

Chapter 3

Agriculture as a Career

Lesson 3.1

Experiential Learning through Agriculture (SAE)

Lesson 3.2

Your Career in Agriculture



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While studying, look for the activity icon  to:

- **Practice** vocabulary terms with e-flash cards and matching activities.
- **Expand** learning with video clips, animations, and interactive activities.
- **Reinforce** what you learn by completing the end-of-lesson activities.
- **Test your knowledge** by completing the end-of-chapter questions.

Lesson 3.1

Experiential Learning through Agriculture (SAE)

Words to Know

enterprise
entrepreneurship SAE
experiential learning
exploratory SAE
hands-on learning
long-term goal
placement SAE
proficiency awards
research SAE
SAE improvement
project
short-term goal
Supervised Agricultural
Experience (SAE)

Did You Know?

Studies have shown that most people are more than four times as likely to remember something if they have a hands-on learning experience.

Lesson Outcomes

By the end of this lesson, you should be able to:

- Explain the importance of learning through experience.
- Compare and contrast the four main types of Supervised Agricultural Experiences (SAE).
- Develop a plan for a personal SAE, including evaluation of interests and resources.
- Set both short-term and long-term goals for your SAE.
- Apply proper recordkeeping skills related to an SAE program.

Before You Read

Before you read the lesson, read all of the table and photo captions. Share what you know about the material covered in this lesson just from reading the captions with a partner.

Learning to Do, Doing to Learn; these are the last two lines of the National FFA motto. Agricultural education has a long tradition of basing instruction on actual experiences. To facilitate learning through doing, agricultural classes are designed to provide you with the opportunity to participate in experiential learning. *Experiential learning* is the process of creating understanding from doing something. For example, you might be able to give someone all the instructions for driving a car, but they cannot really *learn* to drive until they have the experience of being behind the wheel.

This lesson will give you an overview of why experiential learning is important and allow you to develop your plan for learning through experience.

Experiential Learning

The concept of experiential learning is not new. Confucius (551 BCE–479 BCE) said, “I hear and I forget, I see and I remember, I do and I understand,” outlining the basic concept of experiential learning. Think about something that you know how to do really well; something that you feel qualified to teach someone to do. Think about the skills that are needed to perform this task. What mental images come to mind? Do you see words and a list of instructions for performing the task? Do you see a mental image of yourself going through the activity? It is a safe guess that you see images of the activity being performed. Our brains are hardwired to learn through experience, and that’s exactly what experiential learning is all about.

Agricultural Education

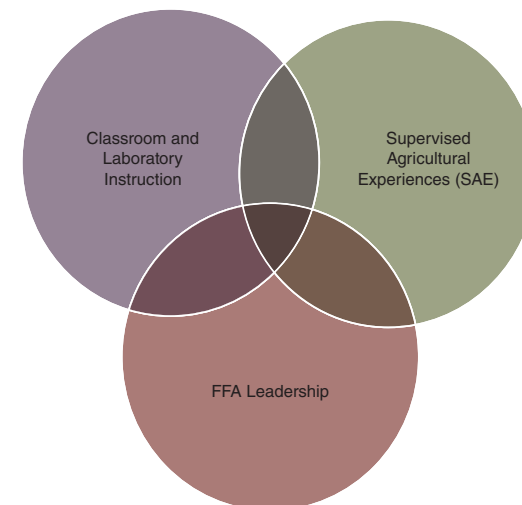
Agricultural education classes provide many opportunities for you to learn through experience. **Figure 3-1** shows the agricultural education model, including the places where experiential learning is likely to occur. In agricultural classes, there are many ways that your teacher can incorporate hands-on learning. *Hands-on learning* is instruction that includes activities provided for you to better understand and apply knowledge in a way that allows you to interact with material and objects. Agricultural education is set up to provide experiential learning in three components:

- Classroom and laboratory instruction.
- Leadership development through FFA activities.
- Hands-on application and learning through Supervised Agricultural Experiences (SAEs).

Classroom and Laboratory

The classroom and laboratory part of agricultural education classes allows for experiential learning through teaching methods that let you participate in the learning process. There are many different agriculture classes from which to choose. Many classes are specific to the agriculture in your particular region. Sometimes, an agriculture program is made up of only one instructor, who teaches all of the different agriculture classes. Quite often, agricultural education programs will have multiple teachers, who each specialize in a particular area of agricultural science. Who are the agricultural educators at your school?

One of the unique things about agriculture classes is their predisposition to laboratory activities. The structure and content of agricultural education courses makes them great places to explore new information through hands-on learning. Think about the different lab areas you have in your agriculture program. Greenhouses, gardens, animal labs, agricultural mechanics facilities, school farm plots, and even woodworking and food science areas are all used as lab spaces by agriculture programs around the country, **Figure 3-2**.



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Figure 3-1. The agricultural education model shows the three main components of a total program. *How balanced do you find your current agricultural education experience?*



Courtesy of Jason McKibben

Figure 3-2. There are many laboratory spaces available in a local agricultural education program. These students are working on developing their skills with electrical systems. *What skills can you develop in the lab of your agricultural education program?*

Your program does not need a special lab space to be hands-on; classrooms are also great places to perform smaller scale agricultural science laboratory activities.

FFA Activities

FFA activities allow you to learn concepts in class and apply them through leadership development and career development events. The National FFA Organization is an intracurricular part of an agricultural education program. Through FFA, agriculture students are provided the opportunity to not only gain skills related to agriculture, but also skills that will make them better communicators, leaders, and citizens.

Have you been to an FFA activity? Your local chapter has the opportunity to plan and conduct a wide variety of activities to help members develop leadership while doing service and having fun. Ask your agriculture teacher when the next FFA activity in your chapter is scheduled and how you can be a part of it. Consider getting involved and helping plan activities for the FFA members at your school. There are also activities at the area and state levels that will allow you to interact with other FFA members from around the country.

Supervised Agricultural Experiences (SAEs)

Every student in an agricultural education program or class is required to have an SAE project or program. *Supervised Agricultural Experiences (SAEs)* are personalized experiential learning programs made up of projects tailored to meet your needs and interests. SAEs are designed and conducted by students and supervised by agriculture teachers. Students choose an SAE based on their likes, interests, and talents. There are four guiding questions used to determine if something can be used as an SAE:

- Has the project been planned and developed based on student interests and resources?
- Does the student plan on documenting and recording the activities of the experience?
- Will the project be supervised and overseen by the agriculture teacher or FFA Advisor?
- Is the project based in agriculture, food, or natural resources?

SAE Type	Description	Investment of	
		Time	Money
Exploratory	Learning something new about the agricultural industry	Yes	Typically none
Research	Using the scientific method to analyze a research question	Yes	Typically none
Placement	Working for someone else in the agricultural industry	Yes	No input, may be paid
Entrepreneurship	Owning and managing an agricultural enterprise	Yes	Yes, responsible for all cost input and profit

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Figure 3-3. The four types of SAEs have been developed to help you make the most of your current interests and resources. *Which type is best for you?*

If all four of these questions can be answered yes, then the project can be considered a viable option for an SAE. Your agricultural science teacher is the expert on this topic. If you have an idea and are not sure it fits the SAE requirements, talk to your teacher and let him or her help you. Because no two students are alike, and SAE programs should be individualized, there are many options for what you can do for your SAE. Each specific project you include in your SAE is called an *enterprise*.

Types of SAEs

There are four types of SAEs (Figure 3-3):

- Exploratory
- Research
- Placement
- Entrepreneurship

The main differences between SAE types is the nature of resources invested and the outcome of the project. All SAE types require records of the experiences and resources to be kept.

Exploratory

Exploratory SAEs allow you to invest time in learning something new about the agricultural industry, **Figure 3-4**. Exploratory SAEs are a great way to learn about an agricultural area before you undertake a full-scale investment of money and resources. The primary investment in an exploratory SAE is time. The records kept on

Did You Know?

The blue corduroy jacket was adopted as official dress in 1933, when FFA members saw the band from Fredricktown, Ohio, wearing matching jackets to the National FFA Convention. Gus Lintner, the director of the band, is credited with its creation. Do you have an FFA jacket yet?



wavebreakmedia/Shutterstock.com

Figure 3-4. Exploratory SAEs allow you the opportunity to learn more about a career or special topic in agriculture.

an exploratory SAE will include the new information or skills learned, along with the hours you spend learning about your chosen topic.

Research

Research SAEs are designed for you to use the scientific method to analyze a research question or test a hypothesis. This type of SAE, as shown in **Figure 3-5**, is a great way to learn more about something you are interested in, and develop your scientific research skills. This type of SAE typically involves only an investment in time. Records are kept related to the hours spent on the research, along with the initial research, procedures, data collected from research, and conclusions that can be made from the project.

Placement

The third type of SAE is a **placement SAE**. In placement SAEs, you work for someone else, **Figure 3-6**. Placement SAEs can occur when you work for an agricultural business, for an individual for wages, or unpaid internships. There is no investment of money, only an investment of time spent working. Records are kept on the hours spent, skills learned, and of any money that has been made through the hours worked.



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Figure 3-5. Completing a Research SAE allows you to conduct an experiment based on agricultural products. They are also perfect for competing in the Agriscience Fair program.



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Figure 3-6. Placement SAEs involve you working for someone else. These SAEs can be paid or unpaid, and keep track of your investment in time.

Entrepreneurship

The final type of SAE is an **entrepreneurship SAE**. In an entrepreneurship SAE, **Figure 3-7**, you have the chance to own your own SAE resources and make management decisions related to the entire enterprise. There is typically an investment of both time and money in this type of SAE. Records are kept on the time spent with the project, the skills learned, the money spent, and the income received from the project.

Developing an SAE Plan

Now that you know the types of SAEs, it is time to start thinking about what SAE enterprises you might like to have. Some people would assume that there is a *best* type of SAE, or that having a stockshow animal is a more valuable experience than having a placement experience. That could not be further from the truth. One of the most important aspects of an SAE program is that it is custom tailored to you.

It is important to remember that you can have more than one SAE enterprise, and that your SAEs might be different types. For example, if you work at a local flower shop, and also have a market hog for a junior livestock show, you have two SAE enterprises: one placement and one entrepreneurship.

There are several considerations that you need to think about when selecting an SAE. Most of the considerations you will need to make are related to developing a personal SAE inventory. Your personal inventory should be conducted related to your interests and your resources.

SAE Interests

One of the coolest things about an SAE is that it allows you to completely control what you want to learn more about, and your personal interests come into play, **Figure 3-8**. There are many different paths for specialization that you can take. Generally, SAEs will fall into one of the following description categories:

- **Animal**—includes all animals kept for entrepreneurship SAEs, along with all employment, research, and exploration with animals of all types.
- **Agribusiness**—deals with the financial end of agriculture including lending, accounting, and commodity markets.
- **Leadership, education, and communication**—involves working with producers and consumers to help develop understanding about agriculture.



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Figure 3-7. Owning a stockshow animal is an example of an entrepreneurship project. You are the sole owner of the enterprise and make all management decisions.



ra2studio/Shutterstock.com

Did You Know?

There are several good SAE inventories available online, all of which will take into account your interests and available resources to help you determine which SAE is right for you. One of the most commonly used online SAE inventories is Explore SAE, a website that allows you to learn about the different SAE areas and explore which SAE might be right for you. Ask your teacher about using an online inventory in your SAE selection process.


Figure 3-8. Your interests can take your SAE path in many different directions.

- Environmental service—related to preserving and reclaiming our natural environment.
- Food products and processing—includes everything required to process and regulate agricultural goods entering the food supply.
- Power, structural, and technical—deals with the design, fabrication, and maintenance for agricultural equipment and structures.
- Natural resources—involved with the management and conservation of natural resources including minerals, water, air, soil, and wildlife.
- Plants—deals with the cultivation and growth of plants used in the food system or in ornamental applications.
- Biotechnology—related to using technology to enhance the natural world through genetic engineering or other technologies.

Understanding which of these categories you are interested in is an important step in finding the right SAE for you. The table in **Figure 3-9** gives you some examples of each type of SAE in each interest category.

Examples of SAEs by Type and Category				
Description Categories	Exploratory	Research	Placement	Entrepreneurship
Animal	Finding the requirements to become a veterinarian	Testing which feed makes laying hens produce the most eggs	An internship at the local dairy farm	Owning and exhibiting a market steer
Agribusiness	Examining the trends in price for a certain agricultural commodity	Conducting market research to decide which product consumers prefer	Working for a local agricultural lender	Owning a service that completes payroll services for local farmers
Leadership, Education, and Communication	Looking at which universities offer Agricultural Leadership Degree Programs	Experimenting to see if students in agriculture classes with required SAE grades complete more SAE hours	Interning at a local radio station	Designing and maintaining websites for local agricultural businesses
Environmental Service	Exploring the number of water pollution complaints in your county	Testing air quality at various places in your community	Volunteering to help with a community recycling project	Running a company that collects scrap metals and brings them to recycling centers
Food Products and Processing	Determining the requirements for safe food handling in the United States	Testing the differences between organic and nonorganic foods	Working at a local farmers market	Selling homemade jams and jellies
Power, Structural, and Technical	Finding a two-year certificate program in diesel mechanics	Conducting load tests for different shapes of metal roofing	Working in a local farm implement dealer service shop	Owning a mobile equipment repair company that provides infield service to producers
Natural Resources	Compiling a list of the most utilized natural resources in your state	Conducting soil tests for farms in different locations in your county	Interning with the local division of wildlife services	Owning a firewood and fence post company
Plant	Looking at the media for information about how drought affects crops in your area	Testing soil amendments to see their impact on corn plants	Working for a local farmer to harvest forage crops	Owning a landscaping and yard-mowing company
Biotechnology	Examining the job requirements for becoming a genetic engineer	Conducting an experiment to compare the growth of GMO and non-GMO plants	Serving as a research assistant in a biotechnology lab	Producing GMO crops

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 **Figure 3-9.** Looking at different examples of SAEs can help you understand where your SAE might fit. *Do you see an SAE in this table that you might find interesting?*

SAE Resources

Once you understand your interest areas, you can begin to determine what type of SAE will fit you best. There are three main considerations that should be taken into account regarding your resources: time, money, and equipment. Examining your expectations in these three categories can provide great clarity to your SAE selection process.

Time

The amount of time you have to spend on your SAE will be a big factor in determining what type of SAE you should take on, **Figure 3-10**. Although every SAE is a little bit different, entrepreneurship SAEs typically take more time than exploratory or research projects. Placement SAEs require varying amounts of time, depending on how many hours you are scheduled to work at your SAE job. Determine how much free time you have to dedicate to an SAE by making a schedule of all of your responsibilities. Once you can determine how much available time you have, you can see where your SAE can fit into your time. Remember that the amount of time you can spend on your SAE will be a large determinant of how successful the project will be.

Money

Not all SAEs require an investment of money. Exploratory and research SAEs are typically conducted with no monetary input at all, and placement SAEs can even be conducted to help you earn money, **Figure 3-11**.



Figure 3-10. Time is one of the biggest considerations to keep in mind when selecting a potential SAE. Making sure you have enough time to work on your SAE will help you strengthen your experience.

Entrepreneurship SAEs are the type most likely to require a financial investment up front. This is because you are essentially starting your own business enterprise. Thinking through how much money you have available can guide your selection of an SAE. Will you need to have money to purchase an animal for your show animal project? Will you need to purchase advertising materials for your landscaping business? Many students rely on short-term loans from their parents to get the funds needed to start their SAE. In addition, there are several organizations that will provide grants and loans to students for initial SAE costs.

Equipment/Facilities

The last category of resources you should consider is the special equipment or facilities you have available. For example, if you want to conduct a research SAE on growth patterns of greenhouse plants, you would need to have access to a greenhouse. Look around your agriculture program for available resources. By making a list of the equipment and facilities you have at home, school, or in other locations, you might be able to come up with a great idea for an SAE.

Your equipment or facilities may change over the course of time. An *SAE improvement project* is an enterprise undertaken to make changes to your SAE for the better. Some examples of improvement projects are designing a new website for your business, restoring an old piece of equipment, or building a new facility for use with your existing SAE enterprises, **Figure 3-12**.



Figure 3-12. Restoring an old piece of equipment for use with one of your SAE enterprises is an example of an improvement project.



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Figure 3-11. The amount of money you have to spend on SAE resources, and the amount you hope to profit from your SAE, are factors to use in making your selection.



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Figure 3-13. Selecting an SAE is very much like choosing a new sports team or after school activity. Pick one that fits both your interests and your schedule.

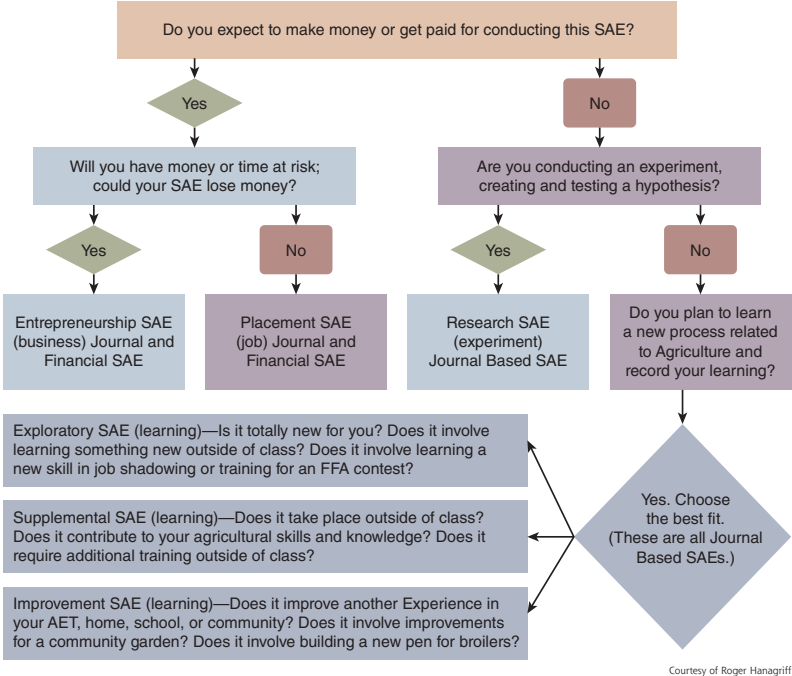
Selecting Your SAE

Once you have taken stock of your interests and available resources, you are ready to select your SAE. Deciding on an SAE is a little bit like trying out a new sport for the first time, **Figure 3-13**. You typically choose to try a new sport because it interests you, the schedule for practices and games fits into your current schedule, and you can commit to learning the skills required to be good at the sport. The same is true of an SAE. Select an SAE you are interested in and that fits into your schedule and financial situation, and commit yourself to being willing to learn the new skills so your SAE will be successful. Also like a new sport, if you decide the SAE you picked is not the best fit for you, you can reassess and move to another SAE that will be a better match.

The decision tree shown in **Figure 3-14** allows you to look at general types of SAEs you may want to pursue. Once you determine a general area, you can choose an interest area and finalize the specific details of your project.

Setting SAE Goals

The best way to make sure your SAE is successful is to develop SAE goals. Just like the personal leadership goals we discussed in *Lesson 2.1*, SAE goals should be SMART (specific, measurable, attainable, realistic, and timely). Setting goals for both short-term and long-term time frames will allow your SAE to have a guided path for the rest of your high school career, and in many cases, even beyond high school. When you are developing SAE goals, you can think about them in two broad categories: short-term and long-term.



Courtesy of Roger Hanagriff

Figure 3-14. If you are having difficulty deciding on an SAE, this decision tree can help you.

Short-term goals are those goals that you plan on accomplishing in the immediate future. A general guideline is that these goals can be accomplished in a time frame of less than one year. **Long-term goals** are those that may take several years to accomplish. When you determine which type of goal you are setting, you should consider at what point you are in your SAE development. For example, the goal of exhibiting the grand champion heifer at the county fair may be a short-term goal for someone who has shown for many years, and has already put in the time and resources to select and exhibit quality animals, **Figure 3-15**. The same goal might be a long-term goal for someone who is new to showing cattle.

As you develop goals, it is a good practice to write them down and refer to them often. To take the goal setting process one step further, you can make a list of the smaller steps required to accomplish your goals and begin working toward them.

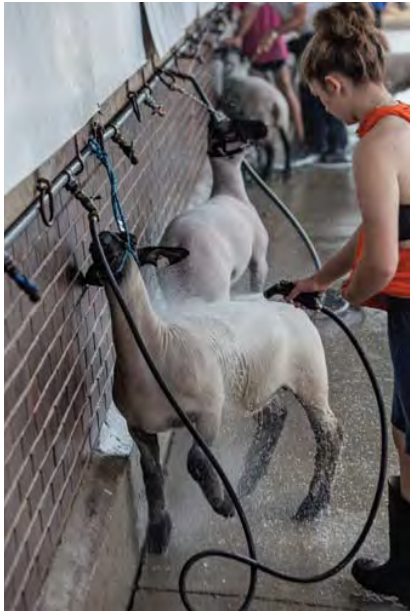


Figure 3-15. The same goal may be a short-term goal for one person and a long-term goal for another. For example, someone who has been showing livestock for many years may have a short-term goal of exhibiting a grand champion at the county fair. For someone who is new to showing livestock, the same goal would be a long-term goal.

Awards and Recognition

Having a quality personal SAE can be reward enough for all of your hard work and dedication, but there are also other ways to be recognized for meeting your SAE goals. **Proficiency awards** are awards given by the National FFA Organization on the local, regional, state, and national levels for student SAE projects that have shown growth and development of skills related to success in the SAE area. Applications for proficiency awards take into account all the resources used, competencies gained, and progress toward individual goals. You may also get recognition for your SAE through your school science fair and the National Agriscience Fair Program run by the National FFA Organization.

Keeping detailed records of the skills and competencies gained through your SAE is important for various reasons. One of the most important reasons is using them to get accepted into college or university programs, or for applying for a job. Many agricultural education students have used their SAEs as a springboard to a successful career.

SAE Recordkeeping

An essential component of having a quality SAE is keeping records. Keeping accurate records will allow you to measure the scope of your SAE and see progress toward your goals. In order to have complete records, you should be recording both the experiences and financial transactions that occur in your program.

How to Know What to Record

One of the biggest decisions you will be faced with over the course of your SAE is what to record in your recordbook. In a nutshell, the answer is “everything.” The specific types of records you will keep depend largely on the type of each of your SAE enterprises.

- Exploratory SAEs will typically require you only to journal your experiences of activities and skills learned. In general, you will have no financial records associated with this type of SAE.
- Research SAEs will require you to journal the research methods, results, and conclusions. In addition, you should account for your time while conducting the project, and record any expenses you incurred while conducting research.
- Placement SAEs require you to record the time, either paid or unpaid, that you spent working. You will also need to journal exactly what you did on

FFA Connection Proficiency Awards

One of the most common goals for SAE projects is to use them to compete and win a proficiency award. Proficiency awards are given to members that excel in their SAE programs. The list of official proficiency award areas changes on an annual basis, but the following can be used as a guideline for determining which proficiency category might be right for you.

Agricultural Communications	Environmental Science and Natural Resources
Agricultural Education	Equine Science—Entrepreneurship
Agricultural Mechanics Design and Fabrication	Equine Science—Placement
Agricultural Mechanics Energy Systems	Fiber and/or Oil Crop Production
Agricultural Mechanics Repair and Maintenance—Entrepreneurship	Food Science and Technology
Agricultural Mechanics Repair and Maintenance—Placement	Forage Production
Agricultural Processing	Forest Management and Products
Agricultural Sales—Entrepreneurship	Fruit Production
Agricultural Sales—Placement	Goat Production
Agricultural Services	Grain Production—Entrepreneurship
Agriscience Research—Animal Systems	Grain Production—Placement
Agriscience Research—Integrated Systems	Home and/or Community Development
Agriscience Research—Plant Systems	Landscape Management
Beef Production—Entrepreneurship	Nursery Operations
Beef Production—Placement	Outdoor Recreation
Dairy Production—Entrepreneurship	Poultry Production
Dairy Production—Placement	Sheep Production
Diversified Agricultural Production	Small Animal Production and Care
Diversified Crop Production—Entrepreneurship	Specialty Animal Production
Diversified Crop Production—Placement	Specialty Crop Production
Diversified Horticulture	Swine Production—Entrepreneurship
Diversified Livestock Production	Swine Production—Placement
Emerging Agricultural Technology	Turf Grass Management
	Vegetable Production
	Veterinary Science
	Wildlife Production and Management

the job each day and describe any new skills that you develop during your employment. If you are working in a paid placement area, you will also need to record the financial income related to each paycheck.

- Entrepreneurship SAEs typically require the most recordkeeping components. In addition to journaling what has been done with the enterprise, and the skills you have gained, you will need to track the inventory, income, and expenses related to the project.

Journaling Experiences

Every type of SAE requires that you keep an accurate journal of the time spent and experiences you have had with each enterprise. Keeping track of everything you are doing with your SAE is not an easy task, and is one that will likely require you to be diligent and timely in recording information. The

Career Connection What Can Your SAE Do for Your Future?

Your SAE is an essential part of your agricultural education experience, but what can it do for you after high school? Many agricultural education students have taken their SAE enterprises and turned them into businesses that support them financially. Exploratory, Research, and Placement SAEs can give you valuable experience that will make you more marketable as an employee in fields related to your SAE category. Entrepreneurship SAEs can also give you employment skills, which you could use to grow your SAE into a productive and successful full-time business venture.

Some of the most common examples of SAEs that easily translate into viable companies include landscaping businesses and livestock operations.

Landscaping Business: One of the most easily transferrable businesses that many FFA members use as their adult career are landscaping businesses. These business owners have taken their high school business and built it into a thriving, full-time employment for themselves. Can you think of some of the benefits of proper SAE setup for those who plan to continue their venture after high school?

Livestock Operations: Many students begin with small numbers of animals during their SAE, and are able to build their enterprise to be large enough to raise animals full-time after high school. These students can then pursue livestock management as a suitable means of income to fund their education, or as a full-time source of employment income.

There are many other ways that your SAE can grow into something much more than just a high school project. In your SAE planning, think not only about how your SAE can play a role in your life today, but in your future.



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Providing professional service to your customers will ensure a solid customer base. Written estimates will help you keep track of accurate and profitable job quotes.



Nate Allred/Shutterstock.com

Raising animals during your SAE will provide you with valuable experience you can apply to your advanced education and future agricultural employment.

experiences that should be collected related to your SAE include the amount of time you spend with your project and any skills or competencies you have worked on or accomplished.

Detailed records will help your record book become the “story” of your SAE. Someone who picks up your record book to evaluate your project should be able to know exactly *what* you did with your project, *how* you did it, and *why* you made the management choices you made. A good rule of thumb is to record more information than you think you will need.

Even those SAEs which have many financial entries require experience entries to tell the whole picture. For example, if you had a paid placement SAE with the local veterinarian, you would enter paychecks into your record book, but those entries do not tell much about the things you learned on the job or the skills you gained while you were working. Journaling allows you to outline the specific tasks and skills that were used during each pay cycle.

Can you remember exactly what you did today? How about what you did exactly one week ago? How about one month ago? Our memories can fade over time. Failure to record information immediately can lead to holes in your SAE story. Timely recording of experiences is important to recordkeeping success. Try to record the information the same day of the experience.

Recording Finances

Depending on the type of SAE you have, you may need to record many financial transactions or none at all. Placement SAEs will require you to record any income arising from your work experience. Entrepreneurship SAEs typically have the largest number of financial entries because they have both income and expenses.

Recording finances in an SAE is a great way to gain practical experience with agribusiness principles. By recording finances for your SAE, you will become familiar with analyzing profit and loss, managing inventory, and determining net worth. These concepts are explained in detail in *Lesson 8.1*.

Methods for Recordkeeping

SAE records can be kept in several different ways. Some agricultural science programs choose to have their students keep paper records, while the majority of SAE recordkeeping has moved to computer-based systems. There are several commercially available recordkeeping systems available to help you keep track of your SAE.

Your agricultural science teacher can give you guidance on which program you will be using to keep your SAE records. The most prominent electronic recordkeeping solution for SAEs is the *Agricultural Experience Tracker*, or AET. This web-based program allows you to access your FFA records from anywhere with an Internet connection.

SAE Connection The AET Overview

The AET is broken down into sections to help guide you through the recordkeeping process. The main sections of the AET are:

PROFILE: Includes personal information related to you.

JOURNALS: Allows you to record your time in the classroom, FFA and SAE.

FINANCES: Deals with the entry of financial transactions for your SAE.

REPORTS: Allows you to view summary information from your classroom, FFA, and SAE experiences.



In order to help you get started in AET, here is the information for logging in and setting up your profile:

Step 1: Log In

1. You can access your AET account anytime from any computer with Internet. Go to: <http://www.theaet.com>, and click Sign In "Student."
2. Your teacher will provide your login information. You will need:
 - A. Chapter Number: This is the two-digit state abbreviation followed by the four-digit chapter number. For example, TX0765. You should memorize this number.
 - B. Username: Usually this is your "first initial and last name." For example, TMurphy for Tim Murphy.
 - C. Password: In the beginning, this is usually the same as your username. Make sure to use capital and lowercase letters exactly as your teacher shows you. After signing in, you can change your password.

Step 2: Set Up Your Profile

1. Click the PROFILE menu at the top of the screen. You should update your profile every year, or whenever your information changes.
2. The PROFILE section of your account is broken into the following sections:
 - A. Manage/Edit your personal information and load a profile picture.
 - B. Record your school Ag class schedule—After your teacher has listed the available classes, you can add yours here.
 - C. Develop your résumé—A very basic outline of your accomplishments that should be updated each year to report involvement. Maintain your list of school and/or community activities. You can add certifications, special awards, and other skills, but your use of AET develops important records from your classroom, FFA, and SAE experiences that are summarized into a complete résumé.
 - D. Develop your AET experiences—This is your project(s) in agriculture education. Enter the type, interest area, and other information about the project you have decided on. You can enter more than one enterprise.
 - E. Enter your FFA offices—If you are an FFA Officer, add your office here.
 - F. Enter your FFA committee memberships—If you are on an FFA Committee, add it here.
 - G. Choose your agricultural career pathway—Check the box next to the Ag Careers that interest you; rank them on the right side.
 - H. Explore your educational and career interests—Find and select the careers of interest.

Courtesy of The AET and Roger Hanagriff

Lesson 3.1 Review and Assessment

Words to Know

Match the key terms from the lesson to the correct definition.

- | | |
|---|----------------------------|
| 1. A Supervised Agricultural Experience where the student works for someone else in an agriculture related job. | A. enterprise |
| 2. An SAE in which students own and operate an agricultural business. | B. entrepreneurship SAE |
| 3. Activities provided for students to gain a better understanding of concepts by applying knowledge in a way that allows them to interact with material objects. | C. experiential learning |
| 4. The process of creating understanding from doing something. | D. exploratory SAE |
| 5. An SAE designed for students to use the scientific method to analyze a research question or test a hypothesis. | E. hands-on learning |
| 6. One specific section of a total SAE program. | F. long-term goal |
| 7. An aim or desired result that will be accomplished over an extended period of time. | G. placement SAE |
| 8. An enterprise undertaken to make changes and improve an existing SAE. | H. proficiency awards |
| 9. Awards given by the National FFA Organization on the local, regional, state, and national levels for student SAE projects. | I. research SAE |
| 10. An aim or desired result that will be accomplished in the immediate future. | J. SAE improvement project |
| 11. An SAE designed to increase student agricultural career awareness through observation activities. | K. short-term goal |

Know and Understand

Answer the following questions using the information provided in this lesson.

1. What are the three components of agricultural education?
2. Briefly explain how to determine if a proposed SAE is a viable option.
3. List the four main types of SAEs.
4. *True or False?* The primary investment in an exploratory SAE is financial.
5. *True or False?* Research SAEs employ the scientific method.
6. *True or False?* When working within a placement SAE, you may or may not be paid.
7. *True or False?* There is typically an investment of both time and money in an entrepreneurship SAE.



8. Briefly explain why it is important to have an SAE that is tailored just for you.
9. List five paths of specialization your SAE may take.
10. What are the three main considerations that should be taken into account regarding your resources for an SAE?
11. Explain what an improvement project is and how it works in an SAE enterprise.
12. Briefly explain SMART goals.
13. Explain the difference between a short-term and a long-term goal. Give an example of each type of goal.
14. Explain how the same goal may be a short-term goal for one person and a long-term goal for another. Give an example.
15. How could inaccurate or careless SAE recordkeeping affect the outcome of your SAE?

Analyze and Apply

1. Think about something you have learned through experiential learning (i.e. cooking a specific food, conducting maintenance on a vehicle, etc.). How do you think it would have been different if you had to learn that skill without actually doing the activity? Do you think that you can learn to perform a task without actually performing the task? Please explain.

Thinking Critically

1. Complete the setup and plan for your SAE. First, make a description of your SAE, then list the ways that you will use time and resources for the project. You should also develop some goals that you would like to accomplish with the project and define the involvement of your parents and agriculture teacher. (If you are using an AET record book, this information will directly transfer to the online system.)
2. How important do you think it is to keep records of a research project, business, or work experience? Please list ten things that could be found in records *and* how those things would be important to the enterprise. (For example, keeping track of hours worked helps an employee know how much he or she should be paid.)



Lesson 3.2

Your Career in Agriculture

Lesson Outcomes

By the end of this lesson, you should be able to:

- Identify career opportunities in the field of agriculture, food, and natural resources.
- Examine the characteristics employers find desirable in employees.
- Describe the skills required for employment in agriculture.
- Accurately describe the steps to obtaining employment.

Before You Read

After reading each section (separated by main headings), stop and write a three- to four-sentence summary of what you just read. Be sure to paraphrase and use your own words.

Words to Know

agribusiness
agricultural communications
agricultural processing
agricultural support service
agricultural systems
agriscience
aptitude test
cover letter
job application
natural resources management
position announcement
production agriculture
résumé

On a global scale, there are more people employed in agriculture than any other industry. In the United States, more than 22 million people are employed in agriculture careers. What might surprise you is that most of the people employed by agriculture are *not* traditional farmers and ranchers. In fact, production agriculturalists only make up a small percentage of the overall agricultural workforce, **Figure 3-16**.

In this lesson, you will learn about some of the many careers available in the different sectors of the agriculture industry. We will also discuss the traits employers are looking for in employees, and what you can do to stand out from the competition when applying for a job.

Career Sectors in Agriculture

According to the Council for Agricultural Education, there are eight different pathways of careers in agriculture. Each of these pathways is specific to the type of agriculture in which you are involved. Agriculture has a diverse range of careers. Much like choosing an SAE, there are agricultural careers certain to meet your interests.



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Figure 3-16. Even though a farmer is the career that most people think of when they think about careers in agriculture, less than 2% of Americans are production agriculturalists. There are many other careers to consider.

Sectors of Agriculture		
Sector	Description	Jobs
Agribusiness	Managing the profitability of agricultural goods	Commodity trader Farm and/or ranch manager Agricultural loan officer
Agriscience	Research and development of emerging agricultural technologies	Geneticist Biotechnology engineer Biologist Food chemist
Agricultural Communications	Informing those in the agricultural industry as well as consumers regarding topics concerning agricultural products	Journalist Public relations manager Sales representative
Agricultural Processing	Transforming raw agricultural goods into modified products for consumers	Grain mill operator Food technician Quality control manager
Agricultural Support Services	Industries and careers that provide support for the equipment and technology associated with agricultural production	Veterinarian Distribution coordinator Mechanic
Agricultural Systems	Design and build agricultural equipment and machinery	Agricultural engineer Irrigation systems specialist
Natural Resources Management	Focus on the ecology and conservation of cultivated and uncultivated lands	Range manager Fish hatchery technician Wildlife biologist
Production Agriculture	Production of raw animal and plant goods for human use	Cattle rancher Grain producer Catfish farm owner Cotton grower

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Figure 3-17. There are eight sectors of agriculture that you can choose a career in. *Which sector do you think is most interesting?*

If you remember from *Lesson 1.1*, there are eight main components of agriculture (**Figure 3-17**):

- Agribusiness
- Agriscience
- Agricultural Communications
- Agricultural Processing
- Agricultural Support Services
- Agricultural Systems
- Natural Resources Management
- Production Agriculture

Each of the components has a different set of specific jobs that might relate to your own unique interests.

Agribusiness

The *agribusiness* career area includes people who are concerned with managing the profitability of agricultural products and companies. In order to work in agribusiness, you should like to work with economics, mathematics, and finances. Careers in this area include:

- **Commodity Trader.** Much like a stock trader, commodity traders work to sell agricultural goods and commodities, sometimes months before they are ready for shipment.
- **Farm or Ranch Manager.** The manager is involved with the day-in and day-out workings of a production farm or ranch. The primary focus is to keep the operation running smoothly and making a profit. The manager is usually in charge of personnel, payroll, and buying and selling inventory.

Other careers in agribusiness are shown in **Figure 3-18**.

Agriscience

People who are interested in the scientific principles behind agriculture and the research and development of emerging agricultural technologies are often employed in *agriscience* careers. These careers examine the core science behind the things that happen in agriculture on a daily basis. If you have an inquisitive mind and like to explore the reasons things work the way they do, then a career in agriscience might be right for you. Nutritionists and meteorologists are examples of agriscience careers:

- **Nutritionist.** Traditionally, nutritionists plan food and nutrition programs. They understand the amount and types of food that an animal or human needs for their life functions. Depending on their training and education background, nutritionists may also be involved in the development of more nutritional varieties of plants and animals.



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Agribusiness	
Accountant	Information systems analyst
Agribusiness manager	International marketing
Agritourism manager	Lawyer
Banker	Leasing consultant
Chemical dealer or sales representative	Loan officer
Economist	Market analyst
Farm appraiser	Marketing head
Farm labor contractor	Policy analyst
Farm manager	Political advocacy
Financer	Quality controller
Grain and livestock buyer	Resource economist
Grain merchandising	Tax consultant

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Figure 3-18. Many people involved in agribusiness careers are also involved in other areas of agriculture. For example, a ranch manager may manage beef cattle production as well as manage the financial aspects of the operation.



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Agriscience	
Agricultural educator	Meteorologist
Agronomist	Microbiologist
Animal or plant pathologist	Molecular biologist
Biochemist	Nutritionist
Botanist	Physiologist
Ecologist	Soil scientist
Extension education director	Toxicologist
Field biologist	Turf scientist
Food scientist	Wildlife biologist
Geneticist	Zoologist
Marine biologist	

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Figure 3-19. Training in a particular area of science does not limit your career prospects. Many areas of science are intertwined and your knowledge and expertise will be applicable in many agricultural and nonagricultural situations. *Can you think of ways some of these career areas overlap? For example, how could a zoologist and a wildlife biologist help each other?*

- **Meteorologist.** A meteorologist is a scientist that examines climate and weather patterns to make predictions about the weather. Many meteorologists are employed by agricultural agencies to predict how the climate will affect agricultural commodities.
More agriscience career options are shown in **Figure 3-19**.

Agricultural Communications

Agricultural communications is a growing industry. Careers in this field are concerned with informing consumers and industry professionals about topics related to agriculture and agricultural products. Being observant, well-spoken, and a good writer are all key traits that may help you excel in an agricultural communications career. Agricultural communications careers include:

- **Public Relations Manager.** A person who works in public relations communicates the mission or purpose of an agricultural company to the public. Public relations specialists often work to promote products or



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Communications
Agribusiness manager
Agricultural educator
Agricultural journalist
Agricultural literacy coordinator
Agricultural marketing
Agricultural photographer
Broadcast journalist
Consumer counselor
Cooperative extension agent
County extension agent
Farm broadcaster
Freelance writer
Marketing representative
Political lobbyist
Public relations representative
Scientific illustrator
Technical writer
Training management

Figure 3-20. Every business requires a solid communication plan in order to succeed. In smaller businesses, employees often “wear more than one hat.” For example, the office manager may also be in charge of marketing and advertising.

- services or clarify any misconceptions that the media or other sources may have regarding their sector of agriculture.
- **Agricultural Journalist.** An individual who works much the same as a newspaper reporter, radio commentator, or magazine writer, only they work for a group that is dedicated to sharing information related to agricultural topics.
Additional careers in agricultural communications are listed in **Figure 3-20**.

Agricultural Processing

Many of the agricultural goods that reach consumers have been modified from their original form. Those who work in **agricultural processing** are involved in the transformation of raw goods to consumer-ready products. A strong work ethic, attention to detail, and desire to produce a quality product are keys to success in this field. Some of the available careers in agricultural processing include:

- **Grain Mill Operator.** A person involved with the conversion of raw grains into products like animal feeds or more finely ground products like flour, corn meal, or cottonseed meal. Their work allows the grain to be transformed into a more consumer-ready product.
- **Quality Control Manager.** A quality control manager works in processing facilities to ensure that all regulations and standards are being met, ensuring a safe food supply.

There are many other careers in the agricultural processing area, as shown in **Figure 3-21**.



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Agricultural Processing	
Crop and plant graders	Machine operator
Dairy plant supervisor	Meat processing worker
Federal grain inspector	Milk processing plant supervisor
Food inspector	Product development technician
Food processing plant operator	Production supervisor
Food regulatory consultant	Quality control manager
Food safety and quality technician	Sawmill operator
Food science technician	Weights and measurements official
Grain mill operator	

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Figure 3-21. In the processing sector, careers range from those who pick and sort through raw food products to those who manage processing facilities. Each step of the process must be performed by someone. *How many steps do you think are required to process the sugar in the illustration above?*

Agricultural Support Services

Agriculture can only function with the guidance and support of those who work indirectly to ensure agricultural goods get from producers to consumers. People who work in *agricultural support services* are involved in providing the logistical, technological, and maintenance needs of the agricultural industry. This area includes careers like the following:

- **Distribution Center Manager.** Many agricultural products are sent to a distribution center before they reach consumers at retail centers. A distribution center manager works to coordinate the shipment of agricultural goods from producers to their final destination.
- **Veterinarian.** Veterinarians support animal production by working as support personnel to care for sick and injured animals. Their support for the animal industry saves producers lost time and money related to animal illness.



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Figure 3-22. Some support services are specific to agriculture whereas others support many other industries as well. For example, a hydraulic engineer may design agricultural machines as well as machines for the oil industry.

Support Services	
Agricultural aviator	Groundskeeper
Agricultural mechanics repair technician	Pharmacologist
Animal behaviorist	Plant pathologist
Animal nutritionist	Risk management analyst
Computer support	Soil analyst
Crop consultant	Transportation dispatcher
Crop insurance salesman	Tree surgeon
Electrician	Veterinarian
Equipment salesman	Veterinary assistant
Fertilizer salesman	Waste management specialist
Firefighter or specialist	

As you can see, it takes a lot of careers in support services to keep agriculture in our nation functioning. More available careers in agricultural support services can be found in **Figure 3-22**.

Agricultural Systems

Agriculture can only function efficiently if all of the mechanical and structural systems are working correctly. Careers in *agricultural systems* focus on designing, manufacturing, and maintaining the mechanical equipment and structures that agriculturalists need to prepare, produce, and process agricultural commodities. Some of the careers in this area include:

- **Agricultural Engineer.** People who work as agricultural engineers design the machinery and equipment that allow agriculture to produce more products in a timely fashion.
- **Agricultural Diesel Mechanic.** These individuals troubleshoot and repair machinery in agriculture, mainly tractors and other farming implements.

A more complete list of careers in agricultural systems is shown in **Figure 3-23**.

Natural Resources Management

People who have careers in *natural resources management* are concerned with the conservation and use of cultivated and uncultivated lands in our country and around the world. These careers focus on the renewable and nonrenewable things in the ecosystem that can be used for human well-being. Some careers in this area include:

- **Range Manager.** Range managers work to help the delicate balance between using land for animal grazing, and ensuring the land is still able



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Figure 3-23. There are many people needed to keep agriculture systems functioning efficiently. Think of all the systems used in a dairy to gather, process, and distribute dairy products. In a large operation, maintaining the plumbing may be a full-time job.

to produce feed for years to come. They work closely with producers and government officials to ensure that joint use of the land is conducted appropriately.

- **Water Quality Tester.** This career involves those who are concerned with the contamination of surface and groundwater sources. They work to identify contaminants and potential sources of contamination in order to protect the water in an area.

More natural resources management careers are shown in **Figure 3-24**.

Production Agriculture

Production agriculture includes careers in which people are directly involved in the management and production of agricultural commodities for sale to the consumer, **Figure 3-25**. There are different categories of



Heath Johnson/Shutterstock.com

Figure 3-24. Many of the people who work in the natural resource sector do so because of their appreciation of nature and their desire to preserve and protect the environment.

Agricultural Systems	
Agricultural electrician	
Agricultural engineer	
Equipment fabricators	
Equipment operator	
Hydraulic engineer	
Irrigation engineer	
Irrigation system designer	
Land-leveling technician	
Machine engineer	
Power system mechanic	
Precision farming technician	
Welder	
Welding/metal fabricator	

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Figure 3-25. The list of agriculture production careers is only a sampling of those available. *How many other production careers can you list?*

agricultural production, based on the commodities you grow or raise. It is interesting to note that without the small percentage of our workforce that works in production agriculture, the rest of the agricultural industry would be out of work. As a production agriculturalist, you must commit to long hours and stressful work environments. However, the rewards of knowing that you are feeding, clothing, and helping humans live better lives could make a career in production agriculture the right fit for you.

Selecting a Career

Selecting a career is not a simple task. Many of us have ideas of what we would like to be when we “grow up,” but we do not always have a plan on how to get there. **Figure 3-26**. Laying out a career path, or plan, early on will allow you to focus your high school courses on your areas of interest and put



Video Clip





Choosing a Career That Is Right for Me

Visit www.g-wlearning.com and view the “Choosing a Career That Is Right for Me” video clip. After viewing the clip, answer the following questions.

1. What are three things you should consider when selecting a career?
2. In which sector of agriculture do you think you would most enjoy a career? Explain your answer.
3. What can you do at this point in your life to help make a decision about a future career?



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Figure 3-26. Taking the time to figure out what type of career suits you best can lead you to the career that you will enjoy. *Do you know what you want to do with your future?*

Did You Know?

In a recent study of middle school students, the potential career most selected by students was veterinarian. However, when asked to list the job duties of a veterinarian, less than one out of four understood all of the things that veterinarians do on a daily basis.

Talents

Knowing and understanding your talents will also be helpful when laying out your career path. To determine what talents you possess, first consider things at which you excel:

- Are you really good at organizing ideas?
- Do you have a natural talent for taking apart mechanical items and finding ways to improve or repair them?
- Have others commented that you are a good communicator?

In addition, think about the subjects in school with which you are most comfortable.

- Do you find math something that comes easily to you?
- Is writing a paper in English class not an issue for you?
- Are your teachers constantly praising your ability to conduct scientific investigations?

These clues may give you some insight into underlying skills that you have that may fit well with a particular career. If you are not certain where your talents and interests lie, you may want to consider taking an *aptitude test*. Aptitude tests are personal questionnaires designed to help you determine what types of activities suit you and your talents. Many aptitude tests also include lists of careers that use those skills. Ask your agricultural science teacher for advice on which aptitude test might be a good fit for you. Taking the time to put your interests and talents into a personal career inventory like the one shown in **Figure 3-27**, much like the SAE inventory, can also be a helpful step in selecting a career.

you on the fast track to a rewarding career. You can begin the process by following the same method you use to select an SAE, based on your likes, interests, and talents.

Likes and Interests

Do you know someone who really dislikes his or her job? One good reason to begin your career search by looking at your likes and interests is that no one wants to spend their adult life working in a career they do not enjoy. Make a list of the things you like to do in your spare time and activities you have enjoyed in the past. You may also want to add a list of topics that interest you. You may even want to add a column listing activities and topics you do not enjoy.

Instructions: On a separate piece of paper, list the attributes in order of importance to you below. Those you find most important should be at the top of the list, and those you find least important should be at the bottom. You can use your top five attributes to help select a job that is right for you.

Ranking	Job Attribute
	Ability to make a difference in the world and lives of others
	Ability to make your own work decisions, be your own boss
	Being able to work and perfect a specific task
	Freedom to make your own work schedule
	Getting to work as quickly as possible after graduating high school
	Having a flexible workload and working at your own pace
	Having a set work schedule each week
	Having varied work experiences, doing something new every day
	High demand, meaning that you will be able to find a position easily
	Interacting with people
	Large income potential
	Meeting deadlines and having set job responsibilities and demands
	Opportunities to advance in leadership roles
	Steady income, set by the hours you put in or a flat rate
	Utilizing your physical strength to perform job tasks
	Variable income, set by the effort you put in or the accomplishments you make
	Working in an environment where you can be on your own
	Working inside, out of the elements
	Working outdoors
	Working with your hands

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Figure 3-27. Looking at your job priorities is a great way to take the first step in choosing a career. This tool will help you select the attributes of a job that you might enjoy.

Job Descriptions

Knowing what is included in a career is a key factor in knowing whether or not it is a career you want to pursue. Not fully understanding the requirements for a job could lead to your spending years getting training in a career that you do not really enjoy. You can find job descriptions online, or



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Figure 3-28. Sample position announcements used to occur only through the classified ads. Today, online job boards also list the job requirements for career openings. *What kind of job will suit you best?*



auremar/Shutterstock.com; Juergen Faelchle/Shutterstock.com

Figure 3-29. On-site career experience is sometimes called an internship. Having the opportunity to learn the job through unpaid experiences is a great way to prepare yourself for a future career. *Can you think of an internship opportunity in a field in which you are interested?*

you can find someone who currently works in that career to give you a complete overview of what the job entails. It may also be helpful to look at **position announcements**, which are full job descriptions published by companies when they are looking to hire for a specific position, **Figure 3-28**. They include items like job duties, work environment, skills and training required, educational requirements, and potential salary. Once you find the job description for a career that you are interested in, crosswalk it to the list of your interests and talents.

Some questions you might want to ask yourself as you analyze the job description include:

- Where do the things in the job description align with my talents and interests?
- Are there points in the job description that I might not enjoy doing? Are they things I can deal with, or will they really bother me?
- Can I make a plan that will allow me to gain the required education?
- Will the salary cover my expenses?
- What opportunities are there for growth in this career?

On-Site Experience

The next step in selecting a career is to gain some real-life experience. You can conduct interviews with someone who already has this career, or you can gain an in-depth view through on-site experiences. On-site career experiences vary from job shadowing for a short period of time, to unpaid internships as an assistant, to full-time paid employment in jobs closely related to your career of choice, **Figure 3-29**. Remember that these types of experiences qualify as part of your overall SAE program.

Preparing to Be an Employee

Once you have selected a particular career that interests you, take some time to think about how you will prepare to be successful in that job. Studies have shown that the skills employers want most in an employee are not related to the actual job description. To make a

SAE Connection Exploratory SAEs

By keeping track of the hours you spend and the research you conduct in a career search, you are fulfilling the requirements for an Exploratory SAE. Entering the information into your record book can not only make it readily accessible, but can also allow you to make progress toward SAE hours for FFA degree applications.

long story short, before you can be good at a specific job, you have to be good at being an employee.

Important Skills

Can you look at a situation and make a decision about how to make it better? Are you able to take verbal instructions and use them to complete a task? These are examples of the types of skills employers are looking for. The skills that will make you a successful employee, regardless of your position, include:

- Critical thinking—being able to logically reason to reach a solution.
- Problem solving—identifying and evaluating different parts of a situation to reach a desired outcome.
- Decision making—being able to weigh the benefits and risks of an action and make the best choice for a given situation.
- Active listening—giving someone undivided attention and taking the time to understand instructions and guidance.
- Computer use—ability to use computers and electronic equipment, including basic computer applications.

Ethics in AG

Think about the following scenario and decide how you would handle it. You are responsible for hiring the new cashier at the local feed store. You have interviewed two candidates. Notes from your interviews are as follows:

Potential Employee #1: Was 15 minutes late to the interview. Came in dressed in dirty jeans and a stained T-shirt. Has a lot of knowledge about animal feeding and nutrition and worked for a local feedlot feeding cattle. Mumbled at the ground during the interview; never made eye contact. When asked why he was leaving the feedlot job, he said “because I hate the guy who owns it.”

Potential Employee #2: Showed up five minutes early for the interview. Dressed in nice jeans and a short-sleeve, button-down shirt. Said that he had little experience with animal feeds but is anxious to learn about animal nutrition and feeding. Was warm and pleasant to speak with. He also made eye contact throughout the interview.

Which potential employee would you hire? In groups, discuss the pros and cons of each individual and decide why you would make the hiring decision you agreed on.

- Mathematics—practical understanding of how to figure out real-world problems using mathematical equations and formulas.
- Operational analysis—the ability to project changes to the outcome of a situation based on changes to the initial stages of the situation.
- Evaluation—monitoring your own progress and the progress of others and changing behavior to ensure that deadlines and goals are met.
- Marketing—knowing how to promote the company or products to potential consumers.

By looking at these traits, you can determine your own strengths and weaknesses in order to develop your potential to be the kind of employee that employers want to hire.

In addition to the skills employers want, there are also personality traits that will help you get (and keep) the job of your dreams. Overall, employers are looking for a person who is:

- Professional
- High-energy
- Confident
- Self-monitoring
- Curious

As you think about applying for a job, think about how you can share those attributes about yourself with those who are making the hiring decisions.

Career Connection Human Resources Director

Helping find the right people for agricultural jobs

Job description: Those who work in human resources are responsible for managing the employees of the organization. For smaller agricultural businesses, these are tasks that are usually performed by someone in addition to their regular job. In larger corporations, there are often entire human resources, or HR, departments. Some of the tasks involved in working in human resources are hiring and termination decisions, managing payroll and benefits, and resolving employee concerns or disputes.

Education required: Typically a bachelor's degree or higher in human resources or business administration.

Job fit: This job may be a fit for you if you enjoy working with people, think you are a good judge of character, and are detail oriented.



Depending on the size of the organization, the human resources director may be involved in the hiring of employees from every department of the company.

Getting Hired

Selecting the career or job that you are interested in can be difficult. Getting hired for a specific job opening can be just as challenging. After looking at yourself and committing to be the type of employee that employers want to hire, you need to market yourself to those who make the hiring decisions. Typically, there are four main stages to getting hired:

- Initial contact
- Application and paperwork
- Interview
- Follow-up

At each step in this process, there are things you can do to make sure that you are visible and memorable to the employer.



Figure 3-30. When making your initial contact by phone, use good phone etiquette: stand or sit up straight, turn off electronics, do not eat or chew gum, speak clearly, and smile. You should also make sure no one will interrupt you. *Why do you think it is a good idea to smile when you answer or speak on the phone?*

Initial Contact

The first step in getting a job is making contact with the employer. You may hear about the job from a friend or relative, through an online or newspaper posting, or from a job board at your school or a local business. It is advisable that you make your initial contact either in person or through a phone call, **Figure 3-30**. However, some businesses prefer you communicate through email. Conduct research about the position, the company, and its hiring policies. Figure out how you would fit this job before you make the call. The initial contact will likely set the impression the employer has of you through the entire hiring process.

If possible, set up an interview during your initial contact. Write down the date, time, and location of the interview, along with the pertinent contact information. Be prepared to answer questions about your qualifications and interest in the job. The most important thing about this contact is to portray yourself as a pleasant, professional individual who can communicate well and as someone the potential employer would consider hiring.

Applying for the Job

After you have made initial contact, you may be asked to provide a résumé and complete an application form. Many businesses now require you fill out an online application, but some still use paper forms. The most common documents to accompany a job application are a résumé and cover letter. Understanding the key factors to include in this paperwork can give you an advantage over other applicants.



Figure 3-31. Completing job applications truthfully and legibly is an important step in obtaining a job. *What other tips should you follow when completing an application?*

Job Applications

Job applications are formal requests for employment, and are generally filled out at the initial contact or directly prior to the interview, **Figure 3-31**. The application typically requires contact information and general questions about work history and skills. To make sure that you are impressing potential employers, your application should be complete, consistent with your résumé, and show that you have good written communication skills (including punctuation and spelling).

Some of the information you will need to have on hand when filling out an application includes:

- Your social security number (SSN).
- Your personal contact information.
- Emergency contact information.
- Names, addresses, and phone numbers of current and past employers.
- Names, titles, and contact information for people who have agreed to act as personal or professional references.
- Names, addresses, and dates of attendance for schools you have attended or are attending.

With the exception of your social security number, write the information in a small notebook or fill out a “practice” application and keep it on hand. It is recommended you memorize your social security number and disclose it only when absolutely necessary.

Résumés

A *résumé* is a brief overview of your education, qualifications, and skills. Having a complete résumé is a key to being able to show the employer that you are a good fit for the job. The information in your résumé allows the employer to see your skills and experience at a glance. Most résumés have six sections: contact information, objective, education, experience/skills, awards/honors, and references, **Figure 3-32**. Understanding how these parts

John Doe		johndoe@email.com
123-456-7890		www.johndoe.com
1234 Main Street, Anytown, ST 12345		
Objective	To obtain a job that will allow me to use my skills to build or do something for your company	
Education	2006–2010 Some State University, Collegetown, ST Bachelor's of Science, This Field Emphasis areas including: science of this field, philosophy of this field, communication, computer skills	
	2002–2006 Anytown High School, Anytown, ST Graduated with High Honors Class Valedictorian Completed advanced courses in: this area, English, Mathematics	
Work History	2008–Present Intern in This Field Some State University, Collegetown, ST <ul style="list-style-type: none">• In this job I completed these tasks related to the job I am applying for:• Some job achievement while working here• Some job achievement while working here	
	2007–2008 Customer Service Manager Some Company, Collegetown, ST <ul style="list-style-type: none">• In this job I completed these tasks related to the job I am applying for:• Some job achievement while working here• Some job achievement while working here	
Awards/Honors	Awesome Award Recipient Some Organization 2010	
	Another Really Cool Award Another Organization 2009	
References	Available upon request	

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Figure 3-32. Typical résumés are laid out so that the employer can find the information related to employment easily. *Can you easily locate each of the six sections of this résumé?*

Section	Tips
Contact Information	<ul style="list-style-type: none">• Make sure the information is up-to-date and current• Be sure that your email address is straightforward and includes your name
Objective	<ul style="list-style-type: none">• Look at the job description for the job you are applying for; customize your objective to the job description• Make sure that you include proactive words in your objective so the employer knows you are motivated
Education	<ul style="list-style-type: none">• If you have not yet graduated, it is appropriate to list the “anticipated graduation” date in the education section• Make sure you highlight the things in your education that will be helpful to the specific job you are applying for
Work History	<ul style="list-style-type: none">• You can list positions even if they weren’t paid; internships are work experience, too• List the work experience beginning with your most recent experience• Think about the skills that you acquired at each position and include relevant skills with the work history
Awards and Honors	<ul style="list-style-type: none">• Think about any school or community awards that you have received; these can all be helpful to obtaining a job• Leadership positions in student, community, or church groups can also be included in this section
References	<ul style="list-style-type: none">• Rather than writing “available upon request,” try to identify 2–3 trusted adults who would give a good report of your skills• Make sure that you ask someone before listing them as a reference• References can make or break your chances; be certain that the people you list have confidence in your abilities

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Figure 3-33. Have you written a résumé before? Consider these tips to make sure that your résumé will stand out from the others.

work together is the first step in developing a quality résumé. Some tips for writing each section are included in **Figure 3-33**.

Cover Letter

A **cover letter** is a document that is sent with a résumé to give the employer information about your interest in the position and additional information about your qualifications. The same rules for writing a formal letter, as discussed in *Lesson 2.2*, apply to writing a cover letter. A good cover letter should include information related to the position, how you learned about the job, how your qualifications fit the job description, and contact information for the employer to reach you. An example cover letter is shown in **Figure 3-34**.

Interview

Doing a good job on your paperwork will lead you to the next step in the hiring process, the interview. Although the application, cover letter, and résumé will give the employer an overview of your skills and abilities, the

John Doe
1234 Main Street
Anytown, ST, 12345

Mr. John Employer, CEO
Important Job Industries
1000 Moneymaker Lane
Big City, ST, 54321

Dear Mr. John Employer:

I am writing in response to your advertisement online for a temporary worker. Based on the requirements listed in the ad, I feel that my skills and experience are a perfect match for this position.

I have worked in this area and have experience including three things that I can use to help your company. I am available to start in a new position immediately.

I have enclosed my resume for your review. I look forward to further discussing opportunities with Important Job Industries. If you have any questions or would like to schedule an interview, please call me at 123-456-7890.

Sincerely,

John Doe
Enclosure

123-456-7890
johndoe@email.com

January __, 20__

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Figure 3-34. A cover letter introduces you to the potential employer and expresses your interest. *Why do you think it is a good idea to make sure this document is professional and well-written?*

interview is where most of the hiring decisions will be made. To make sure that you are the candidate selected for the job, you should be mindful of your appearance, your body language, responses to questions, communication skills, and how you wrap up the interview.

For your interview, dress one step above the clothing required for the position, **Figure 3-35**. For example, if employees wear T-shirts and jeans on the job, wear nice jeans and a collared shirt to the interview. If you are unsure as to what may be appropriate, err on the side of caution and wear formal business attire. It is always better to be overdressed for the interview than to wear inappropriate clothing. In addition to choosing appropriate clothing, make sure your overall look, including hair and accessories, portray professionalism.



baranq/Shutterstock.com

Figure 3-35. Making sure that you are dressed appropriately can be key to getting the job. A good rule of thumb is to dress one step nicer than the clothes you would wear to the job each day.

Do	Do Not
Prepare ahead of time, know who you will meet with, and find out as much as you can about them; research the company and its goals	Go into the interview process blind
Know yourself, be honest about your strengths and weaknesses	Focus on your weaknesses
Analyze reasons why you are the best person for this position	Interview or apply for a position that you think you will dislike
Practice your route to the interview, know exactly how to get there	Risk getting lost on your way to the interview
Be early to the interview	Arrive late (even on time is considered late by interview terms)
Be polite and friendly to everyone you meet at the location of the interview, you never know who you'll bump into	Be so preoccupied with the interview that you are not able to be friendly and personable
Wear something that is suited to the position and you feel great in	Wear uncomfortable clothing, no matter how professional you look; fidgeting is a negative
Be confident in your abilities	Shortchange yourself or try to oversell your abilities
Practice your answers in front of a mirror	Go into an interview without some trial interviews

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Figure 3-36. Understanding some basic tips about interviewing could help you better prepare to get the job.

First impressions in an interview matter. Greet the interviewer and make sure you use open and confident body language. Smile, be pleasant, and try your best to calm your nerves and relax during the interview. Answer questions completely and honestly, tying information you share back to the information included on your résumé. Give the interviewer examples and share relevant experiences to help communicate who you are and how your experiences have prepared you for the job. Be honest! If the employer asks you a question you cannot answer, do not try to guess your way through it. Additional interviewing *do's* and *don'ts* are included in Figure 3-36.

Follow-Up

The completion of an interview is not the end of the hiring process. Completing follow-up correspondence will allow you to make a final contact with those making hiring decisions. Your follow-up should be addressed to the person with whom you interviewed, and should express appreciation for the interview, along with a recap of your qualifications and interest in the job. Writing a follow-up can be a way to make yourself memorable to the employer, Figure 3-37.



Syda Productions/Shutterstock.com

Figure 3-37. A follow-up letter shows the potential employer how serious you were about the job, shows gratitude for their time, and leaves one last impression in the minds of the interviewers.

FFA Connection Job Interview CDE

Do you want to hone your skills related to getting hired? The National FFA Organization has a Career Development Event directly related to the employment process. In the Job Interview CDE, participants are scored on their ability to make initial contact for a job, fill out an application, submit a complete résumé and cover letter, present themselves in a face-to-face interview, and write a follow-up letter.

Ask you agricultural science teacher about the chance to participate in this CDE on the local, regional, or state level. State winners are invited to compete at the National FFA Convention.



Andrey_Popov/Shutterstock.com

Lesson 3.2 Review and Assessment

Words to Know

Match the key terms from the lesson to the correct definition.

- | | |
|---|---------------------------------|
| 1. A document sent to give the employer information about your interest in the position and additional information about your qualifications. | A. agribusiness |
| 2. The agricultural industry area concerned with the profitability of agricultural products and companies. | B. agricultural communications |
| 3. A personal questionnaire designed to help you determine what types of activities suit you and your talents. | C. agricultural processing |
| 4. The agricultural industry area concerned with providing the logistical, technological, and maintenance needs of the agricultural industry. | D. agricultural support service |
| 5. A formal request for employment; may be electronic or paper format. | E. agricultural systems |
| 6. The agricultural industry area concerned with the conservation and use of cultivated and uncultivated lands in our country and around the world. | F. agriscience |
| 7. A brief overview of your education, qualifications, and skills. | G. aptitude test |
| 8. The agricultural industry area concerned with informing consumers and industry professionals about topics related to agriculture and agricultural products. | H. cover letter |
| 9. A full job description published by companies when they are looking to hire for a specific position. | I. job application |
| 10. The agricultural industry area concerned with designing, manufacturing, and maintaining the mechanical equipment and structures that agriculturalists need to prepare, produce, and process agricultural commodities. | J. natural resources management |
| 11. The agricultural industry area involved directly in the management and production of agricultural commodities. | K. position announcement |
| 12. The agricultural industry area concerned with the scientific principles behind agriculture. | L. production agriculture |
| 13. The agricultural industry area concerned with the transformation of raw goods to consumer-ready products. | M. résumé |

Know and Understand

Answer the following questions using the information provided in this lesson.

- If you like working with finances and economics, you might enjoy a career in the _____ sector of the agricultural industry.



- List three types of agriscience careers and give a brief description of each job.
- What types of traits are essential if you want to work in agricultural communications?
- How does veterinary work qualify as an agricultural support service?
- Explain why the work of people in agricultural systems careers is vital to the agricultural industry.
- True or False?* Careers in natural resources management are concerned with the conservation of land and water.
- True or False?* Production agriculturists make up the largest portion of the agricultural workforce.
- Explain why it is important to begin laying out a career plan early in your education.
- How can you use your likes and interests to give you direction when looking at careers?
- Explain why it is a good idea to evaluate your talents when laying out a career plan.
- True or False?* Aptitude tests measure IQ.
- What are the different types of on-site career experiences available?
- True or False?* Employers are looking for employee skills other than those related directly to the job description.
- List three types of skills that will help make you a successful employee.
- What are the four main stages to getting hired?
- True or False?* The initial contact will likely set the impression the employer has of you.
- Explain why it is better to overdress for an interview if you are not sure what to wear.

Analyze and Apply

- Think about a company that you might want to own someday. Now write a job description for an employee who you might want to work for you. Make sure you include the job responsibilities and personal characteristics that you would look for in someone you were going to hire.
- Write a list of potential interview questions that you feel could be used in any interview. Pair up with a partner and practice your answers to each other's questions.

Thinking Critically

- You have applied to a local grower for a job working with field plants. The company has invited you to come in for an interview. What would you consider appropriate dress for this interview?
- You are interviewing for a position as a delivery person for a local retail florist. The interviewer asks, "How old are you?" How should you respond?
- How will you benefit from researching about a company before you schedule an interview?
- You are the president of your local FFA chapter. While conducting a chapter meeting, what would you do when a fellow member constantly whispers to others or starts side conversations during discussions?

Chapter 3

Review and Assessment

Lesson 3.1

Experiential Learning through Agriculture (SAE)

Key Points

- Having an SAE that is custom fit to your interests and needs can be one of the most rewarding parts of an agricultural education program.
- To be considered an SAE, a project should be supervised by your agricultural science teacher, related to agriculture, well-planned, and have records.
- There are four main types of SAEs: exploratory, research, placement, and entrepreneurship.
- By looking at your interests and available resources, you will be able to determine the SAE enterprise that is the best fit for you.
- Once you have selected an SAE, you can work toward goals and measure your progress by keeping records of your experiences, time invested, and related finances.
- Having a quality SAE program can lead to the development of career skills and recognition for a program of which you are proud.

Words to Know

Use the following list and the textbook glossary to review and study the *Words to Know* from Lesson 3.1.

enterprise	hands-on learning	research SAE
entrepreneurship SAE	long-term goal	SAE improvement project
experiential learning	placement SAE	short-term goal
exploratory SAE	proficiency awards	Supervised Agricultural Experience (SAE)

Check Your Understanding

Answer the following questions using the information provided in Lesson 3.1.

1. Identify four lab areas in an agriculture education program.
2. *True or False?* Through FFA, agriculture students are provided the opportunity to gain skills that will make them better communicators, leaders, and citizens.



3. Students choose an SAE based on _____.
 - A. their instructor's decision
 - B. likes, interests, and talents
 - C. their employment status
 - D. All of the above.
4. What are the main differences between SAE types?
5. *True or False?* Exploratory SAEs are the most costly and time-consuming types of SAEs.
6. What type of information is recorded for a research SAE?
7. What type of information is recorded for a placement SAE?
8. *True or False?* In an entrepreneurship SAE, you have the chance to own your own resources and make management decisions related to the entire enterprise.
9. If someone were to pick up your SAE record book to evaluate your project, what types of information should they be able to gain?
10. Explain why it is best to record information the same day of your experience.

Lesson 3.2

Your Career in Agriculture

Key Points

- Choosing a career can be a daunting task. By examining careers that are available in the different categories of agriculture, you might be able to find a career that you think would be a perfect fit for you.
- Looking closely at your interests, hobbies, and skills can help you narrow down your career search to a specific area or job.
- Developing your employability skills will allow you to look at the characteristics that employers want, and work on those things that will make you more likely to get hired.
- Once you are ready for a job, you can complete the four steps of making initial contact, completing paperwork, interviewing, and following up with the employer to land the job you desire.

Words to Know

Use the following list and the textbook glossary to review and study the *Words to Know* from Lesson 3.2.

agribusiness	agriscience	position announcement
agricultural communications	aptitude test	production agriculture
agricultural processing	cover letter	résumé
agricultural support service	job application	
agricultural systems	natural resources management	

Check Your Understanding

Answer the following questions using the information provided in Lesson 3.2.

1. What benefit is there to listing the types of activities and topics you do not enjoy when examining your likes and interests?
2. Explain why it is important to fully understand the requirements for a job before you lay out your career plan.
3. What benefit is there to on-site experiences when you are laying out your career plan?
4. List three ways in which a person can be a good employee.
5. Identify five skills that will help make you a successful employee.
6. Explain why the initial contact may be a decisive factor in whether or not you get hired.
7. List four types of information you should have on hand when filling out a job application.
8. List the six sections of a standard résumé. Why is it important for this information to be consistent with the information you include in your application?
9. Explain what type of information should be included in your cover letter.
10. Identify the types of information that should be included in your follow-up.

Chapter 3 Skill Development

STEM and Academic Activities

1. **Science.** Understanding how agriculture is intertwined with science is a key factor in becoming knowledgeable about the industry of agriculture. List ten agricultural careers which relate to science and list how science plays a role in each of those careers.
2. **Technology.** Create a chart listing ten aspects of job searching and gaining employment. Include aspects such as looking for jobs in a particular field. In one column, identify



- traditional (or dated) methods used to perform a task. In the second column, identify new technological methods of performing the task. Use your chart to write 3–4 paragraphs on how technology has made job searching and employment easier.
3. **Math.** Find information on the average hourly pay rate in your area for three farm- or ranch-related occupations. Calculate what a person in each of these occupations would earn (before taxes) in one week, one year, and over 20 years. Also assume a rate of inflation of about 3% per year and a pay increase of the same. Develop a table to show your results. Can you draw any conclusions from the results?
 4. **Language Arts.** Create an informational pamphlet on the agricultural career of your choice. Research the education requirements, job responsibilities, advancement opportunities, etc. Include images in your pamphlet. Present your pamphlet to the class.

Communicating about Agriculture

1. **Reading and Speaking.** Working with two partners, research the type of interview questions you may be asked when applying for a job in the agricultural industry. Look for examples of the best way to reply to interview questions. Create a script with one partner applying for the position and the other two partners performing the interview. Perform the skit for your class.
2. **Reading and Speaking.** Create an informational pamphlet on how to apply for a job in the agricultural industry. Narrow your focus to a particular area such as greenhouse production or small animal production. Research résumé strategies and portfolio organization and download a sample job application. Present your pamphlet to the class. After your project has been graded and returned to you, review the instructor's comments. List the types of changes you could make to improve your project.
3. **Writing and Speaking.** Interview someone local who works in an agricultural field. For example, you could interview a local veterinarian, nursery manager/owner, park ranger, or swine producer. Choose an area you are interested in and/or with which you are not familiar. Ask the person to describe a typical day at work. Prepare a list of questions similar to the following: *How long have you been in the ____ industry? Did you go to school? Did you work as an intern? What is the work environment like? What are your job duties? What other types of professionals do you work with?* Report your findings to the class, giving reasons why you would or would not want to pursue a career similar to that of the person you interviewed. (Do not forget to send a note thanking the person for their time and help.)