- Click on "Add Record."
- Enter the date you received the money, a description (babysitting, allowance, birthday money, Bailing hay for neighbor, etc.), enter in the monetary value in the total column as well as the same monetary value in the corresponding column (Ag-not related to SAE, Gifts and non-earned income, or Non-Ag).- DOUBLE ENTRY
- Click "Save Record."

#### Personal Expenses 1-3

*How to Complete this Section:*

- Click on "Personal Expenses."
- Click on "Add Record."
- Make sure you choose either personal expense or an educational expense from the pull down menu. Most will be personal expenses. The only thing you could put under educational expense would be tuition for college you have paid for (only dual credit students could claim this).
- Enter the date you spent the money, under "To Whom" put "personal expenses", under item descriptions type a description of what you spent it on, and record the dollar amount.
- If an item was over \$25 I would record it separately, but I would also recommend putting a Misc./month entry for all small purchases. (Ex.- January Misc.- \$125)
- When taxes are paid they should be entered under personal expenses.
- Click "Save Record."

#### Depreciation Schedule 3

*How to Complete this Section:*

- Click on "Depreciation Schedule."
- Click on "Add Record."
- Choose the date that your acquired the capital item that requires depreciation. If you did not acquire the capital item during the current year, you still need to record it in this section. You should then select which enterprise that item is related to from the pull down menu. Then type in a description of the item (i.e. Lawn mower, tractor, hog building, etc.).
- Note if the item you purchased is New or Used and then the cost information (trade-in value if there is one, the cash difference paid, and the total cost basis). The total cost basis is what the capital item is currently worth. (Total cost basis = Remaining book value of trade-in (if any) + Cash Difference paid.)
- To enter depreciation at the end of the year follow the following steps:
  - For our purposes, you will enter a "0" into the expensing or adjustment column.
  - Type in the balance for regular depreciation which is what the item is currently worth (same as total cost basis).
  - The life of item is the average useful number of years you can use it. Refer to Figure 2 on the following page.
  - Use the Straight-line method of depreciation. The **straight-line method** provides equal depreciation during each year of the asset's useful life. This method is the easiest and probably most widely used.
  - If the item has been on a previous depreciation schedule, you may have depreciation from prior years for this asset. Enter that value in the prior depreciation taken column. The remaining book value for the item is the balance for regular depreciation- prior depreciation taken.
  - The computer program will automatically figure the depreciation for the current year as well as the remaining book value.
  - Click "Save Record."

| <b>LIFE OF ASSETS</b>   | <b>GDS</b> |
|---|------------|
| Agricultural Structures (Single Purpose)  | 10         |
| Automobiles & Pickup Trucks (Only include your automobile or car if it is for business use only!) | 5          |
| Trucks (over 13,000 lbs)  | 5          |
| Cattle (Dairy or Breeding)  | 5          |
| Farm Buildings  | 20         |
| Farm Machinery & Equipment  | 7          |
| Fences (Agricultural)   | 7          |
| Goats & Sheep (Breeding)  | 5          |
| Grain bin   | 7          |
| Hogs (Breeding)   | 3          |
| Horses, Breeding & Working, Less than 12 years old  | 7          |
| Horses, Breeding & Working, More than 12 years old,   | 3          |
| Horses, Racing, More than 2 years old   | 3          |
| Horticulture Structures (Single Purpose)  | 10         |
| Over the Road Tractor Units (Pulls Trailer)   | 3          |

*Figure 2. Average Life of Farm Assets (MACRS)*

#### Income and Expense Summary/ Entrepreneurial SAE 4

*How to Complete this Section:*

- Click on "Income and Expense Summary/Entrepreneurial SAE".
- This page automatically fills in values from other record book pages. To have this page complete you must complete all of the other record book pages. In your entrepreneurial books, make sure on the Labor and Management Earnings page you indicate the students share of the SAE. If you do not do this, this page will not fill in.

#### Income and Expense Summary/ Wage Earning SAE 5

*How to Complete this Section:*

- Click on "Income and Expense Summary/Wage Earning SAE".
- This page automatically fills in values from all agribusiness record book pages. To have this page complete you must complete all of the other record book pages. (Especially the Wage/Labor Summary Pages)

#### Financial Statement- Summary of Assets 6-1

*How to Complete this Section:*

- Click on "Financial Statement- Summary of Assets."
- On this page, you can "Edit Assets." Assets are items that you own that are worth something (Cash, Checking, supplies, equipment, etc.).

- To edit assets, click on “Edit Assets.” Your starting date will be Jan. 1 (current year) and the ending date will be December 31 (current year). At the beginning of the year (around January 1<sup>st</sup>, you only need to complete the first column. You will complete the second column at the end of the calendar year (December 31<sup>st</sup>). You should enter in the monetary value of all of your assets during these dates.
- Enter all current and non-current assets on this page. For current assets make sure to record cash, savings, bonds, stocks, cash value or life insurance, current operating inventory (same as what you put on page 13 of your enterprise pages- including market animals) and personal current assets (anything you own of value- put in categories (Ex. Electronics, tools, clothing, etc.)). Then enter all non-current capital assets (all capital inventory from CORE pages) and depreciable and non-depreciable animals. If you have a vehicle put it under the Personal Non-Productive Non-Current/ Capital Inventory.
- Click “Save Asset Changes.”

#### Financial Statement- Summary of Liabilities 6-2

*How to Complete this Section:*

- Click on “Financial Statement.”
- On this page, you can “Edit Liabilities.” Liabilities are items that you owe money on (accounts payable, loans).
- To edit liabilities, click on “Edit Liabilities.”
- Enter in all current and non-current liabilities. Most students do not have these unless you have a loan.
- The total columns will automatically add in the values for you. Click “Save Liability Changes.”
- The net worth, change in net worth, and financial analysis are automatically completed for you using this program.

Most students that do not have any types of loans, will not have anything on this section.

#### Narrative 7

*How to Complete this Section:*

- Click on “Narrative”.
- Click on “Add Record.”
- On this page you will describe your activities summarized in this record book. Emphasize anything not covered in other parts of your records. Include a summary of your major achievements. Include career possibilities that were revealed through this experience program. It should be written in first person.
- I recommend typing this in Microsoft Word (because of spell check and to see your page length) and copy/pasting in the text box on this page.
- You should type  $\frac{3}{4}$ - 1 page per enterprise/ year
- Click “Save Record.”

#### Skills & Tasks Learned 8

*How to Complete this Section:*

- Click on “Skills and Tasks Learned”
- Click on “Add Record.”
- Type in the skill or task learned, the date completed, and any other additional comments regarding this skill. Example: John Smith learned to take soil samples and complete soil tests. The name of the skill would be: Test Soil; Date Completed: April 2006; Comments: Learned to test soil for N, P, and K.
- Click “Save Record.”
- You must include at least one new skill or task learned each grading period for full credit.

#### Safety Activities 9

*How to Complete this Section:*

- Click on “Safety Activities.”
- Click on “Add Record.”
- Type in the date, safety activity, and additional comments. Example: John Smith adopted safety practices in his SAE such as handling pesticides safety, shop safety, and wearing safety goggles while using the weed eater. John would record these items separately, select the date these activities were adopted, and typed the procedure or why it was important.
- Click “Save Record.”
- The student should have at least 5 safety practices in this page.

#### Show Record 10

*How to Complete this Section:*

- Click "Show Record."
- Click "Add Record."
- This section is for students that show livestock or other types of projects. The student should enter the date, name of show or fair, class or event, item, and placing of the class.
- Click "Save Record."
- This page is optional unless you show.

#### FFA Leadership and Participation 11

*How to Complete this Section:*

- Click on "FFA Leadership and Participation."
- To type in the date you received your FFA degrees, click "Edit Records." If you have received one of the FFA degrees, you should record the date you received it. Greenhand and chapter degrees are given in March at the Chapter FFA Banquet. The State degree is given in June at the Illinois FFA Convention, and the American degree is given at the National FFA Convention in October. Only use this section if you have already received that particular degree. Click on "Save Information."
- To edit the Leadership Activities section, click on "Add record" below the section heading. This is for students that have earned a FFA office (Chapter, Section, State, etc.) or have been active on a FFA committee at the chapter level. Include the year and any office or committee in which you have been involved with. Click "Save Record."
- To edit the Participation section, click on "Add Record" under that section heading. This is the section where you will include any Career Development Event (CDE) team you have been on. Select the year and then type in the team and placing you and/or the team received at that level. Click "Save Record." Only include CDE teams here. The next section "Other FFA Activities" focuses on other events and activities.

#### Other FFA Activities 12

*How to Complete this Section:*

- Click on "Other FFA Activities."
- Click "Add Record."
- In this section, you can include all other FFA activities you have participated in other than CDEs. You need to type in the date of the activity, the activity, and the cost associated with it. An example of a cost associated with an activity could be that you paid \$100 to attend the National FFA Convention.
- Click on "Save Record."
- All entries will receive ½ point extra credit for this section.

#### Leadership Outside FFA

*How to Complete this Section:*

- Click on "Leadership Outside FFA."
- Click on "Add Record."
- In this section, you can include all other leadership activities you have been involved with. (Example: 4-H, Sports, School Clubs, Seminars, Church activities, Leadership Conferences other than those FFA related.) Include the date this activity began and the activity itself.
- Click on "Save Record."

All of the CORE record book pages needed to be **printed out on white paper** for the end of the calendar year.

It is very important to print out all pages (even if you were not assigned them). **If you do not have anything to fill out on a particular page it is perfectly acceptable to type "None" on that page.**

#### Managing Enterprise Records

The components of the enterprise pages will vary somewhat by book, but are basically the same. The basic components of each book are the business agreements, planned activities, a budget, record of experiences, wage/labor summary, receipts, expenses, inventory, labor and management earnings, and an enterprise analysis. The production (animal and crop entrepreneurship) enterprise books also contain sections on production records. The Agriscience book contains pages relevant to that project.

To access these various pages, start from the Record Book Main Page. Under “My Enterprises” listed on the left side of this page, choose the enterprise (Click on it) you wish to work on. If you have more than one enterprise, just choose the one you want to complete first, then move on to the next book. You must complete all enterprise pages for every SAE enterprise you have added.

After you have clicked on one of your enterprises, you should see a screen that says “Forms Related to Your \_\_\_\_\_ Enterprise.” To complete each of these pages, you should click on each section title.

You can navigate easily through this program, by selecting the enterprise you wish to go to under the “Load Other Enterprise” and clicking on “Go.” You can also go back to the “record book main page” by clicking on that heading towards the top right of the screen.

The next few pages are dedicated to explaining how to use and complete the enterprise pages of the SAE record book.

#### Business Agreements (or Research Agreement for Agriscience area) 1A, 1B, 1C, 1S

*How to Complete this Section:*

- Click on “Business Agreement” (or Research agreement for agriscience projects)
- Click “Edit”
- In this section enter your name and date for your record book. The date will be January 1, 20XX to December 31, 20XX. Enter your income or credits. Then enter your expenses or debits. These numbers are what are agreed upon between the student, parent, employer, and teacher. (If you have an agriscience project put to first date of the semester and the last date of the semester for your agreement period.)
- Click on “Save Agreement”

#### Plans and Goals/Budget 2A

*How to Complete this Section:*

- Click on “Plans and Goals/Budget”
- Click on “Edit plans and Goals”
- In this section you will enter your breed. Then you will enter the size of the enterprise planned. This includes the animals in your beginning inventory, total animals to be raised, animals to be purchased, expected production (in weight for meat animals and number for animal products), and your marketing plans (where are you going to sell your product). Next you will enter your Budget and Expected Income and Expenses.
- Profits will automatically appear
- Click “Save Plans and Goal Changes”.

#### School Instruction/ Planned Activities 2B-1

*How to Complete this Section:*

- Click on “School Instruction/Planned Activities”
- Click “Add Record”
- Put in the school year you had instruction that related to your enterprise. You will put any class unit that relates to your SAE project. Example: In your Ag class, you have had an animal science unit that was 10 hours. You would record this in this section.
- Click on “Save Record”
- Under planned activities in your enterprise click on “Add Record”
- Type in the activity or activities you plan on completing with the month you plan on completing it in.
- Click on “Save Record”

#### Budget 2B-2

*How to Complete this Section:*

- Click on “Budget”
- Click on “Edit”
- “Expected Income or Credit” enter the quantity, price, and value of each. (If it is a placement project you will only need to enter in wages earned- quantity is expected hours worked during the year , price is dollars per hour earned)
- “Expected Expenses or Debits” enter the quantity, price, and value. Then enter the Operating expenses and Fixed expenses.
- Your Profits will automatically appear.



- Click "Save Budget Changes"

#### Plans and Goals/ Budget and Test Results 2C

*How to Complete this Section:*

- Click "Plans and Goals/Budget and Test Results"
- Click "Edit"
- Enter your "Plans and Goals." Include size of crop land, expected yield and total production, and production plans.
- Enter your "Budget-Expected Income and Expenses"
- Enter the Soil Test Results if any.
- Click "Save Plans and Goals"

#### Research Purpose 2S-1

*How to Complete this Section:*

- Click on "Research Purpose"
- Click on "Edit"
- Enter in your research project title, problem statement, hypothesis, what prompted the research, and the purpose of the research. You have 1000 characters per box to enter in text.
- Click "Save Research Purpose"

#### Goals/Budget 2S-2

*How to Complete this Section:*

- Click on "Goals/Budget"
- Click on "Edit"
- "Expected Income or Credit" enter the quantity, price, and value of each.
- "Expected Expenses or Debits" enter the quantity, price, and value. Then enter the Operating expenses and Fixed expenses.
- Your Profits will automatically appear.
- Click "Save Budget Changes"

#### Production Records 3A-1

*How to Complete this Section:*

- Click "Production Records"
- Click "Add Record"
- Enter the information. Include the sire, dam, bred date, due date, date born, number born, weaned date, and number weaned. Also include identification marks or sex of the animals here.
- Click "Save Record"

#### Death Loss 3A-2

*How to Complete this Section:*

- Click "Death Loss"
- Click "Add Record"
- Enter the Information. Include the date of death, number dead, weight when they died, and cause of death.
- Click "Save Record"

#### Training Agreement 3B

*How to Complete this Section:*

- Click "Training Agreement"
- Click "Edit Training Agreement"
- Enter your Student Information including the date of agreement (January 1<sup>st</sup> of calendar year), telephone number, and date of birth; Employer Information including business name, address, phone number, supervisors name, working hours, starting wages, and payment intervals.
- Click "Save Training Agreement"

#### Production Records 3C

*How to Complete this Section:*

- Click "Production Records"

- Click "Add Record"
- Enter the Information including the variety, no. of units, planting date, depth, row spacing, yield, and total production.
- Click "Save Record"

#### Research Plan 3S

*How to Complete this Section:*

- Click on "Research Plan"
- Click on "Edit Research Plan"
- Enter in Student Information (date of agreement-1<sup>st</sup> day of the semester, student name, address, phone number, and project title. Also include the research site, address, phone number, and supervisors name.
- Go through the student, parent, teacher, and supervisor agrees to section is necessary. Make sure to check the 2a, 2b, and 2c boxes under "the teacher agrees to section."
- Click "Save Research Plan"

#### Quantify of Animal Products 4A-1

*How to Complete this Section:*

- Click "Quality of Animal Products"
- Click "Add Record"
- Enter the information. Your captions should be your products (Ex.- Eggs, Wool, Milk, etc.)
- Enter in your date collected and quantity.
- Click "Save Record"

#### Production and Returns 4A-2

*How to Complete this Section:*

- Click "Production and Returns"
- Click "Edit Production and Returns"
- Enter any and all information. Use your receipts, expenses, production records, and inventory pages for information. Make sure to include the student's share.
- Click "Save Production and Returns Changes"

#### Training Plan- 4B

*How to Complete this Section:*

- Click "Training Plan"
- Click "Edit"
- Enter in your job title and supervisors name.
- Click "Save Record"
- Click "Add Record"
- Enter information. You should include approximately 12 experiences for your project.
- Click "Save Record"

#### Crop Production 4C-1

*How to Complete this Section:*

- Click "Crop Production"
- First you should click "edit captions" and put in your crop in the text box.
- Click "Edit Crop Production Record"
- Enter any and all information. Use your receipts, expenses, production, and inventory pages to complete this page.
- Click "Save Crop Production Record"

#### Enterprise Analysis 4C-2

*How to Complete this Section:*

- Click "Enterprise Analysis"
- Click "Edit Enterprise Analysis Records"
- Enter your information you figured.
- Click "Save Enterprise Analysis"

#### Procedure Used 4S

*How to Complete this Section:*

- Click on "Procedure Used"
- Click on "Edit"
- Enter in your research title and the materials required to complete your agriscience SAE project.
- Click on "Save Record."
- Then click on "Add Record."
- Enter in first step in completing your experiment. Then click "Save Record."
- Continue to "Add Records" until you have entered each step of the experiment.

#### Experiences 5A, 5B, 5C, 5S

*How to Complete this Section:*

- Click "Experiences"
- Click "Add Record"
- Enter your information. This should include the date, what you did each day, and the hours you spent doing it. If it is paid hours- put your hours in the paid column. If they were unpaid hours, put them in that column. Make sure to put in a monthly total hours entry at the end of each month.
- Click "Save Record"

#### Research Skills, Competencies, and Knowledge 6S

*How to Complete this Section:*

- Click on "Research Skills, Competencies, and Knowledge"
- Click on "Add Record"
- Enter in the date, skill or competency learned, and the hours devoted to it.
- Click "Save Record"

#### Wage/Labor Summary 7A, 7B, 7C, 7S

*How to Complete this Section:*

- Click "Wage/Labor Summary"
- Click "Add Record"
- Enter your information. This should include the date, hours worked, and money made either each pay period or by month. If unpaid hours- put self in the employer box, if paid hours- type in the name of your employer. Make sure to include taxes taken out.
- Click "Save Record"

#### Receipts 9A, 9B, 9C, 9S

*How to Complete this Section:*

- Click "Receipts"
- Click "Add Record"
- Enter your information. Include the date, category, description, and amount. Be sure to edit your captions to reflect your categories for sales.
- You should include all money made (Entrepreneurship books only)
- Click "Save Record"

#### Cash and Noncash Expenses 11A, 11B, 11C, 11S

*How to Complete this Section:*

- Click "Cash or Noncash Expenses"
- Click "Add Record"
- Enter your information. Include the date, category, description, and amount. Be sure to edit your captions to reflect your categories for expenses.
- You should include all money spent (Entrepreneurship only)
- Click "Save Record"

#### School Instruction/ Review of Literature 12S

*How to Complete this Section:*

- Click on "School Instruction/ Review of Literature"
- Click on "Add Record" (for school instruction in your enterprise)
- Put in the school year you had instruction that related to your enterprise. You will put any class unit that relates to your SAE project. Example: In your Biology class, you have had an microscope unit that was 10 hours. You would record this in this section.
- Click on "Save Record"
- Click on "Add Record" (for review of literature)
- Enter in the name of the title or resource used for your review of literature. Record how it is relevant to your research. You have 1000 characters of text to do this.
- Click "Save Record"
- Do this for each resource used in your review of literature.

#### Inventory of Non-Depreciable Items 13A, 13B, 13C, 13S

*How to Complete this Section:*

- Click "Inventory of Non-Depreciable Items 13A, 13B, or 13C"
- Start by editing your start and end dates. Use January 1<sup>st</sup> and December 31<sup>st</sup> of the current year for the dates. Also edit the percent students share to reflect your business agreement.
- Click "Add Record"
- Enter your information. Include the category, item description, quantity, and price.
- Click "Save Record"

#### Labor and Management Earnings 14A, 14B, 14C, 14S

*How to Complete this Section:*

- Click "Labor and Management Earnings"
- Click "Edit Labor and Management Earnings"
- This information is transferred from other pages. The only thing you need to do on this page is to make sure your totals are correct and enter in the students share of the enterprise. (as stated in the business agreement.)
- Click "Save Labor and Management Earnings Changes"

#### Evaluation Factors 15A, 15B, 15S

*How to Complete this Section:*

- Click "Enterprise Analysis and Comparison" or "Evaluation Factors"
- Click "Edit Enterprise Analysis" or "Enter Record."
- Enter information for "Size of Enterprise," "Rate of Gain and Production," "Returns and Feed Costs," "Marketing," "Feeding Efficiency," and "Death Loss" OR "Number of Paid Hours, number of unpaid hours, average and highest rate of pay, monthly sales, etc."
- Click "Save Enterprise Analysis Changes" or "Save Evaluation Factors."
- In the agriscience book students will need to enter in their conclusion statement on this page.

#### Abstract 16S

*How to Complete this Section:*

- Click on "Abstract"
- Click on "Edit"
- Enter in your name, school, supervisor, advisor, project title, and project abstract. Your abstract should be approximately  $\frac{3}{4}$  to 1 page in length. You may copy and paste directly from YOUR research paper.
- Click "Save Abstract"

#### Human Vertebrate Endorsement 17S

*How to Complete this Section:*

- Click on "Human Vertebrate Endorsement"
- Click on "Edit"
- Type in space provided how you used humans in your project (if at all). If you didn't, put in the box that you did not use humans in your project.
- Click "Save Endorsement."

### Non-human Vertebrate Endorsement 18S

*How to Complete this Section:*

- Click on "Non-Human Vertebrate Endorsement"
- Click on "Edit"
- Type in space provided how you used vertebrate animals in your project (if at all). If you didn't, put in the box that you did not use vertebrate animals in your project.
- Click "Save Endorsement."

### Hazardous Material Waiver Form 19S

*How to Complete this Section:*

- Click on "Hazardous Material Wavier Form"
- Click on "Add Record"
- Type in any hazardous substance you used in your experience. With you substance include the safety precautions you took and the disposal procedures to the substance.
- Click "Save Record."
- Do this for each hazardous substance.

## Printing the SAE Records

When pages are printed, you need to use a specific color of paper to print them on. Agribusiness and Placement enterprise pages need to be printed on light blue colored paper. Animal projects need to be printed off on a light yellow (Canary) colored paper, crop projects need to be printed off on a light green colored paper, and agriscience projects on a salmon colored paper. All paper will be provided to the student. \*Reminder- All CORE pages should be printed off on plain white computer paper.

Once printed off, the pages either need to be 3- hole punched or put in sheet protectors, and the book needs to be assembled in a 3 ring binder. The pages should be assembled in the following order: Cover page (printed on gold paper), enterprise pages in order (if you have more than one enterprise, separate those out), followed by the white CORE pages. Your supporting documents should follow these items.

## Examples and Help in Completing the Record Book

Examples of each type of record book can be found in the agriculture classroom. Mr. Solomonson is also available to help students with their SAE after school and during their advisory period if needed. Juniors and seniors who have completed books are also a great resource in helping with SAE project. Copies of the SAE Evaluation forms can be found in the appendix of the online version of this handbook. It will explain in greater detail how the SAE is graded.

## The AET - OPTION 2

### Components of the SAE Record Book (Entrepreneurship, Placement, Research, and Exploratory)

The AET SAE record book is divided into two main parts- the “**Journal**” pages and the “**Financial**” pages.

To access the record book, the student will need to navigate to [www.theaet.com](http://www.theaet.com). From there, the student will need to sign in under the student log in button. Our chapter number is IL0297. The student's user name will be their first initial then last name. The default password will be the same thing until the student changes it.

Please refer to [www.theaet.com](http://www.theaet.com) for more information on how to fill out the AET Record Book.

## Requirements for Your SAE Project

### *Specific Requirements for the SAE Project*

1. All students enrolled in an agricultural education class at Orion High School must complete at least one approved SAE project each year they are enrolled in an agricultural class. Students may choose to complete more than one SAE project. This will allow students to experience more than one type of agricultural area as well as given the student options when choosing which proficiency area they want to compete in at the section level.
2. All SAE projects must be agriculturally related. If a student is unsure about a particular project, s/he should ask the instructor. In rare instances, a SAE might be accepted if it is unrelated to agriculture.
3. The student is expected to have a complete and accurate record book, just not to meet the minimum requirements.
4. Since the SAE is a required component of the agricultural class, it will be included in the student's grade. Grading information will be as follows:

Record books will be graded at the end of each grading period.

5. The student is expected to meet the following expectations for the project.
  - Minimum of 24 hours per semester. Record all experiences a student has throughout the year. (Hours Must be Verified on the Hours Verification Sheet by your approved adult.- See form in the appendix).
  - Record all financial transactions a student has throughout the year.
  - Include 12 pictures per enterprise.
  - Compete in proficiency interviews \*

\*If students wish to receive SAE class credit, they must:

1. Attend Section FFA Proficiencies

## Supplemental Components for Your SAE Project

### *Supplemental Components for the SAE Project*

It would be ideal for all SAE projects to have a lot of activities students can complete each month, but in reality some projects are not set up that way. Some projects may be seasonal (turf, vegetable gardening, detasseling, lifeguarding, etc) or others may not start until an agreed upon time by an employer or parent. To help make-up SAE Project points in a student's grade during those months when a student has nothing to do, the supplemental SAE component was developed. Students can choose from a variety of activities listed below to help supplement their SAE grade. Students should choose **two activities per month** in a related project category (the activities should relate to their chosen SAE area somehow). These should be recorded on **page 5 of their SAE Record Book (Experiences) and the hours should be put in the "Other" column**. The supplemental items must be turned in when the record book is due to receive credit. A Student can only complete an activity on the list once. If there is something a students would like to do that is not on the list, check with Mr. Solomonson first and may possibly count towards this requirement.

\*All written materials (reports, essays, papers, etc.) should be **at least 1 page**, typed, and single spaced. (Times New Roman, 1" margins)

## Potential Supplemental SAE Projects

### *General Ag Mechanics*

- \_\_\_ Report on agriculture inventions and inventors that are related to ag-mechanics
- \_\_\_ Choose an everyday product and trace its production, processing, and marketing until it became a finished product. List points along the way where ag mechanics were used.
- \_\_\_ Identify an ag-mechanics career that interests you, research its requirements, earning potential, future outlook, working conditions, educational requirements, hazards, etc.
- \_\_\_ Using the yellow pages, record businesses and agencies that employ people in the ag-mechanics job of interest to you
- \_\_\_ Visit a local business that hires people with agricultural mechanics skills, interview the employer or workers concerning working conditions, travel requirements, employee benefits, skills needed, salary, etc.
- \_\_\_ Collect 10 newspaper and magazine articles on home, shop, farm, or work accidents. Classify each as preventable or not preventable. Explain your classification
- \_\_\_ Study the machines in a home shop, evaluate each for hazards, safety features or lack of, and proper operation
- \_\_\_ Create a display of samples of various nails or screws
- \_\_\_ Create a display of different types of woods used in ag-mechanics
- \_\_\_ Report on the steps necessary for preparing lumber from log to finished board
- \_\_\_ Study the furniture at your home, record the item and joints used to create it, report on the quality of the item
- \_\_\_ Examine the portable tools you have at home, report on each: make, amount of use, condition of tool, repairs needed, accessories,
- \_\_\_ Create a bill of materials for completing a fence, deck, or other lumber project from around your home
- \_\_\_ Examine various labels for latex paint and enamel paint, list the ingredients, proper use, and disposal for each, what is the recommended cleanup and disposal techniques
- \_\_\_ Properly replace an outlet or light switch at home
- \_\_\_ Create a display of pipe fittings
- \_\_\_ Conduct a soil percolation test to determine if your home sits on property that is well drained and suitable for building on
- \_\_\_ Visit a concrete company and report on how it is made
- \_\_\_ Properly prepare and finish a wood or metal surface (sand, prime, paint or stain)
- \_\_\_ Take a CPR and safety course from the Red Cross
- \_\_\_ Interview a professional surveyor and report on the working conditions, training and education, who they work for, job tasks, potential earnings, job competition, etc.
- \_\_\_ Compile a list of the different ways concrete has been used in our community. No less than 25
- \_\_\_ Interview a local merchant that supplies parts, blades, etc. for woodworking power tools, report on the size and scope of their business, who their customers are, the items they stock, what they special order, etc.
- \_\_\_ Replace an electrical fixture at your home or for someone else. Must have pictures of you doing it
- \_\_\_ Tour an agricultural machinery museum
- \_\_\_ Research methods of preventing common accidents in the ag-department shop
- \_\_\_ Conduct field demonstration using GPS
- \_\_\_ Develop "hands-on" shop activities
- \_\_\_ Complete home/farm improvement project
- \_\_\_ Construct prototype of hydraulic system
- \_\_\_ Create a technical model to show how a small engine works
- \_\_\_ Study latest advancements in robotics with an agricultural application
- \_\_\_ Research energy use of different types of lighting systems in farm buildings
- \_\_\_ Research water savings accomplished by new irrigation techniques



## ***Welding***

- \_\_\_ Interview a pro welder about working conditions, demand, activities, profession training, earning potential
- \_\_\_ Compare metals used in welding for weldability, hardness, strength, uses, etc.
- \_\_\_ Conduct an experiment to determine the content of unknown metals using a grinder to create sparks
- \_\_\_ Visit a local welding shop and evaluate their attention to safety
- \_\_\_ Create a display for the various types of welding rods and their applications
- \_\_\_ Research the cost of various types of metal used in the welding shop
- \_\_\_ Visit a local welding supply store, list all the available welding supplies and cost of each item
- \_\_\_ Create the different types of weld joints using an arc welder
- \_\_\_ Create the different types of weld joints using a mig welder
- \_\_\_ Create the different types of weld joints using a gas welding unit
- \_\_\_ Report on the differences between arc, gas, and mig welding
- \_\_\_ Interview an owner of a welding shop or professional welder concerning the different applications of welding, job requirements for employees, management skills, earning potential, working conditions, etc.
- \_\_\_ Interview various farmers/ranchers to determine the most popular type of welding unit used
- \_\_\_ Design a welding project on paper, include dimensions and a bill of materials
- \_\_\_ Locate various welds in a structure, determine the strength of that weld (chapter 8 in textbook)
- \_\_\_ Make flash cards for identifying welding symbols used on blueprints
- \_\_\_ Copy a welding plan and label with appropriate welding symbols as though someone would do the welding
- \_\_\_ Create a pipe weld
- \_\_\_ Create welding pads using the arc, gas, and mig welding units
- \_\_\_ Create a spread sheet comparing different brands of mig welders based on their specifications, uses, cost, etc
- \_\_\_ Create a welding sample plate illustrating various improper welding techniques, be sure to include on good satisfactory weld
- \_\_\_ Take a CPR and safety course from the Red Cross
- \_\_\_ Report on the various methods of testing welds
- \_\_\_ Conduct a spark test on metals of unknown content and report on your findings
- \_\_\_ Research the cost of various types of metal that can be used in the ag shop
- \_\_\_ Visit local welding supply stores, select several items each sells and create a comparison for brand, quality, price, inventory
- \_\_\_ Locate various welds in a structure, determine the strength of that weld (chapter 8 in textbook)
- \_\_\_ Make flash cards for identifying welding symbols
- \_\_\_ Create a pipe weld
- \_\_\_ Construct a useful project using welding
- \_\_\_ Create a demonstration model to show proper and improper welding techniques
- \_\_\_ Test the strengths of different types of welds

## ***Ag Construction***

- \_\_\_ Visit a local construction site and report on the steps taken to protect workers from injury
- \_\_\_ Interview a structure construction employee concerning working conditions, education/training, earnings, etc.
- \_\_\_ Interview a foreman concerning the role of reading blueprints on the job
- \_\_\_ Research a particular job relating to designing, maintaining, and building ag structures
- \_\_\_ Pick a piece of vacant property, evaluate it according to site considerations for ag structures
- \_\_\_ Research what kinds of permits are required to erect a structure in Searcy and in White County
- \_\_\_ Interview a surveyor and report on their job activities
- \_\_\_ Create a display of stationary tools used in building ag structures with a description of each item's uses
- \_\_\_ Create a display of hand power tools used in building ag structures with a description of each item's uses
- \_\_\_ Create a display of hand woodworking tools used in building ag structures with a description of each item's uses
- \_\_\_ Visit a work site that has the foundation prepared for pouring, report on what you find
- \_\_\_ Create a chart identifying the good qualities and poor qualities of different types of flooring in relation to a raised slab, flat slab, raised wood floor with crawl space
- \_\_\_ Visit local lumber yards and compare lumber sold and pricing
- \_\_\_ Build a model pole barn
- \_\_\_ Interview or shadow a plumber, electrician, or mason, etc. and report on their activities, working conditions, earning potential, education/training, etc.
- \_\_\_ Assist in building an agricultural structure, roof, floor, etc.
- \_\_\_ Using design skills, draw a simple plan for a pole barn and create a bill of materials that would be necessary for its construction
- \_\_\_ Create a chart comparing OSB, hardboard, particle board and MDF materials for uses, weight, cost, and composition
- \_\_\_ Visit a local lumber store and create a list of the available framing connectors, include function and pricing
- \_\_\_ Use a CAD program to design a simple ag structure
- \_\_\_ Take a CPR and safety course from the Red Cross
- \_\_\_ Create a chart comparing the good qualities and poor qualities of the various types of agricultural structures (Post-frame wood-frame, metal-frame, concrete/masonry, and pole buildings)
- \_\_\_ Create an inventory of all the professionals that are involved in creating structures, describe what each person is responsible for
- \_\_\_ Locate a company that specializes in remodeling, interview the supervisor concerning common difficulties associated with the job
- \_\_\_ Research a particular job relating to designing, maintaining, and building ag structures
- \_\_\_ Assist in building an ag structure, installing a roof, laying a floor, etc.
- \_\_\_ Build a model pole barn

## ***Animal Science***

- \_\_\_ Research several species of livestock/specialty animals for history, beneficial characteristics, uses, physical descriptions, etc.
- \_\_\_ Interview a local livestock/specialty animal producer
- \_\_\_ Shadow a local livestock/specialty animal producer and summarize activities
- \_\_\_ Attend Arkansas State Fair livestock show and write a report on activities that occurred
- \_\_\_ Tour an agricultural museum and write a report on exhibits, pictures are good too
- \_\_\_ Attend a livestock/horse/specialty animal show-describe the different breeds represented and the benefits of each
- \_\_\_ Compare feed tags for nutrients provided for different breeds of livestock/specialty animal and chart on a poster
- \_\_\_ Compare the differences between ruminants, non-ruminants, and poultry
- \_\_\_ Make an art collage that illustrates the different breeds of livestock/specialty animal (must have a key for explanation)
- \_\_\_ Develop a word search puzzle or cross word puzzle using livestock/specialty animal production terms to be completed by the class
- \_\_\_ Make a time line illustrating when the various livestock and specialty animals were domesticated in relation to major world events of the times
- \_\_\_ Make a chart illustrating the breeds of livestock raised in our county and the numbers of each (census available from instructor)
- \_\_\_ Survey the Sunday newspaper classifieds for 3 weeks and find the average costs of the livestock animals being offered for sale in the state
- \_\_\_ Visit local agribusinesses and survey the items sold for livestock/specialty animal production uses
- \_\_\_ Create a poster illustrating the 8 functions of animals in our society
- \_\_\_ Create a map of the great cattle drives in early American history
- \_\_\_ Write an essay describing current trends in animal agriculture and compare them to trends of the past
- \_\_\_ Research career opportunities for graduates with degrees in Animal Science
- \_\_\_ Create a poster illustrating the difference between genotype and phenotype
- \_\_\_ Create a poster illustrating the difference between homozygous and heterozygous
- \_\_\_ Using pedigrees from animals, show and explain examples of line-breeding, cross-breeding, and in-breeding
- \_\_\_ Write an essay on how genetic selection has used hybrid vigor to improve the livestock industry
- \_\_\_ Write an essay comparing the practices of raising purebred livestock versus commercial livestock
- \_\_\_ Compile a list of appropriate feedstuffs for various groups of livestock
- \_\_\_ Compile a list of poisonous/toxic feedstuffs for various groups of livestock
- \_\_\_ Illustrate the use of a Pearson square when combining 2 commercial feeds to get a desired amount of protein, include the feed tags
- \_\_\_ Compile a list of feed additives/supplements appropriate for a particular species of livestock/specialty animal and explain the basis for adding each item
- \_\_\_ Develop a feeding program for a gestating female of your favorite livestock/specialty animal species
- \_\_\_ Compare the nutritional quality of 3 types of hay commonly used in the area
- \_\_\_ Outline the building requirements for raising cattle, hogs, sheep, horses. Compare the differences and similarities between species
- \_\_\_ Research the various watering systems used in hog operations and poultry operations

Write an essay on one of the following topics (symptoms, vector, spread, treatment, potential for recovery):

- |                                      |  |
|--------------------------------------|--|
| ___ Hoof & mouth disease             | ___ Pseudorabies   |
| ___ Brucellosis                      | ___ Leptospirosis  |
| ___ Bovine spongiform encephalopathy | ___ Rhinotracheitis  |
| ___ Rhinitis                         | ___ Mastitis   |
| ___ Blackleg                         | ___ Scrapie  |
| ___ Tetanus                          | ___ Equine distemper (strangles)                                 |
| ___ Sore mouth                       | ___ Vibriosis  |
| ___ Heaves                           | ___ Founder  |
| ___ Equine infectious anemia         | ___ Rabies   |
| ___ Parainfluenza                    | ___ or other disease associated with specialty animal production |
- \_\_\_ Research parasites that infect your favorite species of livestock/specialty animal
  - \_\_\_ Tour a local slaughter/packing plant and report on the facilities
  - \_\_\_ Interview a local butcher and report on how the meat is processed thru their facility
  - \_\_\_ Price compare similar products at various meat counters in the community
  - \_\_\_ Create a poster illustrating the difference between animal welfare supporters and animal rights activists
  - \_\_\_ Research an animal rights group and report your findings.
  - \_\_\_ Create a poster illustrating the various cuts of meat from a particular livestock animal
  - \_\_\_ Tour a livestock museum
  - \_\_\_ Shadow a USDA inspector
  - \_\_\_ Volunteer at local animal shelter
  - \_\_\_ Conduct a survey of all livestock operators in the area to determine their concerns
  - \_\_\_ Survey local wildlife populations
  - \_\_\_ Conduct a horse safety camp
  - \_\_\_ conduct a livestock/specialty animal showing clinic
  - \_\_\_ maintain chapter show equipment
  - \_\_\_ plan and implement a livestock related field trip
  - \_\_\_ adopt homeless pets and care for them
  - \_\_\_ visit a nursing home with certified therapy pets
  - \_\_\_ volunteer at the county fair livestock show
  - \_\_\_ conduct feed trials for broilers, swine, cattle, etc.
  - \_\_\_ research cage layers versus floor layers for egg production
  - \_\_\_ research estrus synchronization hormone effectiveness
  - \_\_\_ research methods of predator control and trapping

- \_\_\_\_\_ survey community pet owners and prioritize their concerns
- \_\_\_\_\_ research various pet diets
- \_\_\_\_\_ study effects of genetic selection in groups of animals over time

### ***Environmental Science/ Natural resources***

- \_\_\_\_\_ Attend a hunter education or trapping class (outside of school)
- \_\_\_\_\_ Interview a game warden, park ranger, or conservationist about their job and activities
- \_\_\_\_\_ Make an art collage of the various species of wildlife in Illinois (with a key)
- \_\_\_\_\_ Analyze a local river or stream for biology and cleanliness
- \_\_\_\_\_ Conduct a water experiment using tap, pond, and river water to determine which is the healthiest for wildlife
- \_\_\_\_\_ Research the major trees grown in Illinois for the lumber industry
- \_\_\_\_\_ Evaluate the local water sources for their potential for recreational use, cleanliness, accessibility, etc.
- \_\_\_\_\_ Inventory the natural resources in White County, include soil, water, forest, fish and wildlife, metals, minerals, energy, and outdoor recreation
- \_\_\_\_\_ Write a report on a selected natural resource and how it affects the community and how the community affects it
- \_\_\_\_\_ Interview someone who has lived continuously in our community for 50-60 years about how the use of natural resources has changed over the years
- \_\_\_\_\_ Evaluate how the goals of conservation have changed over the past several decades
- \_\_\_\_\_ Compare non-exhaustible, exhaustible, and renewable resources that are present in our county
- \_\_\_\_\_ Pick a natural resource issue and write a conservation point of view and a preservation point of view
- \_\_\_\_\_ Make a rock collection from the local area, label each as igneous, sedimentary, or metamorphic as well as their location where found
- \_\_\_\_\_ Make a poster using real pictures showing sheet, rill, and gully erosion
- \_\_\_\_\_ Conduct an experiment on a bare sloping bank by raking and covering one area with straw and leaving another area exposed, after rain, report your findings
- \_\_\_\_\_ Conduct a survey of local businesses to determine types of erosion control being used
- \_\_\_\_\_ Locate articles National Geographic magazine addressing international grasslands
- \_\_\_\_\_ Compare the various problems and solutions being employed
- \_\_\_\_\_ Select a career related to soil management and research the activities, working conditions, education/training required, etc.
- \_\_\_\_\_ Keep a log of the water you use in one day, evaluate where and how you could have reduced your usage
- \_\_\_\_\_ Evaluate the industries in the area concerning their usage of water
- \_\_\_\_\_ Report on how wastes are disposed of in our community
- \_\_\_\_\_ Explain how rainfall is predicted
- \_\_\_\_\_ Evaluate the temperature range between various locations in town, out of town, in the sun, in the shade, etc.
- \_\_\_\_\_ Prepare a report on a species of endangered animal and how it can be prevented
- \_\_\_\_\_ Evaluate the various game hunting management techniques employed by the regulating body in our state
- \_\_\_\_\_ Chart the various species of wild game according to their locations, hunting seasons, and regulations concerning harvest
- \_\_\_\_\_ Attend a and pass a hunter's ed course
- \_\_\_\_\_ Interview a game warden, park ranger, or conservationist about their job/activities
- \_\_\_\_\_ Make an art collage of the various species of Arkansas wildlife (with a key)
- \_\_\_\_\_ Analyze a local river or stream for biology and cleanliness
- \_\_\_\_\_ Outline the requirements for an area of land to be labeled as a game protection area
- \_\_\_\_\_ Contact the state game and fish commission concerning employment opportunities
- \_\_\_\_\_ Compare the various careers in the wildlife area concerning activities, working conditions, training/education, and earnings
- \_\_\_\_\_ Create a map of national and state outdoor recreation sites in Arkansas
- \_\_\_\_\_ Using a selected species of wildlife, outline where on the food chain the species is found and illustrate its relationships with other organisms
- \_\_\_\_\_ Study sources of pollution on the school grounds that could damage habitat (parking lot runoff, drainage ditches, chemical use, emissions, transportation, etc) and how it could be reduced
- \_\_\_\_\_ Conduct a survey of fellow students concerning their hunting ethics
- \_\_\_\_\_ Make a list of nuisance animal wildlife in your area, determine how these pests can be legally controlled
- \_\_\_\_\_ Learn to use a compass
- \_\_\_\_\_ Make a poster identifying various wildlife tracks
- \_\_\_\_\_ Research the making of bio-fuels and how to make them available locally
- \_\_\_\_\_ Create a list of native plants for the area and determine how prevalent they are
- \_\_\_\_\_ Research impact of ATV's on public land
- \_\_\_\_\_ Research local parks and activities most people prefer
- \_\_\_\_\_ Study changes in the mining industry technology over time
- \_\_\_\_\_ Research effectiveness of habitat restoration projects in the community
- \_\_\_\_\_ Establish greenbelts along stream banks on a farm
- \_\_\_\_\_ Research CRP
- \_\_\_\_\_ Research area pollution concerns
- \_\_\_\_\_ Study pollution practices
- \_\_\_\_\_ Monitor dust levels in the area at various sites and times of the year
- \_\_\_\_\_ Monitor pollen counts in the ag department and lab
- \_\_\_\_\_ Research effects of erosion on various crops
- \_\_\_\_\_ Shadow a water quality lab worker
- \_\_\_\_\_ Tour area farms to determine effective pollution control
- \_\_\_\_\_ Develop plan to manage school food waste
- \_\_\_\_\_ Monitor water quality for commercial ponds
- \_\_\_\_\_ Collect water samples for local/state agencies

- \_\_\_ Attend meetings of the local/state conservation board
- \_\_\_ Interview a naturalist
- \_\_\_ Shadow NRCS employees
- \_\_\_ Shadow Game & Fish Commission employees
- \_\_\_ Assist with habitat construction
- \_\_\_ Develop walking trails
- \_\_\_ Create activities/labs for Natural Resource class
- \_\_\_ Participate in wildlife field day
- \_\_\_ plan and implement a wildlife field trip
- \_\_\_ Clean shelter belts & stack refuge in piles
- \_\_\_ Campground cleanup
- \_\_\_ Create posters on soil conservation for home owners
- \_\_\_ create brochure on how to establish wildlife habitat in back yards
- \_\_\_ Study soil profiles from multiple locations in the community and develop a soil map
- \_\_\_ Study effects of excessive lawn chemicals by wildlife

## ***Aquaculture***

- \_\_\_ Tour the fishery at, report on the facilities and tasks carried out at the facilities
- \_\_\_ Visit the seafood/fish department at a local grocery store. Note the different species available, price, inventory, how stored, etc.
- \_\_\_ Contact the local regulatory agencies to obtain example applications for permits to operate an aquaculture business in the area
- \_\_\_ Interview a local aqua-farmer concerning their production practices, facilities, and investments in the business
- \_\_\_ Dissect one of each: fish, oyster, frog. Compare and contrast the body parts
- \_\_\_ Create an album showing the different species of fish raised in Arkansas
- \_\_\_ Select an occupation in aquaculture, interview someone in the job or research its requirements, report on your findings
- \_\_\_ Select a body of water that is, or could be, used for aquaculture. Test the water for pH, DO, nitrogen compounds, hardness, and other qualities.
- \_\_\_ Assess your findings and report on its suitability for aquaculture
- \_\_\_ Report on a chosen fish disease that affects the aquaculture industry
- \_\_\_ Create a poster illustrating the various fish diseases and methods of treatment
- \_\_\_ Diagram the parts of a fish (don't just print a picture off the computer!)
- \_\_\_ Select various types of fish food and compare the nutrients provided for each
- \_\_\_ Plan a hypothetical aqua-farm. Determine facilities needed, costs, types of water structures, etc.
- \_\_\_ Report on the ways to improve the dissolved oxygen problems encountered by Aqua-farms
- \_\_\_ Take photographs or print them from the internet illustrating the numerous types of aquaculture facilities found in Arkansas
- \_\_\_ Study the procedures for marketing aquaculture crops in our area. This can include ornamental and food fish. Report your findings.
- \_\_\_ Conduct a survey among students to determine their preferences for fish, crustaceans, and mollusks. Draw conclusions concerning how to increase their consumption and/or awareness of aqua-crops.
- \_\_\_ Interview a grocery store manager concerning the aqua-crops sold there, how they are received, packaged, sold, etc
- \_\_\_ Set up an aquarium and raise a species of commercially produced fish. Record water quality data, growth, etc.
- \_\_\_ Prepare a poster that summarizes how to distinguish between the major species of warm freshwater aqua-crops.
- \_\_\_ Report on the grading processes for fish
- \_\_\_ Prepare a poster board illustrating the production of trout
- \_\_\_ Determine the price of salmon, shrimp, and oysters at a local grocery store. How do they compare with locally grown aqua-products? Explain why.
- \_\_\_ Set up and maintain a saltwater aquarium and include shrimp and oysters. Report on your techniques for setting up and management steps to keep it healthy
- \_\_\_ Using an existing aquarium, keep a log of the water quality, fish health, and management techniques used to keep it healthy
- \_\_\_ Tour a local pet store and determine the species of ornamental fish for sale, equipment, and costs for setup.
- \_\_\_ Survey local grocery stores for aquatic plant and algae products. Develop a chart outlining availability of fresh watercress, fresh and canned Chinese water chestnuts, frozen mixes containing Chinese water chestnuts, and seaweed products. Include prices and inventory.
- \_\_\_ Collect publications from the county extension office concerning aquaculture practices, give brief review of their contents
- \_\_\_ Develop a poster depicting the growing stages of each of the 3 most common types of algae (seaweed) grown
- \_\_\_ Visit a fee-lake and interview the manager to determine how fees are assessed, source of fish, and services provided to customers.
- \_\_\_ Plan a hypothetical fee-lake, select a site, type of water, facilities, species, source of fish, services to provide, local laws, etc.
- \_\_\_ Start a fish pond and teach others to fish
- \_\_\_ Research the best practices for improving fish habitat in local ponds

## ***Horticulture and Plant Science***

- \_\_\_ Install a landscape feature
- \_\_\_ Make an art collage of the different ornamental plants used in our area (with a key)
- \_\_\_ Compare local greenhouse businesses for size, # of plants, average prices of commonly purchased items, # of employees, etc
- \_\_\_ Shadow an individual working in the nursery/landscape/greenhouse sector and report findings
- \_\_\_ Interview a Master Gardener concerning their interests and participation in the organization
- \_\_\_ Investigate the opportunities for horticulture professional degrees at universities and colleges
- \_\_\_ Make a poster illustrating the horticulture occupations in the local community (include pictures of the businesses and employees at work with a description of their activities)
- \_\_\_ Shadow a horticulture professional and report on their activities
- \_\_\_ Make a leaf collection of plants of economic importance in the local horticulture Industry

- \_\_\_ Conduct a growth experiment using plants
- \_\_\_ Research a horticulture career and report on the working conditions, education and training required, earning potential, etc.
- \_\_\_ Attend the county fair and record your observations of the horticulture entries
- \_\_\_ Install a landscape plan
- \_\_\_ Plant a perennial flower bed
- \_\_\_ Plant trees and/or shrubs
- \_\_\_ Interview someone in the horticulture industry about their work, education, training, activities, earnings, etc.
- \_\_\_ Select a method of propagation illustrate, demonstrate, or give a detailed report on the steps to complete it successfully
- \_\_\_ Select 3 different plants of your choice and report on their cultural requirements for successful growth
- \_\_\_ Report on biological pest management techniques employed by the horticulture Industry
- \_\_\_ Make an insect collection of insects that are harmful to the horticulture industry
- \_\_\_ Make a leaf collection of the damages caused by the pests and diseased combated by the horticulture industry
- \_\_\_ Interview an entomologist concerning control of horticulture pests
- \_\_\_ Create a spreadsheet containing label information for commonly used chemicals by horticulturalists and home owners
- \_\_\_ Research the occupation of interior landscaping and report on working conditions, education/training, earning potential, etc.
- \_\_\_ Visit a local mall or business that has interior landscaping, report on what you find- species of plants, size of planting areas, soil, mulch, how it affects the overall look of the space, etc.
- \_\_\_ Conduct an experiment using interior landscape plants to determine the optimal amount of light, water, and nutrients necessary for the plant to be successful
- \_\_\_ Plant a dish garden
- \_\_\_ Plant a terrarium
- \_\_\_ Attend a garden show
- \_\_\_ Plant shrubs
- \_\_\_ Plant spring bulbs, report on proper techniques
- \_\_\_ Create a spreadsheet of plants that are suitable for growing in our climate zone, include mature size, water and sun requirements, physical description of desirable characteristics, etc.
- \_\_\_ Visit a local nursery and compile a list of available trees, shrubs, or ground covers
- \_\_\_ Interview a local nurseryman/woman concerning their activities, education/training, earning potential, etc.
- \_\_\_ Design an annual planting bed to include plants appropriate for our growing area
- \_\_\_ Design a perennial planting bed to include plants appropriate for our growing area and that would provide color throughout the various seasons of the year
- \_\_\_ Visit a local grower of perennial plants and report on your findings
- \_\_\_ Locate a landscape that is appealing to you, sketch the plants as they are and label each with their common and scientific names, cultural requirements, and where the landscape is located
- \_\_\_ Design a flower bed using bulbs that will flower throughout the spring and summer
- \_\_\_ Conduct an experiment to force bulbs to grow in the greenhouse
- \_\_\_ Create a poster of the various bulb flowers (identify each with cultural info)
- \_\_\_ Create a spread sheet of the cultural requirements, blooming dates, uses, etc. for the various bulbs in the horticulture industry
- \_\_\_ Practice correct pruning techniques
- \_\_\_ Conduct composting workshops for homeowners
- \_\_\_ Report on control systems in typical greenhouses
- \_\_\_ Process and deliver seeds to elementary students
- \_\_\_ Research impact of various insects on wood lot management
- \_\_\_ Research genetic crossings in various vegetables
- \_\_\_ Create a display showing labeled samples of lawn seed
- \_\_\_ Create a spreadsheet of plants that are suitable for growing in our climate zone, include mature size, water and sun requirements, physical description of desirable characteristics, etc.
- \_\_\_ Visit a local nursery and compile a list of available trees, shrubs, or ground covers
- \_\_\_ Interview a local nurseryman/woman about their activities, education/training, earning potential, etc.
- \_\_\_ Design an annual planting bed to include plants appropriate for our growing area
- \_\_\_ Design a perennial planting bed to include plants appropriate for our growing area and that would provide color throughout the various seasons of the year
- \_\_\_ Visit a local grower of perennial plants and report on your findings
- \_\_\_ Study the construction, type of greenhouse, and how they are heated and cooled
- \_\_\_ Construct models of the various styles of greenhouses
- \_\_\_ Design the layout of a potential greenhouse operation, identify what is grown and how much, heating and cooling, construction materials, etc.
- \_\_\_ Visit a local greenhouse operation and video the various jobs required by the business, be able to explain the different tasks, etc. being performed
- \_\_\_ Grow a greenhouse crop, keep detailed records of planting, germination, growth, fertilizers, etc.
- \_\_\_ Review a variety of nursery and greenhouse supply catalogs, identify the products available from each, create criteria for a satisfactory catalog and give an overall rating for customers to use when choosing a supplier
- \_\_\_ Identify a greenhouse occupation and report on job requirements, working conditions, education required, skills and knowledge required, etc.
- \_\_\_ Participate in the FFA CDE for horticulture
- \_\_\_ Collect samples of greenhouse covering materials and develop a chart showing the positives and negatives for each one
- \_\_\_ Develop a list of common greenhouse framing materials and develop a chart showing the positives and negatives for each one
- \_\_\_ Compare different heating systems used in the commercial greenhouse
- \_\_\_ Compare different cooling techniques used in the commercial greenhouse
- \_\_\_ Compare ventilation systems used in the commercial greenhouse

- \_\_\_ Compare different watering systems used in a commercial greenhouse
- \_\_\_ Construct a hotbed and grow seedlings in it
- \_\_\_ Construct a cold frame and grow cold crops in it
- \_\_\_ Construct a model shade structure
- \_\_\_ Compare the advantages and disadvantages of glass greenhouses
- \_\_\_ Select a variety of seed, perform scarification and stratification on samples, plant and report on your findings
- \_\_\_ Sterilize a sample of soil for seedling use
- \_\_\_ Harvest a sample of cuttings from various plants and report on your success
- \_\_\_ Perform the various types of layering methods and report on your success
- \_\_\_ Visit several lawn and garden stores, report on the crops they sell, compare each business on variety and quality of products
- \_\_\_ Select 5 common products sold by local horticulture businesses, compare each business for display of the product, price, inventory, and projected potential of sales for each product
- \_\_\_ Report on common diseases for seeds and seedlings that affect the greenhouse industry
- \_\_\_ Research the development and use of edible soybeans
- \_\_\_ Interview sales person about customer buying habits at a greenhouse or nursery
- \_\_\_ Growing vegetables to give to a local food pantry
- \_\_\_ Glean fields for food to give to local shelters

## ***Floriculture***

- \_\_\_ Select 5 common products sold by local floriculture businesses, compare each business for display of the product, price, inventory, and projected potential of sales for each product
- \_\_\_ Survey local florist stores concerning most popular products sold, seasonal items, additional items sold besides flowers
- \_\_\_ Conduct an internet search for on-line flower orders and report on findings
- \_\_\_ Visit a local wholesale florist and report on the facilities, products offered, procedures for purchasing
- \_\_\_ Participate in the FFA Horticulture CDE contest
- \_\_\_ Identify a floriculture occupation and report on job requirements, working conditions, education required, skills and knowledge required, etc
- \_\_\_ Interview a local florist business owner concerning management and problems with it
- \_\_\_ Conduct an experiment to force bulbs commonly sold in the florist businesses
- \_\_\_ Create a list of the most common flora crops used in the floriculture industry
- \_\_\_ Attend a flower show
- \_\_\_ Visit a local florist and report on how they reduce the affects of ethylene gas in their business
- \_\_\_ Make a floral arrangement
- \_\_\_ Make an art collage of the different floral plants used in our area (with a key)
- \_\_\_ Make a poster illustrating the floriculture occupations in the local community (include pictures of the businesses and employees at work with a description of their activities)
- \_\_\_ Shadow a floriculture professional and report on their activities
- \_\_\_ Investigate the opportunities for floriculture professional degrees at universities, colleges, and technical schools
- \_\_\_ Make a leaf/flower collection of plants of economic importance in the local floriculture Industry
- \_\_\_ Conduct a growth experiment using floral plants
- \_\_\_ Research a floriculture career and report on the working conditions, education and training required, earning potential, etc.
- \_\_\_ Interview someone in the floriculture industry about their work, education, training, activities, earnings, etc.
- \_\_\_ Create a poster of the various bulb flowers (identify each with cultural info)
- \_\_\_ Visit a local florist store and record the varieties of plants available for interiors
- \_\_\_ Interview an interior landscape maintenance profession concerning their training, working conditions, activities, earning potential, etc.
- \_\_\_ Survey a local business and illustrate where interior landscaping would be beneficial
- \_\_\_ Interview a salesperson at a local florist about customer buying habits

## ***Agronomy***

- \_\_\_ Research major chemicals used in our area for agriculture purposes
- \_\_\_ Write a report on the impact of biotechnology in agriculture
- \_\_\_ Make an art collage of the different crop plants grown in our area (with a key)
- \_\_\_ Take soil samples, submit for analysis, and analyze the data
- \_\_\_ Collect insects related to the crops in our area
- \_\_\_ Write a report on water and/or air pollution
- \_\_\_ Plant a monocot seed (corn) and a dicot seed (bean) and observe the differences before planting, at germination, and while growing
- \_\_\_ Conduct an experiment that limits the amount of a growth necessity (water, air, light, nutrients) and report on the affects
- \_\_\_ Collect vegetable seed packets and compile a listing of all the information on the packages, explain how the information can be used
- \_\_\_ Soak bean seeds and compare what happens with those that aren't soaked, split the soaked seed and illustrate your findings
- \_\_\_ Conduct an experiment to determine which brands of rodent and/or slug/snail baits work the best
- \_\_\_ Create a display showing labeled samples of the different soil types
- \_\_\_ Obtain several plants of one kind. Use different fertilizers, various application methods and rates. Record your observations and growth results
- \_\_\_ Report on the various types of integrated pest management
- \_\_\_ Properly apply pesticides to plants
- \_\_\_ Review a pesticide label and report on your findings
- \_\_\_ Develop a growth chart for planting and harvesting fruits and vegetables for seeds that can be purchased locally
- \_\_\_ Take soil samples from your lawn, submit for analysis and report on findings
- \_\_\_ Interview an entomologist concerning control of agronomic pests

## ***Forestry***

- \_\_\_ Survey a local lumber sales yard for types of wood products available
- \_\_\_ Interview a forester concerning job activities
- \_\_\_ Visit a tree farm, report on management techniques used
- \_\_\_ Report on the use of fire as a tool in the forestry industry
- \_\_\_ Interview a fireman concerning the experience of fighting forest fires
- \_\_\_ Tour a metal salvage/recycling yard, report on how metal sorted, processing, shipping, pricing, etc.
- \_\_\_ Compare the various careers in the energy resource fields concerning activities, working conditions, training/education, and earnings
- \_\_\_ Research and report on alternative sources of energy becoming available
- \_\_\_ Conduct a water experiment using tap, pond, and river water to determine which is the healthiest for wildlife
- \_\_\_ Interview an entomologist concerning control of forestry pests

## ***Agriculture Business, Communications, and Leadership***

- \_\_\_ Create "Ag in our lives" poster
- \_\_\_ Report on an ag career of choice, include education/training required, working conditions, advantages/benefits, disadvantages, salaries and job activities
- \_\_\_ Chart the requirements, salaries, and education for ag-careers of choice, and what you can do now to prepare for the career
- \_\_\_ Survey local ag-businesses for number of employees, starting salaries, number of hours worked, job tasks
- \_\_\_ Photograph poster of agriculture technology, crops, livestock, etc.
- \_\_\_ Shadow an agricultural professional and summarize activities
- \_\_\_ Make an art collage that illustrates the many jobs in agriculture (must have a key for explanation)
- \_\_\_ Make a detailed timeline showing the major FFA events as they occurred in relationship to large American events
- \_\_\_ Track weather patterns that affect and report on how they affect agriculture
- \_\_\_ Research the way GPS and satellites influence weather tracking and how it relates to agriculture
- \_\_\_ Tour agricultural businesses and report on findings
- \_\_\_ Tour an agricultural museum and report on findings
- \_\_\_ Report on agricultural development of a foreign country over the past 50 years
- \_\_\_ Prepare a report on food science careers including salaries and educational requirements
- \_\_\_ Contact agricultural universities and colleges and gather information concerning degrees offered
- \_\_\_ Attend an agricultural career day or field day at a college or university
- \_\_\_ Collect sample job applications from area ag-businesses
- \_\_\_ Outline the process a food item makes from the grower to the table
- \_\_\_ Compare the differences and similarities between prepared speaking and extemporaneous speaking techniques
- \_\_\_ Pick 4 famous people and evaluate their speaking abilities according to the proper techniques of communicating
- \_\_\_ Observe a formal meeting of a group and outline the parliamentary procedures you witness
- \_\_\_ Attend a local civic group meeting and report on their agenda, officers and their duties, committees and how they accomplish their goals
- \_\_\_ Interview the president of the local school board and report on his/her perception of how the board conducts business, each person's duties, committees, and how they accomplish their goals
- \_\_\_ Research universities and colleges that offer Communications in Agriculture degrees
- \_\_\_ Develop newspaper ads for commonly used agriculture products in the area
- \_\_\_ Shadow ag banker or loan officer who deals with agriculturally related business
- \_\_\_ Compare the roles of women in agriculture
- \_\_\_ Research changes in buying habits among farmers
- \_\_\_ Study changes in input costs over time for a given agri-business
- \_\_\_ Research cost of production for a commodity in the area and compare with the state
- \_\_\_ Take inventory of and categorize all ag related businesses in the community
- \_\_\_ Food safety info kit covering safe handling of meat, eggs, and other fresh products
- \_\_\_ Conduct a food safety demonstration for elementary students
- \_\_\_ Establish a community garden
- \_\_\_ Create a poster illustrating food from raw to finished products
- \_\_\_ Interview three companies that process/package food
- \_\_\_ Create an ad promotion for local food products on the chapter website
- \_\_\_ Create classroom activities to increase agricultural awareness
- \_\_\_ Test ideas for new food products
- \_\_\_ Research incidents of food-borne illnesses in the community
- \_\_\_ Study the impact of various styles of labels on people's perceptions of food
- \_\_\_ Research why new foods fail to sell
- \_\_\_ Research rate of accidents on area farms and compare to the national average
- \_\_\_ Study animal waste legislation at local, state, and federal levels
- \_\_\_ Put together a town safety package to mark all signs, fire hydrants, and water drains
- \_\_\_ Take part in membership program with local NRCS
- \_\_\_ Shadow a computer professional in an ag-related industry
- \_\_\_ Design a website for an ag group/business
- \_\_\_ Research adoption of technology by ag producers
- \_\_\_ Research differences in farm management software systems
- \_\_\_ Research cost versus return of automated systems in ag processing facility
- \_\_\_ Study biggest challenges producers face when adopting new technology
- \_\_\_ Study possible modifications in ag equipment for persons with disabilities

# Appendix:

# SAE

# Forms





# Guidelines for Competing at Proficiency Award Interviews

Proficiency awards are designed to recognize students who have excelled in the Supervised Agricultural Experience program. In order to be recognized the student's program must be 1) supervised by the instructor, 2) it must be related to the agriculture industry and 3) there must be career building skills or career exploration activities involved in the program.

## *General Guidelines:*

1. An applicant for a proficiency award must be:
  - A **sophomore, junior** or **senior** FFA member.
  - Have completed at least one year in agriculture education at the high school level.
  - Currently enrolled in an approved high school agriculture education course or have taken all the agriculture education courses offered in their sequence.
2. A mid-year high school graduate is eligible to apply during the year of graduation, and does not give up a year of eligibility because of early graduation.
3. Agriculture education students in their fifth year of high school **are not** eligible.
4. An individual may not apply in an award area for which they have previously been declared a State winner.
5. The only records that may be considered for proficiency awards are those records kept while the student is a member of the FFA.
6. Seventh and eighth grade record books will not be considered for proficiency awards.
7. Each chapter may have only one applicant in each area, but an individual from a chapter may compete in several different proficiency areas at the section level. However, the member may only **win** one area.
8. A copy of an Evaluation Guide for each enterprise, must accompany record books at the proficiency interviews.
9. **All** proficiency winners advancing to state judging must complete a National Proficiency Award application and have it available, along with their record books, at the state awards judging. The "Performance Review" and "Supporting Documentation" portions of the application need not be completed prior to the judging.
10. Each school shall provide judges for each proficiency award candidate advancing to both the district and state level of competition. The member advancing should help the advisor secure a knowledgeable judge for the contest.
11. Members need to wear Official FFA Dress to proficiency interviews.
12. The record books for all award areas are available through ITCS, University of Illinois. Members may use the 1998 revision (9800) written book or EZ Records. *Currently, all members of our chapter use the online EZ Records system.*
13. Freshman records may be kept in one of 3 ways: a) A short 2-3 month record that starts when they begin high school, followed by a full 12 month book. b) a 14-15 month record that starts when they first begin high school agriculture class, or c) commence January 1<sup>st</sup> of their freshman year and concludes the following December. *Our chapter uses option C.*
14. Our record book is a multi-enterprise record book that allows students to keep records of multiple projects in a single basic record book (CORE). However, each enterprise conducted by the student must be recorded in a separate enterprise book.
15. Submitting computer generated EZ Records:
  - Records must be print for the review of the award committees. Records may not be submitted in electronic form.
  - All electronic record book pages must be submitted for award and degree selection even if they do not include any recorded entries.
  - It is recommended that colored paper be used to separate crop, livestock, agribusiness, or agriscience enterprise units. (Blue- Business, Yellow- Animal, Green- Crop, Salmon- Agriscience)
16. You may submit up to 12 items of supportive evidence per enterprise at the contest. (Pictures, etc.)

## *The Interview:*

The interview is probably the most influential component of proficiency awards. This is where you prove to the judges the knowledge and skills you have acquired by completing your project. The questions could be about your records or knowledge of the area you are competing in. A detailed record book and strong interview usually determines who wins the proficiency area. If you know your project inside and out, you will be successful.

To help you prepare for the interview, I have included several interviewing tips as well as sample questions that you might be asked.

## Interview Tips:

### Record Books:

1. Make sure they are finished and all pages are accounted for including evaluation pages and supporting documentation.
2. Make sure figures are double checked.
3. Fill in any black spaces or pages with "None" before printing off your record book for the contest. (This way the judges know you didn't just miss it.)
4. Attach the supplemental documents securely. This can include up to 12 pictures or some other type of documentation.
5. Don't lie in your record books. Judges are good at detecting a student who didn't do something with their project and their records said they did.

### Personal Preparation:

1. Study your record books.
  - a. Know your information.
  - b. Know your weak points.
  - c. Notice anything out of the ordinary. This is what the judges will ask you about.
2. Have as many practice interviews as you can. (Even practicing at home with a parent or sibling is beneficial.)
3. Make your appearance clean and well groomed. You should be wearing *official* FFA dress. Make sure your tie is correct, your shirt is tucked in, your jacket is zipped up all the way, and your shoes are tied.
4. Your attitude makes a world of difference.
  - a. Show that you care and are proud of your project, but are not cocky.
  - b. You want to help the judges understand what you have done.
5. Arrive at the interview site early.

### Interview:

1. RELAX!
2. When you enter the room, walk to the judges and shake their hands. Wait for them to tell you to "have a seat". When sitting, make sure you are sitting up straight. The goal is to look professional, not lazy. ALSO DO NOT CHEW GUM!
3. Answer the interview questions truthfully. Do not lie. If you do not know the answer to the question, tell them that.
4. Usually the first question in proficiency interviews is to "Tell a little about yourself and your project." When asked this mention the following:
  - a. Your history- family and project
  - b. Why you started your project
  - c. Your progress- How has the project grown.
  - d. Your future plans and how the SAE relates.
5. Thank the judges when finished.

# Proficiency Interview Sample Questions

Listed below are several different SAE proficiency areas with sample questions one may be asked during the interview. This is NOT an exclusive list, just an idea of what types of questions may be asked.

## General Record Book Questions (for all areas):

1. Give us an overview of your project. Tell us a little about how you got started and how it has progressed throughout the years.
2. How many years have you been doing your project?
3. What do you do on a day-to-day basis?
4. What are your primary jobs and responsibilities with the project? What management decisions do you get to make?
5. What skills have you learned while doing your project?
6. What safety practices do you use?
7. How has your project grown in size and scope?
8. What do you enjoy best about your project? Least about your project?
9. Why should the committee select you to win this proficiency area?
10. What are your future plans with your project?
11. Is there anything that we did not ask that you would like to share?
12. Any changes that you would make for next year?

## General Record Keeping Questions (for all areas):

1. What is an inventory?
2. What is depreciation? How is this figured?
3. What is a net worth statement? (financial statement)
4. How do you figure net worth?
5. What is your net worth?
6. What is an asset? What is a liability?
7. How do you figure the following ratios? Current ratio, dollars of working capital, debt: worth ratio, asset: liability ratio
8. Approximately how many hours did you work last year? (it could be any year- as well as paid and unpaid)
9. How much do you make an hour? How often do you get paid?
10. Who do you work for?
11. Do you pay taxes? Why or Why not?
12. What deductions are taken out? How much state and federal income taxes are usually taken out of your paycheck?
13. What is FICA?
14. How is net earnings figured?
15. What is a budget? How is a budget figured?
16. On what date did you start your record book, end your book?
17. Are your Records complete?
18. What have you learned by keeping records on your project?

## Areas:

### Animals:

#### *General/Introductory Questions*

Tell us about you animal project? (how you got started, numbers, parent, grandparent involvement)  
What breed do you raise? Sell your breed, why is it best???  
What are the characteristics of your breed?

#### *Breeding*

Gestation or Incubation period of your species  
What does EPD stand for??? How are EPD's used in Beef Cattle??  
Weaning Period?

#### *Feeding*

Describe your feeding program  
Babies, market animals, breeding stock  
What percent protein do you feed ?  
Name the carbohydrates that you feed chickens?  
Name the vitamins that you give chickens?  
Where do you buy your feed? Brand name, why do you like this feed best??

#### *Watering procedures*

How much did you spend on feed this past year?  
Pasture- What type of grass is in your pasture?  
What type of hay do you feed?

### *Marketing*

Where to you market your animals?  
What is the current price?  
What is your break- even costs?  
What are your variable costs?  
What are your fixed costs?

### *Species Knowledge*

List the quality/wholesale/retail grades?  
What are the wholesale cuts of your species?  
What is meant by dressing percent? (DP)  
What is the DP of your species?

### *Health Questions*

Name the diseases that you have had in your herd .  
How do you control parasites on your animals?  
Name your veterinarian.  
What are vaccinations you give your animals?

Explain how to castrate an animal.

### *Financial Questions*

What were your total returns?  
What were your feed costs?  
Returns per \$100 feed?  
Average Sales weight ?

### *Shows and Showing*

Name the shows that you have been involved in?  
Describe how you take care of your showing equipment.  
How do you keep your animals cool at shows?  
How much money did you make showing this past year?  
Describe how you would prepare an animal for show.

### *Waste Management*

What do you do with all the manure/waste???  
What brand of waste handling equipment do you use?

## **Crops:**

### Corn or Soybeans

Tell us how you got started raising corn/soybeans? - How many acres?

### *Fertility*

Nitrogen - Symbol, Nitrogen source, pounds of Nitrogen/Ac,  
Nitrogen deficiency, N functions in plants  
Phosphorus - Symbol, Phosphorus source, pounds of  
Phosphorus/Ac, Phosphorus deficiency, P functions in plants  
Potassium -Symbol, Potassium source, pounds of  
Potassium/Ac, Potassium deficiency, K functions in plants  
pH level - Optimum pH level, Name the liming material that you use, tons/Acre, why do soils turn acidic?

### *Pesticides*

Herbicides - Name weed problems, name herbicides used, know herbicide rates, Name broadleaf weeds, name corn grass weeds  
Insecticides - Name insects, list insecticides and amounts used?  
Pesticide Safety - What are some environmental safety procedures with pesticides, name human safety protective gear when using pesticides?

### *General*

What is the difference between grasses and legumes?  
In your opinion what is the best grass hay and why?  
How often do you cut hay (how many cuttings per year)?  
What happens when it rains on your hay?  
What is a "Crimper"? Why do we crimp hay?  
What moisture level is hay stored at?  
What can happen if hay is stored too wet?

### *Planting Procedures*

What type of planter do you use?  
what is your planting population?  
what is "germination rate"?  
What varieties did you use?  
What was your varieties "days to maturity"?

### *Plant Parts*

Be able to name the parts of a corn/soybean plant

### *Marketing*

What does it cost to store corn/soybeans?  
Define "Hedging"  
What is your breakeven cost of production  
What are some of your "Variable" Costs in production  
What are some of your "Fixed Costs" in production

### *Harvesting*

What does a bushel of corn/soybeans weigh?  
What was your corn/soybean moisture at harvest?  
What percent moisture do we dry corn/soybeans down to for drying?

### Forage

How much does one bale of hay weigh?

### *Fertilizers*

Did you or your employer fertilizer the forage crop?  
What type of fertilizers were applied?

### *Insecticides*

What type of insecticides are applied to forage ground

### *Equipment*

What type of baler did you use?  
What type of bales did you make?  
What are some safety points to remember when working around forage equipment?  
Cost of a bale of twine?

### *Marketing plans*

How/where was the hay marketed?  
What is the price of hay?

### *Feeding forage*

Where are the nutrients found in hay forage?  
What feed type is forage considered?  
What type of animals eat forages?  
What type of digestive system do these animals have?

### *Forage Placement*

- for those students who bale for farmers  
Generally what do farmers pay you to help bale hay?

## Horticulture:

### Floriculture

#### *General*

Name the plants that you grow?

#### *Greenhouse Information*

Greenhouse Temperature  
Fun and exciting item about working in the greenhouse  
Problems working in the greenhouse  
Insecticides used, insect problems, dosages

#### *Flower Bed Information*

When do we plant outside (date or soil temp)  
How would you plant a flower bed (general ideas)  
Problems working in the flower beds  
Insecticides used, insect problems, dosages

#### *Soil Preparation*

What type of tiller do you use  
What happens when you work the soil too wet?

#### *Disease*

Name the diseases that you have had in your floriculture project  
How do you control insects?

#### *Plants*

Transplanting procedures  
List Perennials grown, define what a perennial is?  
List Annuals grown, define what an annual is?

#### *Propagation*

Did you propagate plants during your floriculture project  
Describe methods used and type of plants propagated

#### *Watering*

#### *Misc.*

Define "Geotropism" and "Phototropism", define "Media"

### Vegetable Gardening

#### *General*

Size of your garden?

#### *Fertilization*

Name three fertilizers that we put on vegetable garden.  
What brand of fertilizer did you use?

#### *Soil*

What type of soil is found in your garden?  
How would you improve the soil in your garden?

#### *Vegetable Plants*

Tell us about the varieties in your garden?

#### *Weed Control*

#### *General*

How many lawns do you mow? How often?

What tools did you use for weed control?  
What herbicides did you use for weed control?  
Name garden weed that you had in your garden?

#### *Watering*

What time of the day did you water? Why?

#### *Insects*

What insecticides did you use for insect control  
Name garden insect problems that you had?

#### *Raised Beds*

How did you build your raised beds  
What is the benefit of raised beds

### Turf

#### *Fertilization*

Name three fertilizers that we put on lawns

### *Lawnmowers*

Name your lawnmower.  
What type of engine does it have?  
What type of fuel does it run on?

Explain how to sharpen the blades  
Explain how to clean the air filter.

### *Maintenance*

How often do you change the oil?

### *Safety*

describe safety precautions while mowing  
describe safety precautions while weed eating  
Name safety equipment to use while mowing/weed eating

## **Agribusiness:**

Who do you work for?  
What do you do there?  
What type of paperwork is required for your job?  
What agricultural product does the company you work for sell?  
OR What is the service your company provides that is agriculturally-related?

*Livestock* - Ask general livestock questions if the student indicates they worked with livestock

*Crops* - Ask general crop questions if the student indicates they worked with crops

*Mechanics* - Ask general mechanic questions if the student indicates they worked with equipment

## **Ag Mechanics:**

### Ag Mechanical Design and Fabrication

#### *Design of project*

How did you design your project?  
What books/resources did you use to design your project?

What type of paint did you use on your project?

#### *Materials*

What materials did you use when constructing your project?  
What type nails, screws did you use?  
What type of lumber did you use?

#### *Finished project*

What would you different the next time you design and build something?

#### *Project Safety*

What type of safety procedures did you use during the construction of your project

### *Paints*

### Ag Mechanical Repair and Maintenance

#### *Engines*

Difference between two- stroke and 4-stroke engines  
Explain how you would rebuild a motor?  
What is the carburetor used for?  
Which is bigger 1/2 inch wrench or a 3/4 inch?  
Name manufacturers of engines?

Name some specific parts of an engine

#### *Tractor Maintenance*

How do you change the oil in a tractor?  
How would you change a tire?  
Safety while changing a tire

## **Natural Resources/Environmental Science:**

### Forest Management

#### *Planting Trees*

Types of trees planted  
planting procedure  
Depth of planting  
Care of newly planted trees

#### *Chainsaw*

What type of chainsaw do you have?  
Size of engine  
2 or 4 cycle  
Length of bar  
Do you add oil to the gas?

#### *Trees*

How do you identify Oak trees by bark, leaf shape?  
How do you identify Sugar Maples trees by bark, leaf shape?  
What type of firewood would produces the best firewood?

#### *Safety*

Name safety precautions needed for using a chainsaw  
What would you do if you get your chainsaw stuck while cutting?

How do you avoid "kickback" of your chainsaw

*Marketing of forest products*

Define "Cord"

What is the price of firewood

### Wildlife production and Management

#### *Hunter Safety*

Have you taken an IL Hunter Safety class?

Tell us about Hunter Responsibility

Explain Wildlife Conservation?

Explain Firearm Safety?

Explain Survival Techniques if lost in the woods?

Explain Boating and Water Safety?

#### *Whitetailed Deer*

When does shotgun season for deer begin?

When does bow season for deer begin?

What type of ammunition would you use for whitetails?

How do you field dress a deer?

Explain treestand Safety?

#### *Pheasant*

When does pheasant season begin?

What type of ammunition would you use for Pheasants?

What is the daily bag limit?

Have you ever planted a food plot for Pheasant?

#### *Wild Turkey*

When does Wild Turkey season begin?

What type of ammunition would you use for Wild Turkey?

What is the daily bag limit?

Have you ever planted a food plot for Wild Turkey?

#### *Squirrel*

When does squirrel season begin?

What type of ammunition would you use for squirrel?

What is the daily bag limit for squirrel?

#### *Laws*

Name a conservation officer

What do you think about hunting laws (what are their purpose)?

#### *Guns*

*How do you clean a gun?*

*How do you store your gun when NOT hunting?*

*What would you say to an anti-hunting activists if they picketed a check station?*

#### *Hunting Dogs*

*Name some hunting dog breeds?*

*How do you take care of/train hunting dogs?*

#### *Hunting Organization*

Name the wildlife organizations that you belong to and their purpose of existing?

### Other Areas:

#### Ag Communications

##### *General Questions*

Tell us about your Ag Communications project?

How did you get involved in an communications project?

##### *News writing questions*

How much time do you put into your articles each week?

What are your duties at the newspaper?.

What software programs do you use when writing your articles?

What skills have you gained from working at the newspaper?

Name some of the questions you ask when interviewing someone for an article?

##### *Web Page Questions*

How much time do you put into creating web pages each week

What are your duties in creating web pages

What software programs do you use in creating webpages.

What type of computers do you use?

What skills have you gained from working on Internet web pages?

\*Note- This list does not contain all proficiency areas.



## Use of the Score Sheet

All sections of the score sheet, except "*Knowledge Demonstrated by Interview*," should be completed by each committee member after reviewing the student's record books and prior to an interview with the award applicant. Based on the interview a student score for knowledge should be posted. If the interview reveals information not readily determined from the SAE record books or if the interview contradicts the written records, adjustments can be made to the other sections of the score sheet.

## *Scoring Descriptions*

### Jobs and Responsibilities

Degree of Experience – the skill level the student demonstrates

Extent of Experience – how much time the student spends at the various skill levels in their SAE

### Scope and Growth

Hours Employed – this can be either paid or unpaid hours, but must be outside the regularly scheduled classroom hours

Wages Earned – should report in wage dollars the income from the SAE

Production – should show a consistent unit of measure so it is apparent whether the student's SAE has increased, decreased or remained steady.

Returns – should report in dollars the funds generated through the SAE.

Skills and Safety Practices – should provide a complete log of daily activities and demonstrate safe, legal and generally acceptable management practices.

### Managerial Responsibility

Business Agreement – the agreement should be complete, realistic and signed by all parties

Degree of Decisions – reports the student's use of problem solving skills and the impact on the SAE

Growth of Responsibilities – the student's responsibility in a placement or partnership SAE should increase as time goes on.

### Ability to Keep and Use Records

Accuracy of Records – are the records reflective of the business agreement and follow the plans and budget established at the start of the year. The hours worked, income and expenses should be to the penny, not rounded off to the nearest hour or dollar.

Completeness of Records – The student should report all inputs and expenses to the SAE, even if the items are obtained through gifts or by barter.

Reasonable – Records should be believed at face value, but hours and earnings that seem inflated or beyond belief should form the basis for interview questions.

SAE Analysis – The analysis allows the value of a SAE to be examined based on the specific input and effort provided to the enterprise. The analysis should provide directions for some of the managerial decisions made the following year.

Knowledge Demonstrated by Interview – Allows the student to more completely explain some procedures and decisions described in their SAE records. Their answers should demonstrate a clear knowledge of the SAE and substantiate involvement in it.

### FFA, Community and School Activities – THIS AREA IS ONLY FOR STAR and STATE FFA

**DEGREE CANDIDATES!!!** The FFA prepares students for premier leadership, personal growth and career success through agricultural education – candidates for the State FFA Degree should demonstrate an active role in all three areas.



*Non-Production Agricultural Areas*

|   |                            | Name &<br>School | Name &<br>School | Name &<br>School | Name &<br>School | Name &<br>School |
|---|----------------------------|------------------|------------------|------------------|------------------|------------------|
|   | Maximum Points<br>Possible |                  |                  |                  |                  |                  |
| <b><u>JOBS and RESPONSIBILITIES</u></b><br>Degree and Extent of Experience<br>pg. 4B,5B,7 & 8   | 15                         |                  |                  |                  |                  |                  |
| <b><u>SCOPE and GROWTH</u></b><br>Hours Employed<br>Wages Earned pgs 5B-7B  | 15                         |                  |                  |                  |                  |                  |
| <b><u>SKILLS and SAFETY<br/>PRACTICES</u></b><br>pg. 8  | 5                          |                  |                  |                  |                  |                  |
| <b><u>MANAGERIAL<br/>RESPONSIBILITY</u></b><br>Agreement pg. 4B<br>Degree of Decisions pg. 5B<br>Growth of Responsibilities<br>pg. 5B and 6 | 20                         |                  |                  |                  |                  |                  |
| <b><u>ABILITY TO KEEP and USE<br/>RECORDS</u></b><br>Accuracy, Completeness,<br>Reasonable, Analysis pg 15B                                 | 25                         |                  |                  |                  |                  |                  |
| <b><u>KNOWLEDGE<br/>DEMONSTRATED by<br/>INTERVIEW</u></b>   | 20                         |                  |                  |                  |                  |                  |
| <b>Total Score</b>  | <b>100</b>                 |                  |                  |                  |                  |                  |
| <b>Final Rank</b>   |                            |                  |                  |                  |                  |                  |

*Production Awards*

|  |                            | Name &<br>School | Name &<br>School | Name &<br>School | Name &<br>School | Name &<br>School |
|--|----------------------------|------------------|------------------|------------------|------------------|------------------|
|  | Maximum Points<br>Possible |                  |                  |                  |                  |                  |
| <b><u>SCOPE AND GROWTH</u></b><br>Production and Returns<br>pg. 4A/3C& 9C  | 15                         |                  |                  |                  |                  |                  |
| <b><u>JOBS and RESPONSIBILITIES</u></b><br>Degree and Extent of Experience<br>pg. 5A,5C pages 7,8  | 15                         |                  |                  |                  |                  |                  |
| <b><u>SKILLS and SAFETY PRACTICES</u></b><br>page 8  | 5                          |                  |                  |                  |                  |                  |
| <b><u>MANAGERIAL RESPONSIBILITY</u></b><br>Agreement pg. 1A/C & 2A/C<br>Degree of Decisions pg.5A/C,<br>pg.8<br>Growth of Responsibilities<br>pg.4,5A/C and page 8 | 20                         |                  |                  |                  |                  |                  |
| <b><u>ABILITY TO KEEP &amp; USE RECORDS</u></b><br>Accuracy, Completeness,<br>Reasonable, Analysis pg. 15A/4C  | 25                         |                  |                  |                  |                  |                  |
| <b><u>KNOWLEDGE DEMONSTRATED by INTERVIEW</u></b>  | 20                         |                  |                  |                  |                  |                  |
| <b>Total Score</b>   | <b>100</b>                 |                  |                  |                  |                  |                  |
| <b>Final Rank</b>  |                            |                  |                  |                  |                  |                  |

## SUGGESTED FACTORS FOR EVALUATION GUIDE FOR PRODUCTION AWARDS

### Beef Breeding:

1. Percent calf crop
2. Weight produced per cow (lb.)
3. Returns/\$100 feed
4. Average price received
5. Feed cost/cwt. Gain
6. Lb. Feed/cwt. Gain
  - a. Grain
  - b. Total Concentrates
  - c. Hay, dry roughage, silage
  - d. Pasture (days)
7. Death Loss: % of weight produced

### Dairy:

1. Milk per cow (lb.)
2. Butterfat per cow (lb.)
3. Returns above feed/milk cow
4. Returns/\$100 feed
5. Average price of milk (per cwt.)
6. Feed cost/unit of production
7. Lb. Feed/unit production
  - a. Grain
  - b. Total Concentrates
  - c. Hay Silage
8. Death Loss: % of weight produced

### Feeder Cattle Enterprises:

1. Gain/animal/day (lb.)
2. Returns/\$100 feed
3. Average price received
4. Average price paid
5. Feed cost/cwt. gain
6. Lb. Feed/cwt. Gain
  - a. Grain
  - b. Total Concentrates
  - c. Hay and Silage
7. Death Loss: % of weight produced
8. Returns above feed cost/head

### Poultry:

1. Eggs per hen
2. % Egg Production
3. Returns above feed cost/hen
4. Returns/\$100 feed
5. Average price of eggs

6. Average price/lb.
7. Feed cost/unit
8. Lb. Feed/unit: Total Conc.
9. Death Loss: % of weight produced

### Sheep: (Native Flocks)

1. % Lamb Crop
2. Returns/\$100 feed
3. Average farm price for wool  
(excluding gov't payment)
4. Average price/sheep
5. Feed cost/cwt. Produced
6. Lb. Feed/cwt. Produced
  - a. Concentrates
  - b. Hay
  - c. Pasture (days)
7. Death Loss: % of weight produced

### Swine:

1. Pigs farrowed/litter
2. Pigs weaned/litter
3. Returns above feed/litter
4. Returns/\$100 feed
5. Average weight of hogs sold (lb.)
6. Average price received
7. Feed cost/cwt. Gain
8. Lb. Feed/cwt. Gain
  - a. Grain
  - b. Total Concentrates
9. Death Loss: % of weight produced

### Crops:

1. Yield/Acre
2. Labor
  - a. Hours/Acre
  - b. Cost/Acre
3. Machinery cost/Acre
4. Fertilizer cost/Acre
5. Herbicide cost/Acre
6. Crop Returns/Acre
7. Value of Production/Acre
8. Average price/unit sold
9. Land Class

### **SUGGESTED FACTOR FOR EVALUATION GUIDE FOR OFF-FARM AWARDS**

Evaluation factors are more difficult to determine for the Ag Business proficiency but their value is just as important as the production award evaluation factors. Diversity in off-farm SAE's lends to the difficulty, however, every effort must be made to provide some measures of efficiency on the evaluation guide. Some suggestions are:

- Number of paid hours
- Number of unpaid hours
- Average hourly rate of pay
- Highest hourly rate of pay
- Average monthly sales
- \$ expense/\$100 earned

Each of the proficiency awards have common factors that can be measured and evaluated. We strongly suggest these factors be listed.

## EVALUATION GUIDE FOR NON-PRODUCTION AWARDS

Name of Student: \_\_\_\_\_

Address: \_\_\_\_\_

School: \_\_\_\_\_

Enterprise: \_\_\_\_\_ **Make A Selection**

|  |   |      |      |
|--|---|------|------|
| <b>I. Agricultural Relationship.</b><br>Explain how the SAE is a part of the agricultural industry and/or explores an agricultural career. (Answers are limited to the space provided.)<br><u>Failure to demonstrate an agricultural relationship will result in disqualification.</u> | <u>Explanation:</u><br><br>                     |      |      |
| <b><u>Refer to Suggested Factors for Evaluation</u></b><br><b><u>Guide for Non-Production Awards – Advisor's Guide</u></b>   |   |      |      |
| <b>II. Jobs and Responsibilities</b><br>(Maximum Score – 15 Points)  | Year  | Year | Year |
| Average Hours per Week   |   |      |      |
| Average Rate of Pay  |   |      |      |
|  |   |      |      |
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|  |   |      |      |
| <b>III. Scope and Growth</b><br>(Maximum Score – 15 Points)  |   |      |      |
| Hours Worked   |   |      |      |
| Net Earnings   |   |      |      |
| <b>IV. Skills and Safety Practices</b><br>(Maximum Score – 5 Points)   | <b>Substantiated by Record Books</b>            |      |      |
| <b>V. Managerial Responsibility</b><br>(Maximum Score – 20 Points)   | <b>Substantiated by SAE Business Agreements</b> |      |      |
| <b>VI. Ability to Keep &amp; Use Records</b><br>(Maximum Score – 25 Points)  | <b>Substantiated by SAE Business Agreements</b> |      |      |
| <b>VII. Knowledge</b><br>(Maximum Score – 20 Points)   | <b>Substantiated by Interview</b>               |      |      |

**Note:** Sections I, II and III are to be filled in as completely as possible using each year's record book. Sections IV, V, VI and VII are included only to show the points used to score by a judging committee.

This sheet must be completed and accompany a student's SAE records to all levels of Proficiency Award evaluation.

## EVALUATION GUIDE FOR PRODUCTION AWARDS

Name of Student: \_\_\_\_\_

Address: \_\_\_\_\_

School: \_\_\_\_\_

Enterprise: \_\_\_\_\_ Entrepreneurship

|  |   |      |      |
|--|---|------|------|
| <b>I. Agricultural Relationship.</b><br>Explain how the SAE is a part of the agricultural industry and/or explores an agricultural career. (Answers are limited to the space provided.)<br><br><u>Failure to demonstrate an agricultural relationship will result in disqualification.</u> | <u>Explanation:</u><br><br>                     |      |      |
| <u>Refer to Suggested Factors for Evaluation</u><br><u>Guide for Production Awards – Advisor's Guide</u>   |   |      |      |
| <b>II. Productive Efficiency Measures &amp; Degree of Efficiency</b>   | Year  | Year | Year |
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|  |   |      |      |
| <b>III. Scope and Growth</b><br>(Maximum Score – 15 Points)  |   |      |      |
| Scope  |   |      |      |
| Production   |   |      |      |
| <b>IV. Jobs and Responsibilities</b><br>(Maximum Score – 15 Points)  | <b>Substantiated by Record Books</b>            |      |      |
| <b>V. Skills and Safety Practices</b><br>(Maximum Score – 5 Points)  | <b>Substantiated by Record Books</b>            |      |      |
| <b>VI. Managerial Responsibility</b><br>(Maximum Score – 20 Points)  | <b>Substantiated by SAE Business Agreements</b> |      |      |
| <b>VII. Ability to Keep &amp; Use Records</b><br>(Maximum Score – 25 Points)   | <b>Substantiated by SAE Business Agreements</b> |      |      |
| <b>VIII. Knowledge</b><br>(Maximum Score – 20 Points)  | <b>Substantiated by Interview</b>               |      |      |

**Note:** Sections I, II and III are to be filled in as completely as possible using each year's record book. Sections IV through VIII are included only to show the points used to score by a judging committee.

This sheet must be completed and accompany a student's SAE records to all levels of Proficiency Award evaluation.

# Skills/Proficiencies for 36 Common SAE Programs

Following is a listing of skills/proficiencies for 36 common SAE categories based on the National FFA proficiency award list. The listing under each area is designed to help all parties involved understand *some* of the competencies required for specific project areas so that realistic expectations and goals can be achieved through an SAE. If the SAE category you are looking for is not on this list, keep in mind that many of the skills/proficiencies are applicable to other areas.

## E=ENTREPRENEURSHIP P=PLACEMENT

### 1. AGRICULTURAL COMMUNICATIONS - E/P

- Be able to write a news article or press release suitable for use by a media outlet.
- Possess strong written and oral communications skills.
- Keep accurate records of special event/project planning and coordination.
- Establish and maintain databases of contact information, activities, donors, etc.
- Possess strong computer skills and a basic understanding of website and graphic design.
- Develop effective editing skills required for written communications such as newsletters and articles.
- Be able to give presentations to service groups, business organizations, donors and others.

### 2. AGRICULTURAL MECHANICS DESIGN & FABRICATION - E/P

- Learn to operate and maintain power equipment as well as hand tools.
- Become safety certified on all shop equipment and wear proper safety attire.
- Learn about working with different metals and know their properties.
- Understand and maintain a shop inventory.
- Develop welding and metal cutting skills.
- Be skilled in reading blueprints and measuring equipment.
- Understand how to field test equipment.

### 3. AGRICULTURAL MECHANICS ENERGY SYSTEMS - E/P

- Learn how to install a wire harness.
- Understand hydraulic principles and be able to replace hydraulic hoses on tractors/equipment.
- Be able to wire two and three way switches.
- Be able to install a fuse box, switch box, electrical panel, etc.
- Be able to read amp meters and use electrical testers.
- Implement safety practices in all areas of electrical and hydraulic work.
- Know wire sizes for each job and understand the electrical load for wire types and sizes.

### 4. AGRICULTURAL REPAIR AND MAINTENANCE - E/P

- Learn to operate and maintain shop power equipment as well as hand tools.
- Be skilled in reading blue prints and measuring equipment.
- Become safety certified on all shop equipment and wear proper safety attire.
- Gain knowledge of small and large engine components.
- Possess skills in welding, metal cutting, engine diagnosing, etc.
- Know how to field test farm equipment.
- Be proficient in maintenance procedures (change oil, rotate tires, check transmission, etc.).

### 5. AGRICULTURAL SALES - E/P

- Understand promotion of the business (displays, flyers, signs, advertising).
- Build relationships with customers; work on ability to listen and explain.
- Possess strong written and oral communication skills.
- Have knowledge of the business and products as well as machinery used in the business.
- Understand and use product pricing, product manuals, invoicing, bills of lading, etc.
- Keep good records (net worth statements, balance sheets, depreciation schedules, cash flow, etc.).
- Learn about handling money, banking and making business investments.

### 6. AGRICULTURAL SERVICES - E/P (2 examples)

#### A. COMMERCIAL HEIFER RAISING - P

- Prepare customer contracts for farmers served; practice good customer relations.
- Implement veterinary practices on all heifer calves (dehorn, give vaccinations, treat lice/mange, etc.)

- Develop calf identification techniques and effective heifer management.
- Use techniques such as calf hutches to lessen disease and sickness.
- Learn how to cost-effectively purchase supplies; bulk purchasing, veterinary discounts, etc.
- Learn sire selection for breeding heifers as well as artificial insemination.
- Implement proactive grazing techniques (rotational grazing, measure and layout grazing fields).

#### **B. MANURE HANDLING BUSINESS – E**

- Prepare and sign customer contracts; practice good customer relations.
- Understand manure fertilizer values and overhead cost per gallon to pump manure.
- Prepare a balance sheet, net worth information, cash flow projections, invoices, tax information, etc.
- Develop and update a business plan and keep good records.
- Prepare work site scheduling – equipment for each job, employees for each job.
- Maintain an inventory of supplies and learn about cost-effective supply purchasing.
- Understand the manure handling regulations in your state and implement safety practices.

#### **7. AQUACULTURE - E/P**

- Be able to take pH readings from streams and in aquaculture tanks.
- Learn to take measurements for nitrate concentration, oxygen content, turbidity and water speed.
- Recognize fish and aquatic plants and their contribution to the water ecosystem.
- Know the life cycle of aquatic animals.
- Know how to mix and feed fish rations.
- Figure rates of gain for fish and feed efficiency.
- Be able to set up and/or design an aquaculture system

#### **8. BEEF PRODUCTION - E/P**

- Learn about effective feeding techniques, how to mix rations, etc.
- Understand rate of gain and feed conversions.
- Understand cattle contracting and sales.
- Possess basic veterinary skills for vaccinations, castration, hoof work, etc.
- Learn to select quality breeding stock for the herd (bulls and replacement heifers/cows).
- Understand technologies such as artificial insemination and embryo transplant.
- Keep accurate herd and financial records.

#### **9. DAIRY PRODUCTION - E/P**

- Know how to read and interpret product records and take milk samples.
- Understand how to utilize records to select heifer replacements.
- Understand feeding and using TMR's in the herd feeding program.
- Learn milking procedures and sanitation in the milk house during milking.
- Apply veterinary skills for giving vaccinations, treating mastitis, shots, etc.
- Understand sire selection and genetic mating skills to improve production and type.
- Understand milk contracting and marketing.

#### **10. DIVERSIFIED AGRICULTURE PRODUCTION - E/P**

- Combine the skills/proficiencies of at least one crop commodity and at least one livestock commodity.

#### **11. DIVERSIFIED CROP PRODUCTION - E/P**

- Combine the skills/proficiencies of two or more crops such as grain, forages, fiber/oil crops, specialty crops, fruits and vegetables.

#### **12. DIVERSIFIED HORTICULTURE - E/P**

- Know how to take soil samples, plant and prune nursery crops, pot flowers, etc.
- Understand use of fungicides as protectants or eradicates.
- Learn lawn care: mowing techniques, fertilizing, selecting grass seed, establishing lawns, etc.
- Be able to identify nursery, lawn and flower species.
- Understand selection of plants and landscaping materials for different jobs.
- Be able to identify and treat disease and insect problems in plants, flowers, lawns, etc.
- Understand nursery operation from answering phones to bagging seed and plant propagation.

#### **13. DIVERSIFIED LIVESTOCK PRODUCTION - E/P**

- Combine the skills/proficiencies of two or more livestock areas such as beef, sheep, swine, dairy and poultry.

#### **14. ENVIRONMENTAL SCIENCE AND NATURAL RESOURCES MANAGEMENT - E/P**

- Plant native wildlife vegetation to increase habitat for wildlife species in your area.
- Know how to test water to determine oxygen content, pH, nitrate contents, etc.



- Be able to identify wildlife and plant species in your area as well as wildlife tracks.
- Create a long range plan for improving an area and meet with a related professional to discuss plan.
- Know how to measure land to determine acreage and use a transit for reading elevations.
- Make brush piles for wildlife habitat and plant wildlife food plots.
- Learn to operate land shaping equipment such as a tractor and blade, bulldozer, etc.

#### **15. EQUINE SCIENCE - E/P**

- Understand and implement grooming, feeding, feet and leg care.
- Learn riding skills, showmanship and equine safety.
- Learn how to identify, use and take care of all tack items (includes repair/oiling/inventory).
- Understand and apply basic veterinary practices and maintain a medical inventory/log.
- Assist with foaling as well as selection of mares or stallions in the breeding program.
- Understand horse registration and join associations as required.
- Learn how to exercise and train horses, and prepare horses for competition.

#### **16. EMERGING AGRICULTURE TECHNOLOGY-E/P**

- Have broad knowledge of computer technology (databases, spreadsheets, publishing software).
- Be able to use the Internet for sales or advertising.
- Work in a laboratory situation doing soil testing, milk testing, biotechnology research, etc.
- Be able to set up a laboratory for personal or class use.
- Follow laboratory protocol and understand how to use microscopes and other equipment.
- Build laboratory systems for alcohol synthesis, to separate chemicals, research hybrids, etc.
- Use GPS in agriculture for fertilizer application, mapping fields, scanning market animals, etc.

#### **17. FIBER AND/OR OIL CROP PRODUCTION - E/P (2 examples)**

##### A. PEPPERMINT/SPEARMINT OIL PRODUCTION – E/P

- Understand field tillage operations and soil sampling.
- Be able to identify disease and insects (become pesticide certified to treat problems).
- Gain knowledge of soil types for growing peppermint/spearmint and their properties.
- Learn business operations; cutting and raking mint, chopping mint plants, distilling oil, etc.
- Understand contracting, customer relations and marketing.
- Improve production by growing multiple crops in one year, using better irrigation techniques, etc.
- Learn how to maintain and fabricate specialized equipment.

##### B. SOYBEAN PRODUCTION – E/P

- Understand field tillage operations.
- Be able to sample soils and read results.
- Be able to identify disease and insects (become pesticide certified to treat problems).
- Learn business operations; combining the crop, drying the crop, crop storage, etc.
- Understand crop rotation and variety selection as well as use of round-up ready varieties.
- Use marketing techniques: direct sales and contracting.
- Know how to repair and maintain production/harvest equipment.

#### **18. FLORICULTURE - E/P**

- Learn basic floral care; watering, feeding, refrigeration/storage.
- Know how to cut and arrange flowers.
- Be able to identify flowers and determine how they fit into a display or arrangement.
- Be able to grow a flower crop using associated skills (soil testing, pest control, cut times, tillage, etc.).
- Learn how to dry flowers and use dried flowers in arrangements.
- Develop sales/marketing techniques and customer service skills.
- Learn how to take floral orders, make deliveries, operate the cash register, etc.

#### **19. FORAGE PRODUCTION - E/P**

- Know harvesting methods (baling, chopping, silage, grazing, etc.).
- Know the proper harvest moisture for silage (alfalfa, corn, soybeans, etc.).
- Learn how to figure storage capacity in trench silos, upright silos, hay mow storage, etc.
- Use forage testing to determine the relative feed value for hay or silage.
- Establish a long range field plan for planting, harvesting, crop rotation, etc.
- Be able to identify diseases and insects and apply pesticides as needed (obtain pesticide license).
- Understand tillage operations, soil testing, variety selection.

#### **20. FOOD SCIENCE AND TECHNOLOGY - E/P**

- Follow laboratory protocols and wear proper safety attire.
- Know how to conduct experiments (research food preservation, product flavoring, growth additives).
- Know how to analyze components or the make-up of food products.
- Learn how to conduct product testing (How to test milk for solids, fat, protein and water content.).
- Understand and implement data comparison (new varieties versus older varieties; antibiotic comparisons).
- Determine digestibility of certain foods.

#### **21. FOREST MANAGEMENT AND PRODUCTS - E/P**

- Know how to maintain and repair equipment in the harvest and processing of lumber.
- Understand equipment operation and safety.
- Be able to estimate the amount of lumber in a stand of trees.
- Be able to recognize different wood types and know their properties.
- Understand how to “fall a tree” as well as cutting techniques (block cutting).
- Know how to plant and care for new trees for reforestation.
- Know how to effectively dispose of all branches and stumpage.

#### **22. FRUIT PRODUCTION - E/P**

- Possess knowledge of laying out the garden/field/orchard.
- Obtain a pesticide application license and know how to apply pesticides.
- Understand tillage and weed control as well as tree care (pruning, watering, fertilizing, etc.)
- Understand harvesting, packaging, sales preparation, delivery methods, etc.
- Employ a marketing strategy (roadside stands, delivering to groceries, wholesale contracts).
- Know how to establish new plantings or trees (variety selection).
- Recognize and treat disease and insect problems.

#### **23. GRAIN PRODUCTION - E/P**

- Understand the use of no-till versus conventional tillage methods and the results.
- Know how to conduct soil and moisture testing and read the results.
- Know how to measure grain yields.
- Be able to identify and treat disease and insect infestation (obtain license to apply pesticides).
- Obtain your commercial driving license (CDL) to haul grain to market.
- Know how to safely operate harvesting equipment, equipment at the grain storage facility, etc.
- Understand the use of genetically modified seeds and the benefits.

#### **24. HOME AND/OR COMMUNITY DEVELOPMENT - E/P**

- Be able to map and identify community resources to help with improvement projects.
- Take an inventory of community and home improvement areas and develop an improvement plan.
- Assist the community in times of disaster (floods, fires, snow damage, tornado, other storm clean-up).
- Learn improvement skills such as painting, woodwork, flooring, etc.
- Build community flower beds or flower containers for businesses, home or community landscaping.
- Organize and lead a team to assist people in need of services they cannot do themselves.
- Volunteer/assist with building park benches, playground equipment, horse shoe pits, etc.

#### **25. LANDSCAPE MANAGEMENT - E/P**

- Be able to identify different varieties of plants and trees.
- Understand the characteristics of plants selected for a landscape project.
- Know how to safely operate and maintain landscaping equipment.
- Learn how to use computer-assisted landscape drafting programs.
- Learn how to select landscape materials other than plants (timbers, bricks, a trellis, etc.).
- Know how to figure a bill of materials and prepare an estimate for a landscape job.
- Be able to read the plat books/soil survey books to ensure the property is accurately laid out.

#### **26. NURSERY PRODUCTION - E/P**

- Be able to identify and tag common nursery stock.
- Know how to care for nursery stock before and after it is harvested.
- Implement pruning techniques for developing saleable nursery stock.
- Have knowledge of irrigation, propagation of perennials, fertilizers, etc.
- Be able to identify disease and insects and treat problems (obtain pesticide certification license).
- Assist with sales in the nursery plant yard and help customers select and care for nursery stock.
- Know how to operate and maintain nursery equipment.

#### **27. OUTDOOR RECREATION - E/P (two examples)**

#### **A. POOL WORKER – P**

- Keep an inventory of pool supplies and know how to operate pool equipment.
- Teach swimming lessons (different swimming strokes, how to float, life saving).
- Know how to sample water for pH, chlorine content, bacteria content, etc.
- Learn administrative skills (collect and record fees, post rules, pool opening/closing).
- Coordinate pool functions and swimming activities.
- Obtain life guard certification (Level I, Level II); learn First Aid and CPR.

#### **B. CAMPGROUND DIRECTOR/YOUTH COUNSELOR – P**

- Learn how to teach a variety of summer and winter activities (sports, horseback riding, knot tying, etc.).
- Understand campground maintenance and safety procedures/practices (learn First Aid and CPR).
- Serve as an activities director; provide team leadership, teach safety, enforce rules, etc.
- Be able to identify plants and animals, build a campfire, identify potential problems, etc.
- Understand the administration of running camp (open/close camp areas, stables, pool, boat house, etc.).
- Maintain attendance and participation records as well as parental consent forms, health forms, etc.

### **28. POULTRY PRODUCTION - E/P**

- Be able to identify and treat diseases and pest problems.
- Understand poultry health issues, preventative measures and treatments.
- Know how to feed different poultry types (meat animals, laying animals).
- Understand breed selection and housing of different types of poultry.
- Know how to do feed conversions and ration formulations.
- Keep egg production records for laying animals.
- Learn about home slaughter, commercial marketing and processing for meat animals.

### **29. SHEEP PRODUCTION - E/P**

- Be able to identify breeds and characteristics of breeds in your flock.
- Learn about ram and ewe selection as well as crossbreeding programs to improve lamb performance.
- Know how to figure rate of gain, feed conversion rates, balance rations for market and breeding animals.
- Understand marketing methods for market lambs, breeding stock and show lambs.
- Know how to shear sheep and market wool as a value-added product.
- Track carcass performance of fair animals to help improve production and feeding practices.
- Learn how to identify animals and use marking methods such as tags or ear marks.

### **30. SMALL ANIMAL PRODUCTION AND CARE - E/P**

- Be able to identify breeds of small animals and know their characteristics.
- Learn to give basic shots and vaccinations; assist at a veterinary clinic with care and procedures.
- Know grooming and pet care (trim dog nails, pet exercise, obedience training, sanitation practices, etc.).
- Be able to identify animal parasites and recommend/perform treatment.
- Become skilled in lab work areas such as autopsies for diseased animals, packaging samples for the lab, etc.
- Handle inventory items for the pet store or clinic where you work (price items, stock shelves).
- Keep good records of pet vaccinations, health issues, contact information, etc.

### **31. SPECIALITY ANIMAL PRODUCTION - E/P (1 example)**

#### **A. RAISING ELK – E**

- Understand bull and cow breeding stock selection as well as selecting calves for herd replacement.
- Know what to feed animals and how to mix rations.
- Know how to build fences, taking into consideration height and double fencing to prevent outside contact.
- Take safety precautions when working with elk (bull temperament, aggressive cows with calves).
- Learn tagging and identification of elk calves as well as how to take hair samples for DNA verification.
- Understand the rules and regulations for raising elk and keep good records in all areas of the operation.
- Learn about value-added activities such as antler harvest (handling velvet, storing velvet, marketing).

### **32. SPECIALTY CROP PRODUCTION - E/P (1 example)**

#### **A. SEED PRODUCTION - P**

- Know how to plant test plots and keep varieties separated by identity.
- Establish a uniform population for varieties so replicated tests are based on uniform populations.
- Be able to inoculate inbreds for tolerance to problems (smut, stalk rot, etc.).
- Know how to record data on stalk and root lodging, yield, insect damage, disease infestations, etc.
- Know how to operate/maintain harvesting equipment.
- Know how to bag, tag and store seed.

- Be able to harvest a plot (soybeans, alfalfa, clover, corn, etc.).

### **33. SWINE PRODUCTION - E/P**

- Know and use basic veterinary skills (clipping needle teeth, castration, vaccination, clipping tails, etc.).
- Understand boar and gilt selection and breeding systems such as rotational crossing.
- Know how to mix rations to feed different age groups of swine; understand feed efficiency and rates of gain.
- Learn identification methods such as ear notching.
- Know how to contract sales of market hogs and other marketing methods.
- Apply improvement practices such as artificial insemination.
- Learn showmanship skills to enhance sale of breeding or market swine.

### **34. TURF GRASS MANAGEMENT- E/P**

- Have knowledge of grass seed varieties and be able to select the right variety for different lawns.
- Be able to use different lawn mowing techniques.
- Be able to conduct soil testing and read/interpret test results to make recommendations.
- Know how to safely use and care for equipment/tools (edger, leaf blower, aerator, lawn mower, etc.).
- Recognize and be able to treat disease and insect problems in lawns.
- Know how to efficiently dispose of lawn clippings (bagged and removed or mulched).
- Practice good customer relations and record keeping.

### **35. VEGETABLE PRODUCTION - E/P**

- Learn about variety selection and selecting varieties that grow well in your area.
- Be able to identify diseases and insects and provide treatment (obtain pesticide license).
- Know how to safely and effectively use and care for equipment used in production and harvest.
- Understand how to lay out the garden or fields where vegetables are grown.
- Understand the value of tillage, weed control and use of mulches.
- Know how to cost-effectively harvest vegetables and prepare them for market.
- Know how to market the crop using direct markets, roadside stands or contracting.

### **36. WILDLIFE MANAGEMENT - E/P**

- Be able to conduct a wild game census.
- Know how to identify wildlife species and wildlife signs (tracks, deer rubs, nesting areas, bedding areas, etc.).
- Learn wildlife characteristics (nocturnal or diurnal, mating habits, food requirements, etc.).
- Utilize animal population control methods (hunting, trapping, stocking pheasants, quail, turkeys, etc.).
- Be able to identify plant species in the area and know how to plant wildlife shrubs, trees, etc.
- Have knowledge of local and state hunting rules and regulations as well as firearm and archery safety.
- Know how to establish wildlife food plots and feed young raised wildlife (pheasants, quail).

## **Sample Safety Activities for SAE Record Books**

Wearing proper eye protection  
Wear proper footwear  
Wear sunscreen  
Wear proper protective clothing  
Wear rubber gloves  
Keep guards in place  
Wear seatbelt  
Stay away from a moving PTO shaft  
Mower safety  
    Keep area clean  
    Keep children and pets away  
Use proper lighting  
Battery safety  
Lock brakes together  
Keep all shields in place  
Anhydrous safety  
Chemical Safety  
Bin Safety  
Baler Safety  
Combine Safety  
Keep fire extinguishers accessible  
Keep work area safe  
Tool Safety  
Keep floors clean  
Ladder safety  
4-wheeler safety  
Ear Protection  
Safety around animals  
Proper Handling of Gasoline  
Proper disposal of hazardous waste  
Driving Safety  
Hauling Trailers  
Water Safety  
Safety courses  
Food safety  
Computer safety- surge protector, anti-virus

**SAE Visit Supervision Record**  
**Orion High School Supervised**  
**Agricultural Experience Program**

**Type of SAEP**

- ☐ Agriscience  
☐ Entrepreneurship  
☐ Placement

Date: \_\_\_\_ \ \_\_\_\_ \ \_\_\_\_  
Month Day Year

☐ On-Site  
☐ School

Parent(s) Present  
☐ Yes ☐ No

Mileage \_\_\_\_  
Time Spent \_\_\_\_

Time: 1 2 3 4 5 6 7 8 9 10 11 12 am or pm

*Description of Current SAEP*

*Instructor's Comments / Notes*

1. Observations
2. Record Book
3. FFA
4. Skills instruction
5. Recommendations
6. Goals
  - A. Short Range
  - B. Long Range
7. Follow-up

Student : \_\_\_\_\_

Address : \_\_\_\_\_

Phone: \_\_\_\_\_

# ***Record Book Picture Template***

Put your name here.

Type your 50 word caption in this box.

Type your 50 word caption in this box.

**Supervised Agriculture Experience Project Planning Guide**

(You Will Need to Complete One of These for Each Project You Plan on Having)

COMPLETE IN PENCIL

1a. Is this a new or existing SAE project for you?

1b. Will you use EZ Records or AET?

\_\_\_\_\_ New

\_\_\_\_\_ Existing

\_\_\_\_\_ EZ Records

\_\_\_\_\_ AET

2. What type of SAE project do you want to complete?

\_\_\_\_\_ Placement

\_\_\_\_\_ Entrepreneurship

\_\_\_\_\_ Agriscience

\_\_\_\_\_ Exploratory

3. What proficiency area(s) will this type of project fit into? – It must fall into at least one. Refer to pages 6-12 of the SAE Handbook for a list of the proficiency areas

Proficiency Area (s):

\_\_\_\_\_

\_\_\_\_\_

4. What are Your Career Interests? Does this SAE match these career interests? If not, how could you develop a SAE project that more closely ties into your career interest?

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If your project in no way ties to your career interest or hobbies, you might want to consider choosing another topic.



**5. Description and Overview of Your SAE** - In this section, provide a general description of your project. Include the name of the project, your interest in this area of agriculture, the planned beginning and ending dates of the experience, classes you have taken in this area, and the learning and financial outcomes you plan to achieve.

**6. Estimated Investment of Time and Supervision** - Every SAE requires an investment of time: your time and the time others will spend helping you and supervising your experience. In this section, describe your commitment of time for this project from start to finish. You might include the time to plan, manage and care for the project. Include time you plan to show or present the project in competitions. Describe how you plan to balance the time for this project with your other commitments.

Finally, describe how other people (your teacher, parents, peers, community leaders, etc.) are planning to supervise and assist you with your project.

**7. Estimated Financial Investment** - In this section, provide a brief summary of an estimated budget. Include the estimated cost to purchase the project, the estimated expenses you will incur in managing and caring for the project, the source of these funds, and the estimated income you plan to receive.

Then, clearly describe any "non-cash" benefits you will receive. These include direct expenses (feed, supplies, etc) that you will not pay to use. Be specific when you describe these non-cash arrangements. Carefully describe what is being provided, and how you determined its value. Describe who will provide each non-cash benefit, and what you will do in return, if anything.

**8. Estimated Capital Item Investment** - Most entrepreneurial projects require an investment in capital items (land, facilities, equipment, breeding animals, etc.). In this section, describe any capital items that YOU OWN that will be used in this project.

In many cases, you will be using capital items that someone else owns (parents, school, neighbor, etc.). If that's true, then describe the rental arrangement between you and the owner(s) of these items. Be specific when you describe these cash or non-cash arrangements. Carefully describe what is being provided, and how you determined its value for your project. Describe who will provide each capital item you need to use, and what you will provide in return, if anything.

**9. Learning and Financial Objectives** – Describe the learning objectives and financial outcomes you plan to achieve through this project. Describe how this project’s learning objectives relate to your classes, your FFA Activities, your career choices or plans, and any future projects you may be considering.

You should include 3-5 SMART Goals for your project here.

10. Please list the name(s) and contact information for the adult(s) who will be “supervising” your SAE project this semester. This individual(s) will fill out the Supervisor Hour Verification Form as well as supply the Ag teacher will feedback on the students’ performance. (If more than one, please include each.)

Name \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

# Hours Verification Sheet

Name: \_\_\_\_\_

(To be submitted at the end of each semester)

Signature of Adult Supervisors:

*I confirm that the student completed their SAE project under my supervision. I confirm that the times and activities listed in their SAE Experience Pages are accurate to my knowledge. Note: There maybe multiple signatures depending on your project. If your project was completed in the agricultural department, then you may have your instructor's signature as one of them. Your parent(s) may sign for some of the time as well if you worked on it at home. Note: You may have one OR more depending on your project.*

| <u>Date</u>     | <u>Hours &amp; Minutes</u> | <u>Name Printed</u> | <u>Phone Number</u> | <u>Signature</u> |
|-----------------|----------------------------|---------------------|---------------------|------------------|
|                 |                            |                     |                     |                  |
|                 |                            |                     |                     |                  |
|                 |                            |                     |                     |                  |
|                 |                            |                     |                     |                  |
|                 |                            |                     |                     |                  |
|                 |                            |                     |                     |                  |
|                 |                            |                     |                     |                  |
|                 |                            |                     |                     |                  |
| TOTAL<br>TIME → |                            |                     |                     |                  |

## STUDENT VERIFICATION

I verify that the hours included above and in my record book are accurate and that the signatures on this form are authentic. I understand that if this sheet is not turned in or if the signatures turn out to be forged, I will receive not receive a score for my SAE project.

Name (printed): \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation

### Agriculture Placement Enterprise- Beginning of the Year (January)- NEW BOOK

| Item   | Page #             | Description  | Points Possible | Points Earned |
|--|--------------------|--|-----------------|---------------|
| <b>Record Keeping</b>                        |                    |  |                 |               |
| <b>SAE Binder Cover</b>                      |                    | This should include your name, Orion FFA Chapter, your project area, and a picture related to your project.  | <b>5</b>        |               |
| <b>Gold Cover Page</b>                       |                    | Print this page off on Gold paper. This will be your first page in your binder.  | <b>5</b>        |               |
| <b>Business Agreement</b>                    | <b>1B</b>          | This page should be filled out completely (agreement period is 1/1/XX to 12/31/XX).  | <b>10</b>       |               |
| <b>School Instruction/Planned Activities</b> | <b>2B-1</b>        | You should have the school instruction portion filled out as well as all planned activities in this section (one per month).   | <b>15</b>       |               |
| <b>Budget</b>                                | <b>2B-2</b>        | Record your expected income and expenses here. As a placement student you should only fill out wages earned in the income section. (Line 3)  | <b>10</b>       |               |
| <b>Training Agreement</b>                    | <b>3B</b>          | This should be filled out completely.  | <b>10</b>       |               |
| <b>Training Plan</b>                         | <b>4B</b>          | This should be filled out completely with at least 12 items in the plan.   | <b>15</b>       |               |
| <b>Financial Statement</b>                   | <b>6-1<br/>6-2</b> | Your starting date is 1/1/XX and the end date is 12/31/XX. You should add in all assets and liabilities as of 1/1/XX. If none in an area, please explain on the <b>SAE Explanation sheet</b> . | <b>20</b>       |               |
| <b>Safety Activities</b>                     | <b>8-2</b>         | Include at least 5 safety activities related to your project.  | <b>10</b>       |               |
| <b>FFA Leadership &amp; Participation</b>    | <b>10</b>          | Include your FFA degrees, offices, committees, and CDE participation on this page. (Up to 5 points Extra Credit)   | <b>EC</b>       |               |
| <b>Leadership Outside FFA</b>                | <b>12</b>          | Record all Non FFA activities. (Up to 5 points Extra Credit)   | <b>EC</b>       |               |
| <b>TOTAL</b>                                 |                    |  | <b>100</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>               |                    |  |                 |               |

\_\_\_\_\_ (Make sure pages 9B, 11B, 13B, 1-1, and 3 are finished by putting in the end date 12/31/XX and NONE)

These pages will first be printed off and turned in on white paper to be checked (except the SAE Binder Cover and Gold Cover Page- they should be printed off first). Once approved, pages 1B, 2B-1, 2B-2, 3B, 4B, 9B, 11B, and 13B should be printed off on blue paper and put in the binder. Pages 1-1 and 3 should be printed off on white paper.

**What you need to work on:**

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation Agriculture Placement Enterprise- End of Quarter

| Item   | Page #     | Description   | Points Possible | Points Earned |
|--|------------|---|-----------------|---------------|
| <b>Record Keeping</b>  |            |   |                 |               |
| <b>Experiences</b>   | <b>5B</b>  | Record all experiences you have had so far on this page. Please write in complete sentences. Include the number of hours with the experience. You should have a total for each month. (You should have a <b>minimum</b> of 3 lines each month)  | <b>30</b>       |               |
| <b>Wage/labor Summary</b>  | <b>7B</b>  | You should include information from your paycheck. Every time you get paid, record your hours and money earned on this page. Make sure to include taxes taken out. <b>If no taxes are taken out, explain why on the SAE Explanation sheet.</b>  | <b>20</b>       |               |
| <b>Misc. Income</b>  | <b>1-2</b> | Record all money you have received since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Personal Expenses</b>   | <b>1-3</b> | Record all money you have spent since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Skills and Tasks Learned</b>                                    | <b>8-1</b> | You should include at least 1 skill and tasks learned each month.   | <b>10</b>       |               |
| <b>FFA Leadership &amp; Participation</b>                          | <b>10</b>  | Include your FFA degrees, offices, committees, and CDE participation on this page. If you have none, put in none.   | <b>EC</b>       |               |
| <b>Other FFA Activities</b>  | <b>11</b>  | Record all FFA activities other than CDEs. If you have none, put in none.   | <b>EC</b>       |               |
| <b>Supporting Documentation</b>                                    |            |   |                 |               |
| <b>Supporting Documents (Pictures or other approved documents)</b> |            | Supporting Documents-All pictures should show student actively working on the SAE project. <b>These should be printed off or affixed to a 3- hole punched white sheet of paper with its captions.</b> It will be turned in with this evaluation and then it should be put in the record book.<br><br><b>You need to have three <u>NEW</u> Supporting Documents each grading period.</b> | <b>20</b>       |               |
| <b>TOTAL</b>   |            |   | <b>100</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>                                     |            |   |                 |               |

These pages need to be printed off and turned in by the due date on white paper. Supporting documents should be **affixed to a 3- hole punched white sheet of paper with its captions.**

**What you need to work on:**

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation

### Agriculture Placement Enterprise- End of the Year (January)- Previous Year's Book

| Item  | Page #             | Description   | Points Possible | Points Earned |
|---|--------------------|---|-----------------|---------------|
| <b>Record Keeping</b>                                 |                    |   |                 |               |
| <b>Experiences</b>                                    | <b>5B</b>          | Record all experiences you have had so far on this page. Please write in complete sentences. Include the number of hours with the experience. You should have a total for each month. (You should have a minimum of 3 lines each month)         | <b>30</b>       |               |
| <b>Wage/labor Summary</b>                             | <b>7B</b>          | You should include information from your paycheck. Every time you get paid, record your hours and money earned on this page. Make sure to include taxes taken out. If no taxes are taken out, explain why on the <b>SAE Explanation sheet</b> . | <b>20</b>       |               |
| <b>Labor &amp; Management Earnings</b>                | <b>14B</b>         | You need to put in your "students share numbers." All other figures should transfer automatically.  | <b>10</b>       |               |
| <b>Evaluation Factors</b>                             | <b>15B</b>         | Put in your evaluation factors. Number of paid hours, Number of unpaid hours, Average hourly rate of pay, Highest hourly rate of pay  | <b>5</b>        |               |
| <b>Misc. Income</b>                                   | <b>1-2</b>         | Record all money you have received since January 1 <sup>st</sup> of this past year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Personal Expenses</b>                              | <b>1-3</b>         | Record all money you have spent since January 1 <sup>st</sup> of this past year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Income &amp; Expense Summary- Wage Earning SAE</b> | <b>5</b>           | This page fills out automatically. It just needs to be printed off. Make sure to print off page 4 (Income & Expense Summary/ Entrepreneurial SAE as well- Nothing should be on this page)   | <b>5</b>        |               |
| <b>Financial Statement</b>                            | <b>6-1<br/>6-2</b> | You should now add in all assets and liabilities as of 12/31/XX. The entire document should now be filled out. If none in an area, please explain on the <b>SAE Explanation sheet</b> .   | <b>20</b>       |               |
| <b>Narrative</b>                                      | <b>7</b>           | This should be at least 1 page per enterprise.  | <b>20</b>       |               |
| <b>TOTAL</b>  |                    |   | <b>130</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>                        |                    |   |                 |               |

These pages will first be printed off and turned in on white paper to be checked. Once approved Pages 5B, 7B, 14B, and 15B should be printed off on blue paper and put in the binder. Also Pages 1-2, 1-3, 4, 5, 6-1, 6-2, 7, 8, 9, 10, 11, and 12 should be printed on white paper.

**What you need to work on:**

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation

### Agriculture Business Enterprise- Beginning of the Year (January)- NEW BOOK

| Item  | Page #             | Description  | Points Possible | Points Earned |
|---|--------------------|--|-----------------|---------------|
| <b>Record Keeping</b>                             |                    |  |                 |               |
| <b>SAE Binder Cover</b>                           |                    | This should include your name, Orion FFA Chapter, your project area, and a picture related to your project.  | <b>5</b>        |               |
| <b>Gold Cover Page</b>                            |                    | Print this page off on Gold paper. This will be your first page in your binder.  | <b>5</b>        |               |
| <b>Business Agreement</b>                         | <b>1B</b>          | This page should be filled out completely (agreement period is 1/1/XX to 12/31/XX. It should be PRINTED off on blue paper and signed.  | <b>10</b>       |               |
| <b>School Instruction/<br/>Planned Activities</b> | <b>2B-1</b>        | You should have the school instruction portion filled out as well as all planned activities in this section.   | <b>15</b>       |               |
| <b>Budget</b>                                     | <b>2B-2</b>        | Record your expected income and expenses here.   | <b>10</b>       |               |
| <b>Inventory of Non-Depreciable Items</b>         | <b>13B</b>         | Put in all non-depreciable inventory (does not decrease in value) in here for the beginning of the year. Dates are 1/1/XX and 12/31/XX. Make sure to put in the students share %. If none, explain on the <b>SAE Explanation sheet</b> . | <b>15</b>       |               |
| <b>Depreciation</b>                               | <b>3</b>           | Include items you depreciate and other pertinent info. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Financial Statement</b>                        | <b>6-1<br/>6-2</b> | Your starting date is 1/1/XX and the end date is 12/31/XX. You should add in all assets and liabilities as of 1/1/XX. If none in an area, please explain on the <b>SAE Explanation sheet</b> .   | <b>20</b>       |               |
| <b>Safety Activities</b>                          | <b>8-2</b>         | Include at least 5 safety activities related to your project.  | <b>10</b>       |               |
| <b>FFA Leadership &amp; Participation</b>         | <b>10</b>          | Include your FFA degrees, offices, committees, and CDE participation on this page. (Up to 5 points Extra Credit)   | <b>EC</b>       |               |
| <b>Leadership Outside FFA</b>                     | <b>12</b>          | Record all Non FFA activities. (Up to 5 points Extra Credit)   | <b>EC</b>       |               |
| <b>TOTAL</b>                                      |                    |  | <b>100</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>                    |                    |  |                 |               |

\_\_\_\_\_ (Make sure pages 3B & 4B are finished by putting in a N/A on the page)

These pages will first be printed off and turned in on white paper to be checked (except the SAE Binder Cover and Gold Cover Page- they should be printed off first). Once approved, pages 1B, 2B-1, 2B-2, 3B, and 4B, should be printed off on blue paper and put in the binder.

**What you need to work on:**



Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation Agriculture Business Enterprise- End of Quarter

| Item   | Page #     | Description   | Points Possible | Points Earned |
|--|------------|---|-----------------|---------------|
| <b>Record Keeping</b>  |            |   |                 |               |
| <b>Experiences</b>   | <b>5B</b>  | Record all experiences you have had so far on this page. Please write in complete sentences. Include the number of hours with the experience. You should have a total for each month. (You should have a minimum of 3 lines each month)   | <b>30</b>       |               |
| <b>Wage/labor Summary</b>  | <b>7B</b>  | You should only include your total monthly hours on this page.  | <b>10</b>       |               |
| <b>Receipts</b>  | <b>9B</b>  | You should include all money you make here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Cash &amp; Noncash Expenses</b>                                 | <b>11B</b> | You should include all money you spend on your enterprise here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Capital Inventory</b>   | <b>1-1</b> | Record any capital inventory you have purchased or sold. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Misc. Income</b>  | <b>1-2</b> | Record all money you have received since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Personal Expenses</b>   | <b>1-3</b> | Record all money you have spent since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Skills and Tasks Learned</b>                                    | <b>8-1</b> | You should include at least 1 skill and tasks learned each month.   | <b>10</b>       |               |
| <b>FFA Leadership &amp; Participation</b>                          | <b>10</b>  | Include your FFA degrees, offices, committees, and CDE participation on this page. If you have none, put in none.   | <b>EC</b>       |               |
| <b>Other FFA Activities</b>  | <b>11</b>  | Record all FFA activities other than CDEs. If you have none, put in none.   | <b>EC</b>       |               |
| <b>Supporting Documentation</b>                                    |            |   |                 |               |
| <b>Supporting Documents (Pictures or other approved documents)</b> |            | Supporting Documents-All pictures should show student actively working on the SAE project. <b>These should be printed off or affixed to a 3- hole punched white sheet of paper with its captions.</b> It will be turned in with this evaluation and then it should be put in the record book.<br><br><b>You need to have three <u>NEW</u> Supporting Documents each grading period.</b> | <b>20</b>       |               |
| <b>TOTAL</b>   |            |   | <b>120</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>                                     |            |   |                 |               |

These pages need to be printed off and turned in by the due date on white paper. Supporting documents should be **affixed to a 3- hole punched white sheet of paper with its captions.**

**What you need to work on:**

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

**Supervised Agricultural Experience Program Evaluation**  
**Agriculture Business Enterprise- End of the Year (January)- Previous Year's Book**

| Item                                      | Page #             | Description   | Points Possible | Points Earned |
|---|--------------------|---|-----------------|---------------|
| <b>Record Keeping</b>                     |                    |   |                 |               |
| <b>Experiences</b>                        | <b>5B</b>          | Record all experiences you have had so far on this page. Please write in complete sentences. Include the number of hours with the experience. You should have a total for each month. (You should have a minimum of 3 lines each month) | <b>30</b>       |               |
| <b>Wage/labor Summary</b>                 | <b>7B</b>          | You should only include your total monthly hours on this page.  | <b>10</b>       |               |
| <b>Receipts</b>                           | <b>9B</b>          | You should include all money you make here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Cash &amp; Noncash Expenses</b>        | <b>11B</b>         | You should include all money you spend on your enterprise here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Inventory of Non-Depreciable Items</b> | <b>13B</b>         | Put in all non-depreciable inventory (does not decrease in value) in here for the end of the year. Dates are 1/1/XX and 12/31/XX. Make sure to put in the students share %. If none, explain on the <b>SAE Explanation sheet</b> .      | <b>30</b>       |               |
| <b>Labor &amp; Mngt. Earnings</b>         | <b>14B</b>         | You need to put in your "students share" numbers. All other figures should transfer automatically.  | <b>10</b>       |               |
| <b>Evaluation Factors</b>                 | <b>15B</b>         | Put in your evaluation factors. Number of paid hours, number of unpaid hours, etc.  | <b>5</b>        |               |
| <b>Capital Inventory</b>                  | <b>1-1</b>         | Put in all inventory that is depreciable. If none, explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Misc. Income</b>                       | <b>1-2</b>         | Record all money you have received since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Personal Expenses</b>                  | <b>1-3</b>         | Record all money you have spent since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Depreciation</b>                       | <b>3</b>           | Include items you depreciate and other pertinent info. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Income &amp; Expense Summary- Ent.</b> | <b>4</b>           | This page fills out automatically. It just needs to be printed off. Make sure to print off page 5 (Income & Expense Summary/ Wage Earning SAE as well- nothing should be on this page.)   | <b>5</b>        |               |
| <b>Financial Statement</b>                | <b>6-1<br/>6-2</b> | You should now add in all assets and liabilities as of 12/31/XX. The entire document should now be filled out. If none in an area, please explain on the <b>SAE Explanation sheet</b> .   | <b>20</b>       |               |
| <b>Narrative</b>                          | <b>7</b>           | This should be at least 1 page per enterprise.  | <b>20</b>       |               |
| <b>TOTAL</b>                              |                    |   | <b>190</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>            |                    |   |                 |               |

These pages will first be printed off and turned in on white paper to be checked. Once approved Pages 5B, 7B, 9B, 11B, 13B, 14B, and 15B should be printed off on blue paper and put in the binder. Also Pages 1-1, 1-2, 1-3, 4, 5, 6-1, 6-2, 7, 8, 9, 10, 11, and 12 should be printed on white paper.

**What you need to work on:**

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

**Supervised Agricultural Experience Program Evaluation**  
**Animal Entrepreneurship Enterprise- Beginning of the Year (January)- NEW BOOK**

| Item                                      | Page #             | Description  | Points Possible | Points Earned |
|---|--------------------|--|-----------------|---------------|
| <b>Record Keeping</b>                     |                    |  |                 |               |
| <b>SAE Binder Cover</b>                   |                    | This should include your name, Orion FFA Chapter, your project area, and a picture related to your project.  | <b>5</b>        |               |
| <b>Gold Cover Page</b>                    |                    | Print this page off on Gold paper. This will be your first page in your binder.  | <b>5</b>        |               |
| <b>Business Agreement</b>                 | <b>1A</b>          | This page should be filled out completely (agreement period is 1/1/XX to 12/31/XX. It should be PRINTED off on blue paper and signed.  | <b>10</b>       |               |
| <b>Plans &amp; Goals/Budget</b>           | <b>2A</b>          | Include all plans and goals as well as record your expected income and expenses here.  | <b>25</b>       |               |
| <b>Inventory of Non-Depreciable Items</b> | <b>13B</b>         | Put in all non-depreciable inventory (does not decrease in value) in here for the beginning of the year. Dates are 1/1/XX and 12/31/XX. Make sure to put in the students share %. If none, explain on the <b>SAE Explanation sheet</b> . | <b>15</b>       |               |
| <b>Depreciation</b>                       | <b>3</b>           | Include items you depreciate and other pertinent info. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Financial Statement</b>                | <b>6-1<br/>6-2</b> | Your starting date is 1/1/XX and the end date is 12/31/XX. You should add in all assets and liabilities as of 1/1/XX. If none in an area, please explain on the <b>SAE Explanation sheet</b> .   | <b>20</b>       |               |
| <b>Safety Activities</b>                  | <b>8-2</b>         | Include at least 5 safety activities related to your project.  | <b>10</b>       |               |
| <b>FFA Leadership &amp; Participation</b> | <b>10</b>          | Include your FFA degrees, offices, committees, and CDE participation on this page. (Up to 5 points Extra Credit)   | <b>EC</b>       |               |
| <b>Leadership Outside FFA</b>             | <b>12</b>          | Record all Non FFA activities. (Up to 5 points Extra Credit)   | <b>EC</b>       |               |
| <b>TOTAL</b>                              |                    |  | <b>100</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>            |                    |  |                 |               |

These pages will first be printed off and turned in on white paper to be checked (except the SAE Binder Cover and Gold Cover Page- they should be printed off first). Once approved, pages 1A. and 2A should be printed off on yellow paper and put in the binder.

**What you need to work on:**

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation Animal Entrepreneurship Enterprise – End of Quarter

| Item  | Page #      | Description   | Points Possible | Points Earned |
|---|-------------|---|-----------------|---------------|
| <b>Record Keeping</b>   |             |   |                 |               |
| <b>Production Records</b>   | <b>3A-1</b> | If you breed animals and raise the young, include the production records here.  | <b>10</b>       |               |
| <b>Death Loss</b>   | <b>3A-2</b> | If you only raise market animals, please write in NONE and a date of 12/31/XX in bred date and due date. Please explain on the <b>SAE Explanation sheet</b> if you have none and you are raising breeding animals.<br>If you have death loss, include this. If none, put in an end date of 12/31/XX and NONE in the cause of death section.   |                 |               |
| <b>Quantity of Animal Products</b>                                    | <b>4A-1</b> | If you have animal products, enter your dates/quantities here. If none, put in an end date of 12/31/XX and NONE in the first box. Please explain on the <b>SAE Explanation sheet</b> if you have chickens, sheep, etc. and do not have animal products.   | <b>5</b>        |               |
| <b>Experiences</b><br>(put in chores weekly)                          | <b>5A</b>   | Record all experiences you have had so far on this page. Please write in complete sentences. Include the number of hours with the experience. You should have a total for each month. (You should have a minimum of 3 lines each month)   | <b>30</b>       |               |
| <b>Wage/labor Summary</b>   | <b>7A</b>   | You should only include your total monthly hours on this page.  | <b>10</b>       |               |
| <b>Receipts</b>   | <b>9A</b>   | You should include all money you make here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Cash &amp; Noncash Expenses</b>                                    | <b>11A</b>  | You should include all money you spend on your enterprise here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Capital Inventory</b>  | <b>1-1</b>  | Record any capital inventory you have purchased or sold. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Misc. Income</b>   | <b>1-2</b>  | Record all money you have received since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Personal Expenses</b>  | <b>1-3</b>  | Record all money you have spent since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Skills and Tasks Learned</b>                                       | <b>8-1</b>  | You should include at least 1 skill and tasks learned each month.   | <b>10</b>       |               |
| <b>FFA Leadership &amp; Participation</b>                             | <b>10</b>   | Include your FFA degrees, offices, committees, and CDE participation on this page. If you have none, put in none.   | <b>EC</b>       |               |
| <b>Other FFA Activities</b>   | <b>11</b>   | Record all FFA activities other than CDEs. If you have none, put in none.   | <b>EC</b>       |               |
| <b>Supporting Documentation</b>                                       |             |   |                 |               |
| <b>Supporting Documents</b><br>(Pictures or other approved documents) |             | Supporting Documents-All pictures should show student actively working on the SAE project. <b>These should be printed off or affixed to a 3- hole punched white sheet of paper with its captions.</b> It will be turned in with this evaluation and then it should be put in the record book.<br><br><b>You need to have three <u>NEW</u> Supporting Documents each grading period.</b> | <b>20</b>       |               |
| <b>TOTAL</b>  |             |   | <b>135</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>  |             |   |                 |               |

These pages need to be printed off and turned in by the due date on white paper. Supporting documents should be **affixed to a 3- hole punched white sheet of paper with its captions.**

**What you need to work on:**

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation

### Animal Entrepreneurship- End of the Year (January)- Previous Year's Book

| Item                                      | Page #                   | Description   | Points Possible | Points Earned |
|---|--------------------------|---|-----------------|---------------|
| <b>Record Keeping</b>                     |                          |   |                 |               |
| <b>Production Records</b>                 | <b>3A-1</b>              | If you breed animals and raise the young, include the production records here.  | <b>10</b>       |               |
| <b>Death Loss</b>                         | <b>3A-2</b>              | If you only raise market animals, please write in NONE and a date of 12/31/XX in bred date and due date. Please explain on the <b>SAE Explanation sheet</b> if you have none and you are raising breeding animals.<br>If you have death loss, include this. If none, put in an end date of 12/31/XX and NONE in the cause of death section. |                 |               |
| <b>Quantity of Animal Products</b>        | <b>4A-1</b>              | If you have animal products, enter your dates/quantities here. If none, put in an end date of 12/31/XX and NONE in the first box. Please explain on the <b>SAE Explanation sheet</b> if you have chickens, sheep, etc. and do not have animal products.   | <b>5</b>        |               |
| <b>Experiences</b>                        | <b>5A</b>                | Record all experiences you have had so far on this page. Please write in complete sentences. Include the number of hours with the experience. You should have a total for each month. (You should have a minimum of 3 lines each month)   | <b>30</b>       |               |
| <b>Wage/labor Summary</b>                 | <b>7A</b>                | You should only include your total monthly hours on this page.  | <b>10</b>       |               |
| <b>Receipts</b>                           | <b>9A</b>                | You should include all money you make here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Cash &amp; Noncash Expenses</b>        | <b>11A</b>               | You should include all money you spend on your enterprise here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Inventory of Non-Depreciable Items</b> | <b>13A</b>               | Put in all non-depreciable inventory (does not decrease in value) in here for the end of the year. Dates are 1/1/XX and 12/31/XX. Make sure to put in the students share %. If none, explain on the <b>SAE Explanation sheet</b> .  | <b>30</b>       |               |
| <b>Labor &amp; Mngt. Earnings</b>         | <b>14A</b>               | You need to put in your "students share" numbers. All other figures should transfer automatically.  | <b>10</b>       |               |
| <b>Evaluation Factors</b>                 | <b>15A</b>               | Put in your evaluation factors. Number of paid hours, number of unpaid hours, etc.  | <b>5</b>        |               |
| <b>Capital Inventory</b>                  | <b>1-1</b>               | Put in all inventory that is depreciable. If none, explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Misc. Income</b>                       | <b>1-2</b>               | Record all money you have received since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Personal Expenses</b>                  | <b>1-3</b>               | Record all money you have spent since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Depreciation</b>                       | <b>3</b>                 | Include items you depreciate and other pertinent info. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Income &amp; Expense Summary- Ent.</b> | <b>4</b>                 | This page fills out automatically. It just needs to be printed off. Make sure to print off page 5 (Income & Expense Summary/ Wage Earning SAE as well- nothing should be on this page.)   | <b>5</b>        |               |
| <b>Financial Statement</b>                | <b>6-1</b><br><b>6-2</b> | You should now add in all assets and liabilities as of 12/31/XX. The entire document should now be filled out.<br>If none in an area, please explain on the <b>SAE Explanation sheet</b> .  | <b>20</b>       |               |
| <b>Narrative</b>                          | <b>7</b>                 | This should be at least 1 page per enterprise.  | <b>20</b>       |               |
| <b>TOTAL</b>                              |                          |   | <b>205</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>            |                          |   |                 |               |

These pages will first be printed off and turned in on white paper to be checked. Once approved Pages 3A-1, 3A-2, 4A-1, 5A, 7A, 9A, 11A, 13A, 14A, and 15BA should be printed off on blue paper and put in the binder. Also Pages 1-1, 1-2, 1-3, 4, 5, 6-1, 6-2, 7, 8, 9, 10, 11, and 12 should be printed on white paper.

**What you need to work on:**

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation

### Crop Entrepreneurship Enterprise- Beginning of the Year (January)- NEW BOOK

| Item   | Page #             | Description  | Points Possible | Points Earned |
|--|--------------------|--|-----------------|---------------|
| <b>Record Keeping</b>                          |                    |  |                 |               |
| <b>SAE Binder Cover</b>                        |                    | This should include your name, Orion FFA Chapter, your project area, and a picture related to your project.  | <b>5</b>        |               |
| <b>Gold Cover Page</b>                         |                    | Print this page off on Gold paper. This will be your first page in your binder.  | <b>5</b>        |               |
| <b>Business Agreement</b>                      | <b>1C</b>          | This page should be filled out completely (agreement period is 1/1/XX to 12/31/XX. It should be PRINTED off on green paper and signed.   | <b>10</b>       |               |
| <b>Plans and Goals/Budget and Test Results</b> | <b>2C</b>          | At the top of the page include all plans for your project. At the bottom complete a budget for your enterprise. Also fill out soil test results (if none for soil test results, type NONE in there)                                      | <b>25</b>       |               |
| <b>Inventory of Non-Depreciable Items</b>      | <b>13C</b>         | Put in all non-depreciable inventory (does not decrease in value) in here for the beginning of the year. Dates are 1/1/XX and 12/31/XX. Make sure to put in the students share %. If none, explain on the <b>SAE Explanation sheet</b> . | <b>15</b>       |               |
| <b>Depreciation</b>                            | <b>3</b>           | Include items you depreciate and other pertinent info. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Financial Statement</b>                     | <b>6-1<br/>6-2</b> | Your starting date is 1/1/XX and the end date is 12/31/XX. You should add in all assets and liabilities as of 1/1/XX. If none in an area, please explain on the <b>SAE Explanation sheet</b> .   | <b>20</b>       |               |
| <b>Safety Activities</b>                       | <b>8-2</b>         | Include at least 5 safety activities related to your project.  | <b>10</b>       |               |
| <b>FFA Leadership &amp; Participation</b>      | <b>10</b>          | Include your FFA degrees, offices, committees, and CDE participation on this page. (Up to 5 points Extra Credit)   | <b>EC</b>       |               |
| <b>Leadership Outside FFA</b>                  | <b>12</b>          | Record all Non FFA activities. (Up to 5 points Extra Credit)   | <b>EC</b>       |               |
| <b>TOTAL</b>                                   |                    |  | <b>100</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>                 |                    |  |                 |               |

These pages will first be printed off and turned in on white paper to be checked (except the SAE Binder Cover and Gold Cover Page- they should be printed off first). Once approved, pages 1C. and 2C should be printed off on green paper and put in the binder.

**What you need to work on:**

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation Crop Entrepreneurship Enterprise – End of Quarter

| Item   | Page #     | Description   | Points Possible | Points Earned |
|--|------------|---|-----------------|---------------|
| <b>Record Keeping</b>  |            |   |                 |               |
| <b>Production Records</b>  | <b>3C</b>  | Enter in your production records here. If you have not planted yet, just type in your varieties and plan on planting and note that you haven't planted yet on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Experiences</b>   | <b>5C</b>  | Record all experiences you have had so far on this page. Please write in complete sentences. Include the number of hours with the experience. You should have a total for each month. (You should have a minimum of 3 lines each month)   | <b>30</b>       |               |
| <b>Wage/labor Summary</b>  | <b>7C</b>  | You should only include your total monthly hours on this page.  | <b>10</b>       |               |
| <b>Receipts</b>  | <b>9C</b>  | You should include all money you make here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Cash &amp; Noncash Expenses</b>                                 | <b>11C</b> | You should include all money you spend on your enterprise here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Capital Inventory</b>   | <b>1-1</b> | Record any capital inventory you have purchased or sold. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Misc. Income</b>  | <b>1-2</b> | Record all money you have received since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Personal Expenses</b>   | <b>1-3</b> | Record all money you have spent since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Skills and Tasks Learned</b>                                    | <b>8-1</b> | You should include at least 1 skill and tasks learned each month.   | <b>10</b>       |               |
| <b>FFA Leadership &amp; Participation</b>                          | <b>10</b>  | Include your FFA degrees, offices, committees, and CDE participation on this page. If you have none, put in none.   | <b>EC</b>       |               |
| <b>Other FFA Activities</b>  | <b>11</b>  | Record all FFA activities other than CDEs. If you have none, put in none.   | <b>EC</b>       |               |
| <b>Supporting Documentation</b>                                    |            |   |                 |               |
| <b>Supporting Documents (Pictures or other approved documents)</b> |            | Supporting Documents-All pictures should show student actively working on the SAE project. <b>These should be printed off or affixed to a 3- hole punched white sheet of paper with its captions.</b> It will be turned in with this evaluation and then it should be put in the record book.<br><br><b>You need to have three <u>NEW</u> Supporting Documents each grading period.</b> | <b>20</b>       |               |
| <b>TOTAL</b>   |            |   | <b>130</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>                                     |            |   |                 |               |

These pages need to be printed off and turned in by the due date on white paper. Supporting documents should be affixed to a 3- hole punched white sheet of paper with its captions.

**What you need to work on:**

Name \_\_\_\_\_ Proficiency Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation

### Crop Entrepreneurship- End of the Year (January)- Previous Year's Book

| Item                                      | Page #             | Description   | Points Possible | Points Earned |
|---|--------------------|---|-----------------|---------------|
| <b>Record Keeping</b>                     |                    |   |                 |               |
| <b>Production Records</b>                 | <b>3C</b>          | Enter in your production records here.  | <b>10</b>       |               |
| <b>Crop Production</b>                    | <b>4C-1</b>        | Include all sales, inventory, purchases, and production of products. Make sure to include all numbers for your product(s).  | <b>10</b>       |               |
| <b>Enterprise Analysis</b>                | <b>4C-2</b>        | Enter all analysis factors here.  | <b>10</b>       |               |
| <b>Experiences</b>                        | <b>5C</b>          | Record all experiences you have had so far on this page. Please write in complete sentences. Include the number of hours with the experience. You should have a total for each month. (You should have a minimum of 3 lines each month) | <b>30</b>       |               |
| <b>Wage/labor Summary</b>                 | <b>7C</b>          | You should only include your total monthly hours on this page.  | <b>10</b>       |               |
| <b>Receipts</b>                           | <b>9C</b>          | You should include all money you make here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Cash &amp; Noncash Expenses</b>        | <b>11C</b>         | You should include all money you spend on your enterprise here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Inventory of Non-Depreciable Items</b> | <b>13C</b>         | Put in all non-depreciable inventory (does not decrease in value) in here for the end of the year. Dates are 1/1/XX and 12/31/XX. Make sure to put in the students share %. If none, explain on the <b>SAE Explanation sheet</b> .      | <b>30</b>       |               |
| <b>Labor &amp; Mngt. Earnings</b>         | <b>14C</b>         | You need to put in your "students share" numbers. All other figures should transfer automatically.  | <b>10</b>       |               |
| <b>Capital Inventory</b>                  | <b>1-1</b>         | Put in all inventory that is depreciable. If none, explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Misc. Income</b>                       | <b>1-2</b>         | Record all money you have received since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Personal Expenses</b>                  | <b>1-3</b>         | Record all money you have spent since January 1 <sup>st</sup> of this year. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | <b>10</b>       |               |
| <b>Depreciation</b>                       | <b>3</b>           | Include items you depreciate and other pertinent info. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | <b>10</b>       |               |
| <b>Income and Expense Summary- Ent.</b>   | <b>4</b>           | This page fills out automatically. It just needs to be printed off. Make sure to print off page 5 (Income and Expense Summary/ Wage Earning SAE as well- nothing should be on this page)  | <b>5</b>        |               |
| <b>Financial Statement</b>                | <b>6-1<br/>6-2</b> | You should now add in all assets and liabilities as of 12/31/XX. The entire document should not be filled in. If none in an area, please explain on the <b>SAE Explanation sheet</b> .  | <b>20</b>       |               |
| <b>Narrative</b>                          | <b>7</b>           | This should be at least 1 page per enterprise   | <b>20</b>       |               |
| <b>TOTAL</b>                              |                    |   | <b>215</b>      |               |
| <b>PERCENTAGE (OUT OF 100)</b>            |                    |   |                 |               |

These pages will first be printed off and turned in on white paper to be checked. Once approved Pages 3C, 4C-1, 4C-2, 5C, 7C, 9C, 11C, 13C, and 14C should be printed off on blue paper and put in the binder. Also Pages 1-1, 1-2, 1-3, 4, 5, 6-1, 6-2, 7, 8, 9, 10, 11, and 12 should be printed on white paper.

**What you need to work on:**



# Agriscience Research Projects

## Introduction

When selecting a topic for your agriscience research project, consider your ongoing SAE program as a good place in which to begin. Quality experimental SAE projects/activities are well suited for all students and can be easily incorporated into any SAE program. Experimental SAE activities can provide valuable learning experiences for students with agriscience-related career goals (as well as those with other career interests).

Developing a quality agriscience project includes or requires:

- Focusing on an important agricultural/scientific issue, question or principle.
- Specific research objectives.
- Using a number of steps.
- Following a scientific process to collect and analyze data.
- Student commitment to a moderate or substantial amount of time.
- Teacher supervision.

## Agriscience Category Description and Examples

### **Animal Systems (AS)**

The study of animal systems, including life processes, health, nutrition, genetics, management and processing, through the study of small animals, aquaculture, livestock, dairy, horses and/or poultry.

Examples:

- Compare nutrient levels on animal growth
- Research new disease control mechanisms
- Effects of estrous synchronization on ovulation
- Compare effects of thawing temperatures on livestock semen
- Effects of growth hormone on meat/milk production

### **Environmental Services/Natural Resource Systems (ENR)**

The study of systems, instruments and technology used in waste management; the study of the management of soil, water, wildlife, forests and air as natural resources and their influence on the environment.

Examples:

- Effect of agricultural chemicals on water quality
- Effects of cropping practices on wildlife populations
- Compare water movements through different soil types

### **Food Products and Processing Systems (FPP)**

The study of product development, quality assurance, food safety, production, sales and service, regulation and compliance and food service within the food science industry.

Examples:

- Effects of packaging techniques on food spoilage rates
- Resistance of organic fruits to common diseases
- Determining chemical energy stored in foods
- Control of molds on bakery products

### **Plant Systems (PS)**

The study of plant life cycles, classifications, functions, structures, reproduction, media and nutrients, as well as growth and cultural practices, through the study of crops, turf grass, trees and shrubs and/or ornamental plants.

Examples:

- Determine rates of transpiration in plants
- Effects of heavy metals such as cadmium on edible plants
- Compare GMO and conventional seed/plant growth under various conditions

- Effects of lunar climate and soil condition on plant growth
- Compare plant growth of hydroponics and conventional methods

### **Power, Structural and Technical Systems (PST)**

The study of agricultural equipment, power systems, alternative fuel sources and precision technology, as well as woodworking, metalworking, welding and project planning for agricultural structures.

Examples:

- Develop alternate energy source engines
- Create minimum energy use structures
- Compare properties of various alternative insulation products
- Investigation of light/wind/water energy sources

### **Social Systems (SS)**

The study of human behavior and the interaction of individuals in and to society, including agricultural education, agribusiness economic, agricultural communication, agricultural leadership and other social science applications in agriculture, food and natural resources.

Examples:

- Investigate perceptions of community members towards alternative agricultural practices
- Determine the impact of local/state/national safety programs upon accident rates in agricultural/natural resource occupations
- Comparison of profitability of various agricultural/natural resource practices
- Investigate the impact of significant historical figures on a local community
- Determine the economical effects of local/state/national legislation impacting agricultural/natural resources

### **Selecting a Topic**

Approximately 61 million Americans work in agriculture today, with only two percent of those working in traditional, production agriculture. Agriscience is an exciting and continuously growing field. You too can be on the cutting edge of science and technology. Have you considered a career as a botanist, food scientist, geneticist, microbiologist, quality assurance specialist, research technician, soil scientist, water quality specialist or a veterinarian? These and many other agriscience careers await your exploration.

When selecting a topic for an agriscience competition, there are some items to keep in mind. If possible, select a topic that matches closely with your on-going supervised agricultural experience (SAE). By integrating your agriscience fair project and your SAE, both programs will provide great benefit. Doing this allows you to participate in all aspects of research and experimentation with your area with a goal of enhancing your experience. A quality experimental SAE can be developed by all FFA members and is especially well suited for those in agricultural classes where there is a strong emphasis on biotechnology or agriscience.

Experimental SAE activities can provide valuable learning experiences for all students.

Be sure that the topic you select is of interest to you. Choose a topic that is realistic in relationship to your abilities, knowledge and the resources available. The best idea in the world will remain just an idea without the ability, desire and tools needed to complete the task. Long-term projects (two-and-three year studies) allow you to more deeply investigate your topic and tend to do better in agriscience events than those completed in only one year. These projects collect more data during multiple phases and involve more replications of the experiment than projects of shorter duration. Try to select a topic that lends itself to expansion from year to year in order to discover as much as possible about your subject and collect complete and useful data. The earlier you begin competing in the agriscience program and the longer you remain committed to a project, the better your chances are of reaping some excellent benefits from your efforts.

If you simply have no idea what type of project you are interested in, then you need to do some research. A visit to the state or national agriscience competition can be an excellent means for getting ideas.

Once the topic has been identified, it is time to construct the theoretical base upon which your experiment will be built. It is up to you to find as much written material about your topic as you can using a variety of sources; i.e., the Internet, books, magazines, film, local experts, university professors, county extension agents, etc.

Do not limit your search to only one type of media. If your topic is unique, then you will find very little material available that directly relates to your experiment. In this case, locate any material that relates (even vaguely) to your subject. There may be information about a similar process that you plan to use, or the economic impact exhibited by another crop, animal or process that might be mirrored in your experiment. Remember you are searching for items that will enable you to build an argument that your proposed research project is necessary and can make a positive contribution to the body of knowledge that already exists.

As a rule of thumb, include a minimum of 15 references in the project report. While this is not a mandatory number for references, it shows you made an effort to locate pertinent information supporting your proposed research topic and methods.

## **Rules for the Agriscience Research Project**

### **Plagiarism**

An agriscience project must be the result of a student's own effort and ability. However, in securing information as direct quotes or phrases, specific dates, figures or other materials, that information must be marked in "quotes" in manuscripts and identified in the Literature Cited or Reference section of the written report. Non-compliance represents plagiarism and will automatically disqualify a student from the Agriscience Competition as well as a zero (0) for their project grade.

Students MAY NOT:

- In any way falsify a permission form, scientific paper or display.
- Use another person's results or thoughts as their own even with the permission of this person. This includes work done by a family member or a mentor.
- Use information or data obtained from the Internet without proper citation.
- Re-enter a project with only minor changes.

### **Ethics Statement**

Scientific fraud and misconduct is not condoned at any level of research or competition. Plagiarism, use of presentation of other researcher's work as one's own and fabrication or falsification of data will not be tolerated. Fraudulent projects will result in elimination from the Agriscience Fair or Proficiency Awards. Unethical behavior will result in notification to the student's local school administration.

### **Multiple Student Research Projects**

If more than one agriscience project is entered from the same chapter and/or school, then projects must differ in:

- research hypotheses (questions or objectives).
- findings related to the research hypothesis (questions or objectives).
- conclusions.
- recommendations.

Each of the published authors must have made a unique and substantial contribution to the research endeavor. It is standard that peripheral contributions be acknowledged (i.e., The Researchers would like to thank Mr. Solomonson for his assistance in...).

## Safety Rules

1. If an exhibit becomes unsafe or unsuitable for display, it will be removed and deemed ineligible for any awards.
2. Projects involving vertebrate animal subjects must conform with the following statement and have a fully completed non-human vertebrate endorsement form submitted:

Experiments on live animals involving surgery, the removal of parts, injection of harmful chemicals and/or exposure to harmful environments are not acceptable at the FFA Agriscience Fair. Live vertebrates may not be exhibited at the fair.
3. Hypodermic needles, syringes, crystals [other than sucrose (sugar) and sodium chloride (salt)] and/or toxic and hazardous chemicals are prohibited from display at the FFA Agriscience Fair. Students should substitute colored water, photographs, three dimensional models or drawings for chemicals and crystals.
4. All necessary chemical glassware must be displayed in a stable manner. The items must be back from the edge of the table and may not be operational at any time.
5. No wild cultures may be incubated above room temperature; no cultures taken from humans or other warm-blooded animals may be used. This includes, but is not limited to, skin, throat and mouth.
6. Only plastic Petri dishes may be used in displays, and they must be sealed.
7. Lasers may not be used in any exhibit.
8. Dangerous and combustible materials are prohibited.
9. No exhibit may have open flames. Any part of an exhibit that can get hotter than 100 degrees Celsius (boiling water temperature) must be adequately protected from its surroundings.
10. If an exhibit includes electrical wiring or devices, they must be safe. For voltages above 20 volts, special precautions must be taken. All connections must be secure and provide suitable protection against short circuits, etc.
11. All wiring carrying more than 20 volts must be well insulated. Also, the connections must either be soldered or secured by UL listed fasteners. The wire used must be insulated adequately for the maximum voltage that will be present, and the wire must be of sufficient size to carry the maximum current you anticipate. Open knife switches or door bell-type push buttons in circuits using more than 20 volts may not be used.
12. If the exhibit will be connected to 120 volt AC power (plugged into a wall outlet), fuses or circuit breakers must be provided to protect not only the exhibit, but also any others that may share the same sources of power. The power cord used must be UL listed for the voltage and current it will be carrying, and it must be at least 1.8 meters (6 feet) long.
13. Exhibits requiring voltage in excess of 120 volts AC are not allowed.

## **Agriscience Research Project Components:**

### **Logbook**

Your logbook is one of the most important pieces of your project. It will contain accurate and detailed notes of a well-planned, implemented project. Your notes should be a consistent and thorough record of your project. These notes will be your greatest aid when writing your paper.

#### **Sample Logbook**

*You must keep careful records of all that you do and all that happens during your project. This should be in the form of a daily diary called a logbook.*

#### **Sample Logbook**

**Date:** 1/13/11

Today I checked my plants at 12:30 p.m. I noticed that Group A seems to be growing faster than groups B, C and D. Specifically, plant A<sub>2</sub> seems to be growing the best. The plants in Group A are not just taller, but seem to be greener and healthier. It is interesting to note that the plant with the longest root development is plant C<sub>3</sub>. I do not know the reason for this. Here is a chart of my results for today:

| <b>Plant</b> | <b>Height in cm.</b> | <b># of Leaves</b> | <b>Root length in cm.</b> | <b>Observations</b>     |
|--------------|----------------------|--------------------|---------------------------|-------------------------|
| A1           | 5                    | 4                  | 3.1                       | Has not grown           |
| A2           | 5.2                  | 5                  | 3.4                       | Has a new leaf          |
| A3           | 5.3                  | 4                  | 3.4                       | Is tallest in the group |
| B1           | 4.9                  | 4                  | 3.1                       | Has not changed         |
| B2           | 4.8                  | 4                  | 3.0                       | Has not shown growth    |
| B3           | 4.8                  | 5                  | 2.5                       | Poor root growth        |
| C1           | 5.0                  | 4                  | 2.3                       | Poor root growth        |
| C2           | 4.3                  | 5                  | 3.4                       | Lowest height           |
| C3           | 4.5                  | 4                  | 4.2                       | Longest roots           |
| D1           | 4.3                  | 4                  | 3.2                       | Lowest height           |
| D2           | 4.7                  | 4                  | 2.9                       | Low root growth         |
| D3           | 4.4                  | 4                  | 2.0                       | Least root development  |

- ✓ Notice there are comments and a chart for each entry.
- ✓ Developing an outline template for the logbook and photocopying a page for each daily entry can be helpful.
- ✓ The logbook can be created either in a notebook or as a collection of pages.
- ✓ Use a separate page for each daily entry.

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## **Written Report**

### **Title Page**

Your title should be a precise description of the work performed. The title page should include the title of your project, your name, grade, school and school address. This should be all that appears on this page. The title itself should be no more than three lines with a 15 word maximum. All numbers, chemical elements and compounds should be spelled out. All words should be capitalized except for articles (such as “a” and “the”), prepositions (such as “of,” “in,” “on,” “during” and “between”) and conjunctions (such as “and” and “but”) unless they are the first word of the title.

## **Abstract**

An abstract is a brief summary of your paper, which concisely describes your purpose, methods, results and conclusion. Do not include the title in the abstract. Your abstract may include potential research applications or future research. The abstract should not contain cited references. It should be no longer than one page and in paragraph form. Because this is the first page of your project report, it will be where the reader forms an opinion on your work. In your abstract, arrange your points as 1) Purpose, 2) Procedure, 3) Conclusion. These sections would include materials used, effects of major treatments and main conclusions. Do not include discussion, citations and footnotes, or references to tables and figures or methods.

## **Introduction**

The introduction answers the question “Why was the work done?” Provide background on your subject in several paragraphs. The introduction should clearly state the problem that justifies conducting the research, the purpose of the research, the findings of earlier work and the general approach and objectives. You must cite sources for statements that are not common knowledge. The last paragraph of the introduction includes the objectives of the study.

## **Review of Literature**

The literature review should detail to the reader what information currently exists concerning your research project. Information listed in your review should be materials that you have used for your research. Material cited could include articles about similar studies, similar research methods, history of the research area and any other items that support the current knowledge base for the research topic and how your project might complement existing information.

## **Materials and Methods**

A well-written materials and methods section will enable others to reproduce your results by duplicating your study. Write in past tense, third person, encompassing all of the materials required and explaining the technical and experimental procedures employed. With fieldwork, describe the study site. Include any statistical procedures employed.

## **Results**

This section should be a summary of the results your project has produced, even if they were not what you expected. Do not include discussion or conclusions about the data. Tell the reader exactly what you discovered and what patterns, trends or relationships were observed. Decide on the most meaningful way to present your data (tables, figures) and refer to them in your text.

## **Discussion and Conclusion**

In this section draw conclusions from the results of your study and relate them to the original hypothesis. It is helpful to briefly recap the results and use them as a foundation for your conclusions. If your results were not what you expected, take this opportunity to explain why. Give details about your results and observations by elaborating on the mechanisms behind what happened. Tie your study in with the literature, but do not hesitate to offer sound reasoning of your own.

## **References**

Only significant, published and relevant sources accessible through a library or an information system should be included. All citations in the text must be included in the reference section. When you use information or facts that are not common knowledge, you must give credit to the source of that information by citing a reference. You should use the APA style recognized citation system throughout your report.

## **Acknowledgements**

Acknowledge anyone who helped in any aspect of your project in this section.

## Format of Report

The report should be printed on 8 1/2" x 11" white bond paper. The report will have 1" margins. Font size must be 12 using Arial, Courier or Times New Roman font. The APA style recognized citation system should be used throughout the report.

## Display

Each exhibit should include information relevant to the study and any objects the student wishes to display. All projects must have the following information attached to the exhibit:

- Name of person(s) responsible for developing the project
- Chapter name, state
- Title of category entered
- Division entered (I, II, III or IV)

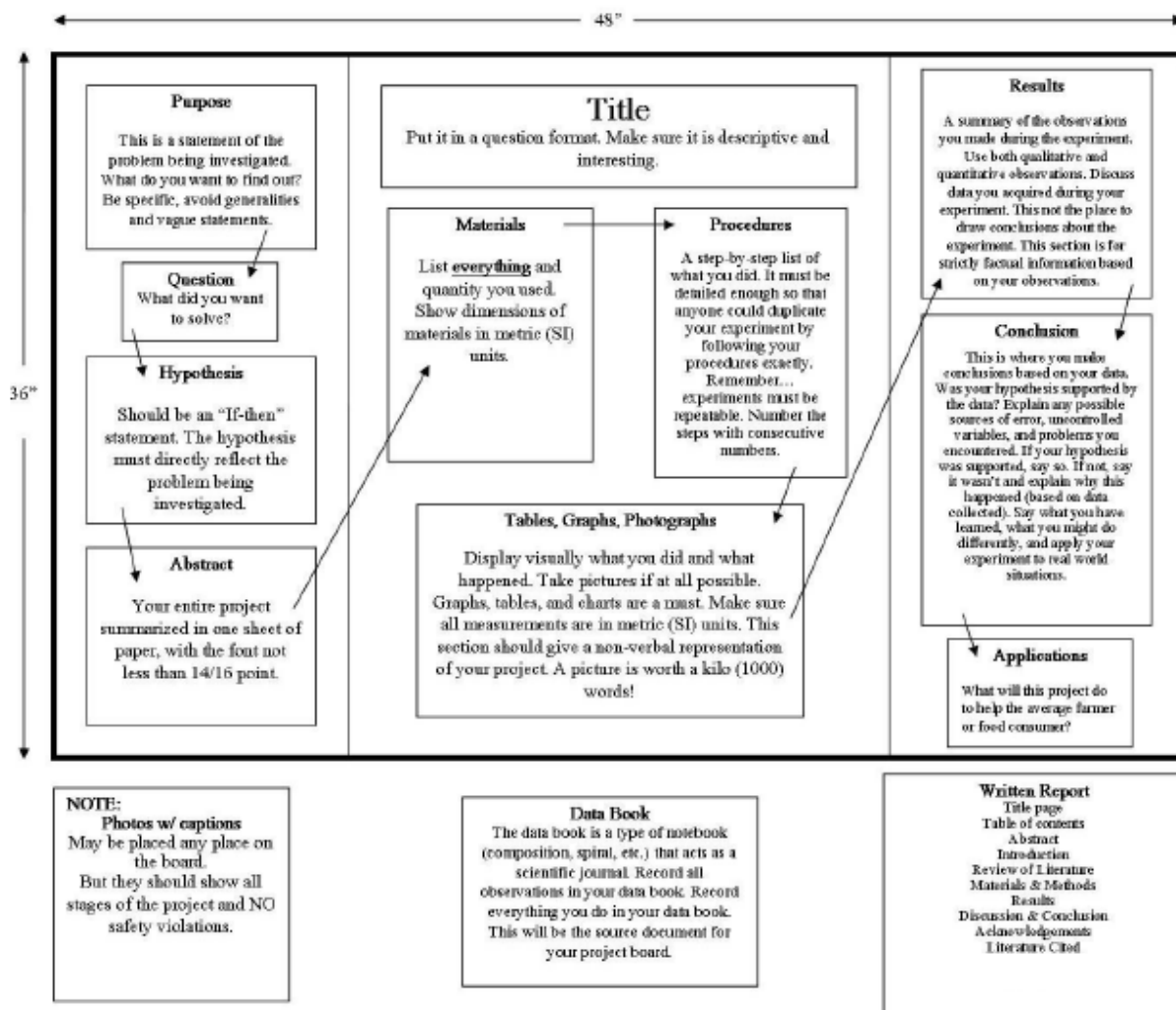
## Preferred Display Requirements

It is preferred that the participants display the results of their study utilizing a standard printed poster with dimensions of 36 inches (height) by 48 inches (width). Posters can be created utilizing Microsoft PowerPoint™ slide format. The display should be stable and free standing on the provided table top. Each participant is responsible for providing backing for the poster. The display may include any objects the student wishes to exhibit, as long as they adhere to safety guidelines.

## Standard Display Requirements

A standard display should consist of one or more panels of information and any objects the student wishes to display within safety guidelines. The exhibit panels must be constructed to be stable and free standing. The maximum size for a project is 48 inches wide by 30 inches deep (the distance from front to back) by 108 inches high (from floor to top of display, this includes the table and project).

The following image will give you a general idea of the types of things that should be included on your display; these ideas are exclusive or all-encompassing.



## **SAE Record Book**

Students will also need to complete the Agriscience insert and CORE records on the EZ Records website. This will mirror a majority of the components mentioned above. If a student has any questions on how to complete this portion they should refer to the earlier chapters in this handbook or ask Mr. Solomonson for clarification.

Students will be expected to complete an agriscience fair project within a semester's time.

The upcoming pages are the grading rubrics and worksheets for the Agriscience Research Project.

\*Note- Typically Agriscience SAE Projects are due the last week of the assigned month (January, March, May, September, October, and December)



Name \_\_\_\_\_ Research Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation

### Agriscience Research Enterprise- Evaluation 1

| Item                                 | Page #     | Description   | Points Possible | Points Earned |
|--------------------------------------|------------|---|-----------------|---------------|
| Record Keeping- EZ Records           |            |   |                 |               |
| SAE Binder Cover                     |            | This should include your name, Orion FFA Chapter, your project area, and a picture related to your project.   | 5               |               |
| Gold Cover Page                      |            | Print this page off on Gold paper. This will be your first page in your binder.   | 5               |               |
| Research Agreement                   | 1S         | This page should be filled out completely (agreement period is either 1/1/XX-6/1/XX or 9/1/XX-12/31/XX.) It should be PRINTED off on salmon paper and signed.   | 10              |               |
| Research Purpose                     | 2S-1       | You should enter in your project title, problem statement, hypothesis, what prompted the research, and the purpose of the research.   | 20              |               |
| Goals/Budget                         | 2S-2       | Record your expected income and expenses here. Income could be science fair premiums; expenses are all items you had to purchase to conduct your research.  | 10              |               |
| Research Plan                        | 3S         | Enter in all information.   | 5               |               |
| School Instruction/<br>Review of Lit | 12S        | Enter in school instruction you have had that relates to your research. Also add in all the research sources (cited properly)   | 10              |               |
| Inventory of Non-Depreciable Items   | 13S        | Put in all non-depreciable inventory (does not decrease in value) in here for the beginning of the semester. Dates are 1/1/XX and 12/31/XX. Make sure to put in the students share %. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> . | 15              |               |
| Human Vert. Endorsement              | 17S        | This should be filled out, printed off (on salmon paper) and signed.  | 5               |               |
| Non-human Vert. Endorsement          | 18S        | This should be filled out, printed off (on salmon paper) and signed.  | 5               |               |
| Hazardous Mat. Waiver Form           | 19S        | This should be filled out, printed off (on salmon paper) and signed.  | 5               |               |
| Financial Statement                  | 6-1<br>6-2 | Your starting date is 1/1/XX and the end date is 12/31/XX. You should add in all assets and liabilities as of 1/1/XX. If none in an area, please explain on the <b>SAE Explanation sheet</b> .  | 20              |               |
| FFA Leadership & Participation       | 10         | Include your FFA degrees, offices, committees, and CDE participation on this page. If you have none, put in none.   | 5               |               |
| Leadership Outside FFA               | 12         | Record all Non FFA activities. If you have none, put in none.   | 5               |               |
| Supporting Documentation             |            |   |                 |               |
| Supporting Documents                 |            | Worksheet- Topic, Variables, Hypothesis, and Rationale  | 15              |               |
|                                      |            | REVIEW OF LITERATURE  | 50              |               |
| TOTAL                                |            |   | 200             |               |
| PERCENTAGE (OUT OF 100)              |            |   |                 |               |

These pages will first be printed off and turned in on white paper to be checked (except the SAE Binder Cover and Gold Cover Page- they should be printed off first). Once approved, pages 1S, 2S-1, 2S-2, and 3S should be printed off on salmon paper and put in the binder.

# Agriscience Project: Topic, Variables, Hypothesis, and Rationale Worksheet

Name: \_\_\_\_\_ Hour \_\_\_\_\_ Date: \_\_\_\_\_

Writing a scientific research paper may seem complicated at first, but really it is a very simple process if you understand the individual steps. Answer the questions below and be sure to strictly follow the format described.

1. Is this going to be an individual or group project? \_\_\_\_\_  
1a. If a group project, who is your lab partner? \_\_\_\_\_ (only agriscience class)
2. What category area does your project fall into? (one of the 6 Agriscience categories) \_\_\_\_\_  
\_\_\_\_\_
3. What is your study subject (thing living or non-living thing that you are studying)? \_\_\_\_\_  
*This could be a plant like a radish, an animal like a chicken, or even a person such as a student.*
4. What is your independent variable? \_\_\_\_\_  
\_\_\_\_\_

*The independent variable is the thing you are purposely changing; for example, if you added Gatorade mix to chicken feed to measure growth "addition of Gatorade powder" would be your independent variable. You should have only one!*

5. What is your dependent variable? \_\_\_\_\_  
\_\_\_\_\_
6. What do you think will happen? \_\_\_\_\_  
\_\_\_\_\_

*Expected results are what you think will happen as a result of your experiment. For example, if you thought chickens would gain weight as a result of Gatorade mix, you would say "chickens on Gatorade will weigh more than chickens in the control group at the end of the experiment. Again, you need to be specific! Make sure that there is no doubt as to what you mean!*

7. Write your **Expected Title** below. Your Title should include **four** things: 1) The study subject, or the thing you are studying; 2) the independent variable, or the one thing you are changing; 3) the dependent variable, or the thing(s) that you are measuring; and 4) the results, or outcome of your experiment. (Title Might Change with Results)

**For example, examples of good titles include:**

-Radish plants that were given Skittles grew taller on average than the control radishes.

-Broiler Chickens On Gatorade Mix Treatment Weighed 10% More Than Chickens In The Control Group At The End Of The 4 Week Experiment.

-Addition Of 10 Mg Of Caffeine Powder To Water Increases Heart Rate Of Students By An Average Of 10 Beats Per Minute In Comparison To The Control.

-Organic Fertilizer Shows A Statistically Significant Increase In Rate Of Growth Of Radishes In Comparison To The Control

Remember – be specific; no one should have to wonder what you mean. **Your message should be clear and straightforward** without any need for guessing or interpretation. It is a good idea to also reference your **control population** (the group that did not receive the treatment). For example, an increase in height of 10% means nothing if the control also increased 10% in height.

8. **Hypothesis & Rationale** – in the space below, respond to the following questions:

- a. What is your **research question**? A research question is the unknown ‘thing’ that you were trying to determine.

We wondered/We were unsure if \_\_\_\_\_

\_\_\_\_\_  
*e.g. We were unsure what impact pure caffeine would have on heart rate.*

- b. What was your **hypothesis**? A hypothesis is what you think will happen in your experiment.

We hypothesize that \_\_\_\_\_

\_\_\_\_\_  
*e.g. We hypothesized that the addition of caffeine to pure water would cause a slight increase in the heart rate of participants compared to the control group.*

- c. What is your **rationale**? A rationale is why you think your hypothesis might be right.

We think/thought this because \_\_\_\_\_

\_\_\_\_\_  
*e.g. We thought this would be true largely because of personal experience. For example, when we would have coffee or soda, it seemed like our own heart rate increased. Research, particularly that of Folgers, et. al., also supports the idea that caffeine raises the heart rate (Folgers, 2009)*

- d. What is the purpose of the research? Why is this important?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Agriscience Project Review of Literature Scoring Rubric

| Requirement Area   | Total Points Possible     | High Points 5-4  | Medium Points 3-2   | Low Points 1-0   | Points Earned            |
|--|---------------------------|--|---|--|--------------------------|
| <b>Introduction</b>  | <b>5 points</b>           | The topic is introduced, and groundwork is laid as to the direction of the review of literature.   | Readers are aware of the overall problem, challenge, or topic of the article  | Neither implicit nor explicit reference is made to the topic or purpose of the review of literature.                             |                          |
| <b>Body: Coverage of content &amp; relationship to the topic of experiment</b>               | <b>5 points</b>           | Details the reader of information that currently exists or related to your topic. It includes information about similar studies, similar research methods, history of the research area, and any other items that support the current knowledge base of the topic. | The body includes some information relating to similar studies and research areas and is loosely tied to your project area.   | The information provided does not include information from related studies or similar research areas.                            |                          |
| <b>Body: Flow of the review of literature</b>  | <b>5 points</b>           | The review goes from general ideas to specific conclusions. Transitions tie sections together, as well as adjacent paragraphs.   | There is a basic flow from one section to the next, but not all sections or paragraphs follow in a natural or logical order.  | The body appears to have no direction, with subtopics appearing disjointed.  |                          |
| <b>Conclusion</b>  | <b>5 points</b>           | Conclusion does a good job summarizing the information presented in the paper. The author was able to make succinct and precise conclusions based on the review. Insights into the problem are appropriate.  | The conclusion loosely ties the information in the body together. The author provides concluding remarks that show an analysis and synthesis of ideas occurred. Some of the conclusions, however, were not supported in the body of the report. | There is no indication the author tried to synthesize the information or make a conclusion based on the literature under review. |                          |
| <b>Written in 3<sup>rd</sup> Person- Contains no personal pronouns</b>                       | <b>5 points</b>           | Contains no personal pronouns.   | Contains 1 personal pronoun.  | Contains more than 1 personal pronouns.  |                          |
| <b>Writing Mechanics</b>   | <b>5 points</b>           | Sentences are well-structured, without run-ons or fragments. No spelling, grammar, or punctuation errors are made.   | Few (1-3) spelling, grammar, or punctuation errors are made.  | Misspelled words, incorrect grammar, and improper punctuation are evident.   |                          |
| <b>Minimum 3 Reliable Sources (at least 1 non-internet)</b>                                  | <b>5 points</b>           | Has at least 3 reliable sources with one of those being a non-internet source.   | Has at least 3 sources, with at least one of them being an unreliable source or all are internet sources.   | Has less than 3 sources  |                          |
| <b>Proper APA Citations within text and proper Works Cited Page</b>                          | <b>10 points Weighted</b> | Contains correct in-text citations and proper works cited page.  | Has citations and works cited page, but with errors   | Is missing either in text citations or works cited page.   | $\frac{\quad}{2} \times$ |
| <b>At least 1 full page, typed, double-spaced, 1" margins, Arial or Times New Roman Font</b> | <b>5 points</b>           | At least 1 full page, typed, double-spaced, 1" margins, correct font   | 1 of the previous items is incorrect. (less than 1 page, not typed, not double spaced, incorrect font)  | More than 1 of the previous items is incorrect. (less than 1 page, not typed, not double spaced, incorrect font)                 |                          |
| <b>TOTAL</b>   | <b>50</b>                 |  |   |  |                          |

Name \_\_\_\_\_ Research Area \_\_\_\_\_

## Supervised Agricultural Experience Program Evaluation Agriscience Research Enterprise- Evaluation 2

| Item                               | Page #                                     | Description   | Points Possible | Points Earned |
|------------------------------------|--|---|-----------------|---------------|
| Record Keeping-EZ Records          |  |   |                 |               |
| Procedure Used                     | 4S   | Enter in the title, materials required to complete the project, and a step-by-step procedure list of how to conduct the research project.   | 20              |               |
| Experiences                        | 5S   | Record all experiences you have had so far on this page. Please write in complete sentences. Include the number of hours with the experience. You should have a total for each month.   | 30              |               |
| Research Skills, Comp. & Know.     | 6S   | You should include at least 1 new skill, competencies, or knowledge learned.  | 10              |               |
| Wage/labor Summary                 | 7S   | You should only include your total monthly hours on this page.  | 10              |               |
| Receipts                           | 9S   | You should include all money you make here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | 10              |               |
| Cash & Noncash Expenses            | 11S  | You should include all money you spend on your enterprise here. If there is none for a grading period, please explain on the <b>SAE Explanation sheet</b> .   | 10              |               |
| Inventory of Non-Depreciable Items | 13S  | Put in all non-depreciable inventory (does not decrease in value) in here for the end of the semester. Dates are 1/1/XX and 12/31/XX. Make sure to put in the students share %. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> . | 15              |               |
| Labor & Mngt. Earnings             | 14S  | You need to put in your “students share” numbers. All other figures should transfer automatically.  | 5               |               |
| Evaluation Factors                 | 15S  | Include all evaluation factors for this project.  | 5               |               |
| Abstract                           | 16S  | Enter in all required info and ½ to 1 page for your abstract.   | 5               |               |
| Misc. Income                       | 1-2  | Record all money you have received since the beginning of the semester. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .   | 10              |               |
| Personal Expenses                  | 1-3  | Record all money you have spent since beginning of semester. If you have none, put in none and explain on the <b>SAE Explanation sheet</b> .  | 10              |               |
| Income & Expense Summary- Ent.     | 4  | This page fills out automatically. It just needs to be printed off. Make sure to print off page 5 (Income & Expense Summary/ Wage Earning SAE as well- nothing should be on this page.)   | 10              |               |
| Financial Statement                | 6-1<br>6-2                                 | You should now add in all assets and liabilities as of the end of the semester. The entire document should now be filled out. If none in an area, please explain on the <b>SAE Explanation sheet</b> .  | 5               |               |
| Skills and Tasks Learned           | 8-1  | You should include at least 1 skill and tasks learned each month you did your project. (Should have 5-10 total)   | 5               |               |
| Supporting Documentation           |  |   |                 |               |
| Supporting Documents               | Final Research Paper, LogBook, and Display |   | 250             |               |
| TOTAL                              |  |   | 410             |               |
| PERCENTAGE (OUT OF 100)            |  |   |                 |               |

These pages need to be printed off and turned in by the due date on white paper.

Name \_\_\_\_\_

Research Title: \_\_\_\_\_

**Agriscience Project Written Paper Scoring Rubric**

| <b>Requirement Area</b>     | <b>Total Points Possible</b> | <b>High Points 5-4</b>  | <b>Medium Points 3-2</b>  | <b>Low Points 1-0</b>  | <b>Points Earned</b> |
|-----------------------------|------------------------------|---|---|--|----------------------|
| <b>Title Page</b>           | <b>5 points</b>              | Title precisely describes the work with no more than 3 lines and 15 words maximum. All numbers, chemical elements and compounds should be spelled out. Page should include student name, grade, school and school address. No spelling or grammar errors are present.   | Title vaguely describes the work with no more than 3 lines and 15 words maximum. All numbers, chemical elements and compounds should be spelled out. Page should include student name, grade, school and school address. Minor spelling or grammar errors are present.  | Title poorly describes the work and includes more than 3 lines and 15 words maximum. All numbers, chemical elements and compounds are not spelled out. Page should include student name, grade, school and school address. Excessive spelling or grammar errors are present.           |                      |
| <b>Abstract</b>             | <b>10 points Weighted</b>    | Abstract is brief and concisely describes the purpose, methods, results and conclusion. Abstract does not include title or cited references. Abstract is no longer than one page. Arrangement makes the purpose, procedure and conclusion clear. No spelling or grammar errors are present.   | Abstract describes the purpose, methods, results and conclusion. Abstract does not include title or cited references. Abstract is longer than one page. Arrangement makes the purpose, procedure and conclusion vague. Minor spelling or grammar errors are present.  | Abstract is poorly describes the purpose, methods, results and conclusion. Abstract includes title or cited references. Abstract is longer than one page. Arrangement makes the purpose, procedure and conclusion are not clear. Excessive spelling or grammar errors are present.     | ____X 2=             |
| <b>Introduction</b>         | <b>10 points Weighted</b>    | Introduction answers the question "Why was the work done?" and clearly states the problem that justifies the research being conducted, purpose of research, and general approach and objectives. Hypothesis is clearly stated. No spelling or grammar errors are present.   | Introduction answers the question "Why was the work done?" and vaguely states the problem that justifies the research being conducted, purpose of research, and general approach and objectives. Hypothesis is unclearly stated. Minor spelling or grammar errors are present.  | Introduction does not answers the question "Why was the work done?" and does not states the problem that justifies the research being conducted, purpose of research, and general approach and objectives. Hypothesis is not stated. Excessive spelling or grammar errors are present. | ____X 2=             |
| <b>Review of Literature</b> | <b>15 points Weighted</b>    | Details the reader of information that currently exists concerning your project. It includes information from sources about similar studies, similar research methods, history of the research area, and any other items that support the current knowledge base of the topic. At least 3 sources are cited. No spelling or grammar errors are present. | Does an average job of providing information that currently exists concerning your project. It includes information from sources about similar studies, similar research methods, history of the research area, and any other items that support the current knowledge base of the topic. At least 2 sources are cited. Minor (1-3) spelling or grammar errors are present. | Review of Literature is either is not included or does not do a good job providing information that currently exists concerning your project. Sources are not cited. Many spelling or grammar errors (3+) are present.   | ____X 3=             |

|   |                           |   |   |  |          |
|---|---------------------------|---|---|--|----------|
| <b>Materials &amp; Methods</b>          | <b>20 points Weighted</b> | Clearly wrote to enable others to reproduce the results duplicating the study. Section is written in third person and encompasses all materials required for the research. If used, the statistical procedure is included. No spelling or grammar errors are present.   | Not written clearly to enable others to reproduce the results duplicating the study. Section may or may not be written in third person and encompasses all materials required for the research. The statistical procedure are included but are unclear. Minor spelling or grammar errors are present.   | Written poorly so that others cannot reproduce the results duplicating the study. Section is not written in third person and does not encompass all materials required for the research. The statistical procedure are not included. Excessive spelling or grammar errors are present.   | ____X 4= |
| <b>Results</b>                          | <b>20 points Weighted</b> | Results of the project are summarized. Trends and relationships are clearly addressed. No conclusions are made in this section. Data that can stand alone in the form of tables and/or figures are included. Tables/figures should have headings, labels and proper use of measurement. Captions are included for each table/figure and are at least 2 font sizes smaller than font in table/figure and are single spaced. No spelling or grammar errors are present. | Results of the project are incompletely summarized. Trends and relationships are vague. No conclusions are made in this section. Data that can stand alone in the form of tables and/or figures are sometimes included. Tables/figures should have headings, labels and proper use of measurement. Captions are included for each table/figure and are at least 2 font sizes smaller than font in table/figure and are single spaced. Minor spelling or grammar errors are present. | Results of the project are poorly summarized. Trends and relationships are not addressed. Data that is not appropriately included as tables and figures and lacks heading, labels and proper use of measurement. Captions are not included for each table/figure. Excessive spelling or grammar errors are present.  | ____X 4= |
| <b>Discussion &amp; Conclusion</b>      | <b>25 points Weighted</b> | Conclusions are clearly drawn directly from the results of the study and relate directly to the hypothesis. Brief recap of the results is included and shown how they were foundation of the study. Sound reasoning is shown that conclusions are based on results and literature. Discussion refers to facts and figures in the results section. No spelling or grammar errors are present.  | Conclusions are unclearly drawn directly from the results of the study and partially relate directly to the hypothesis. Brief recap of the results is included and shown how they were foundation of the study. Unsound reasoning is shown that conclusions are based on results and literature. Discussion refers to facts and figures in the results section. Minor spelling or grammar errors are present.   | Conclusions are not drawn directly from the results of the study and do not relate directly to the hypothesis. No recap of the results is included or poorly shows how they were foundation for the study. Conclusions are not based on results or literature. Discussion poorly refers to the facts and figures in the results section. Excessive spelling or grammar errors are present. | ____X 5= |
| <b>References/<br/>Literature Cited</b> | <b>5 points</b>           | References listed are significant, published and relevant sources. APA citation style is used. No spelling or grammar errors are present.   | References listed are somewhat significant, published and relevant sources. APA citation style is used. Minor spelling or grammar errors are present.   | References listed are not significant, published and relevant sources. APA citation style is not used. Excessive spelling or grammar errors are present.   |          |

|                         |                           |  |   |   |          |
|-------------------------|---------------------------|--|---|---|----------|
|                         |                           |  |   |   |          |
| <b>Acknowledgements</b> | <b>5 points</b>           | Detailed list or paragraph is included acknowledging anyone who assisted with any aspect of the project and how they helped. No spelling or grammar errors are present.  | A list or paragraph is included acknowledging anyone who assisted with any aspect of the project. Minor spelling or grammar errors are present. | A list or paragraph is not included acknowledging anyone who assisted with any aspect of the project and how they helped. Excessive spelling or grammar errors are present. |          |
| <b>Format of Paper</b>  | <b>15 points Weighted</b> | Paper has headings for each section. A table of contents is included with page numbers. Report is typed on 8 1/2" X11" white paper. The report has 1" margins with a 12 point font using Arial, Courier, or Times New Roman.   | 1-2 of the previous are incorrect or missing.   | More than 2 of the previously mentioned items are incorrect or missing.   | ____X 3= |
| <b>Logbook</b>          | <b>20 points Weighted</b> | Logbook is included with accurate and detailed notes and observations of the research. This should be in a notebook or binder devoted to this project only. It should be hand written. The notes and observations are consistent and a through record of your project. | Logbook is included, but with little detail of the research or is not included in a notebook, binder, or is hand written.                       | Logbook is either not included or it does not match the information found in the paper.   | ____X 4= |
| <b>TOTAL</b>            | <b>150</b>                |  |   |   |          |

**Comments:**



## Agriscience Project Display Grading Rubric

| Item   | Points Possible | Points Earned |
|--|-----------------|---------------|
| <b>Meets Guidelines (project board must be used)</b><br>Width- maximum of 48 inches (3 pts)<br>Height- maximum of 36 inches (3 pts)<br>Must be stable and freestanding (4 pts) | 10              |               |
| <b>Photographs</b><br>At least 5 pictures (4 points per picture)   | 20              |               |
| <b>Title</b>   | 10              |               |
| <b>Purpose</b>   | 5               |               |
| <b>Question</b>  | 5               |               |
| <b>Hypothesis</b>  | 5               |               |
| <b>Abstract</b>  | 5               |               |
| <b>Materials</b>   | 5               |               |
| <b>Procedures</b>  | 5               |               |
| <b>Tables and Graphs</b>   | 5               |               |
| <b>Results</b>   | 5               |               |
| <b>Conclusion</b>  | 5               |               |
| <b>Applications</b>  | 5               |               |
| <b>Neatness and Eye Appeal</b>   | 10              |               |
| <b>TOTAL</b>   |                 |               |
| <b>100</b>   |                 |               |

Name\_\_\_\_\_

## SAE Explanation Sheet

**Directions:** If you need to explain why certain pages of your record book are not filled out completely, use the space below to explain why and attach this to your SAE Evaluation Rubric. Please use as much detail as possible.

**Production Records/Death Loss-**

(page 3A-1, 3A-2 OR 3C: Animal OR crop entrepreneurship)

**Quantity of Animal Products-**

(page 4A-1: Animal entrepreneurship)

**Wage/Labor Summary-**

(page 7B: placement only)

**Receipts-**

(page 9A, B, C, S: All except placement)

**Cash and Noncash Expenses-**

( page 11A, B, C, S: All except placement)

**Inventory of Non-depreciable Items-**

( page 13A, B, C, S: All except placement)

**Capital Inventory-**

(page 1-1: entrepreneurship areas)

**Misc. Income-**

(page 1-2: All areas)

**Personal Expenses-**

(page 1-3: All areas)

**Depreciation-**

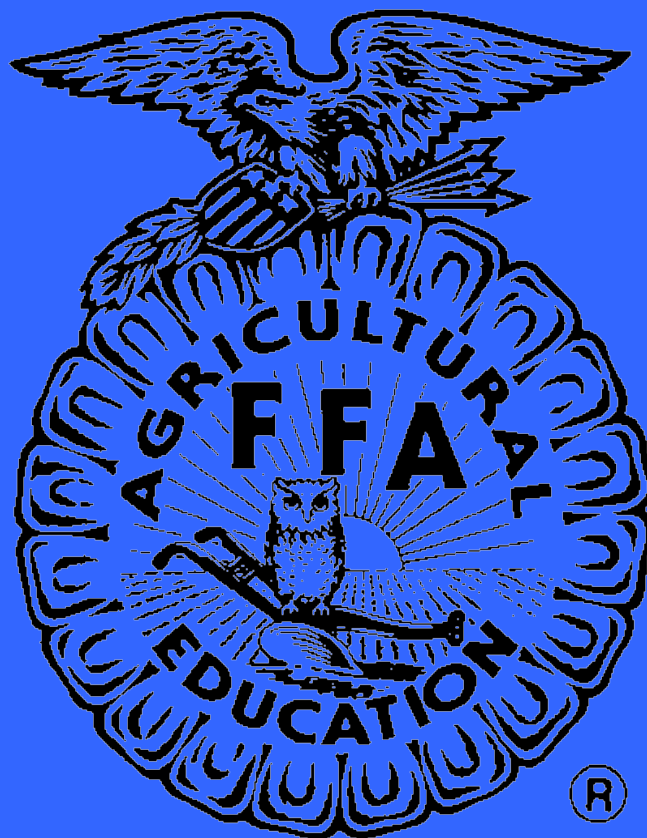
(page 3: entrepreneurship areas)

**Financial Statement-**

(pages 6-1 and 6-2: All areas)

## Notes:

This image shows a full page of white paper with horizontal blue lines. The lines are evenly spaced and run across the width of the page, typical of notebook paper. There are no margins, text, or other markings on the page.



**Orion High School Department of Agriculture SAE Handbook-**  
**Revised 2016 Version 5.2**