

**SAEP ACTIVITIES FOR INTRODUCTION TO WORLD
AGRICULTURAL SCIENCE AND TECHNOLOGY
AGSC 101**

This publication contains a partial listing of potential SAEP activities that can be used to enhance learning. Plan, seek approval of, and verify the activities with the teacher of agricultural science and technology.

**A. Knowledge of the Employability Characteristics of a Successful Worker
in the Modern Workplace**

- Search for agricultural job openings using an Internet browser and search engine.
- Request agricultural career materials from public institutions and private businesses and share the information with other members of the class.
- Label and file a collection of agricultural career materials.
- Research an agricultural career and identify job availability, salary scale, educational requirements, work duties, working conditions, and advancement opportunities.
- Write a newspaper article to publicize the importance of career planning to young people.
- Visit with the journalism teacher about publishing a career-planning article in the school or community newspaper.
- Research an international agricultural career, collect and organize information about the career, and discuss the information in class.
- Identify part-time jobs related to agriculture in the community and discuss them in class.
- Attend a college "career day" and briefly report to the class on information gathered.
- Tour an agricultural-related industry in the area and report findings of working conditions, job opportunities, etc. to the class.
- Research an information management system for an animal, crop, plant, or agribusiness enterprise and discuss the system in class.
- Assist in preparing and publicizing an agriscience department or FFA exhibit.
- Prepare and perform a special Supervised Agricultural Experience Program public relations activity during National FFA Week using information available at www.ffa.org.
- Develop plans for a 4-year Supervised Agricultural Experience Program (SAEP) with your parents or guardians in consultation with the teacher of agriscience.
- Prepare a computer-generated budget for a specific SAEP and discuss the budget in class.
- Tour an agricultural production enterprise and share the findings with others in class.
- Secure a professional agriculturist to explain the value of additional training or higher education in agriculture to the class.
- Prepare and conduct a mock interview for a part-time job.
- Complete a résumé (a personal data sheet) and update it monthly.
- Interview for a part-time job with a local agricultural producer or agribusiness person.
- Prepare a "Letter of Application for Employment" for a job related to agriculture.
- Complete an "Application for Employment" for a job related to agriculture.
- Attend career day activities at a post-secondary educational institution and share items collected with other members of the class.
- Word-process a SAEP article for the school or community newspaper.

- Contact past recipients of the State FFA Degree to describe their successful SAEPs.
- Interview a recent graduate of the agriscience program regarding her/his experiences with the SAEP during high school.
- Select two different entrepreneurship SAEPs and compare each according to cost, facilities, time, and necessary equipment.
- Contact a land-grant university, the USDA, or another related organization for information on the job market of a specific agricultural career and share information collected with other members of the class.
- Develop a "trivial pursuit" type of game to describe various occupations.
- Prepare a display that illustrates different careers related to agriculture.
- List the types of agricultural-related businesses in the community and discuss in class.
- Contact people in popular agribusinesses to visit the class and discuss their jobs.
- Discuss the levels of education needed for 10 agribusiness jobs.
- Identify two agricultural occupations for each of the following skill areas: using mathematics, researching, identifying plants and animals by names, speaking to groups, working outdoors, working indoors, using mechanical things, working with plants or animals, selling, improving the environment, working with other people, etc.
- Develop an agriscience department library file of career preparation materials.
- Identify course certification requirements for various agricultural-related occupations.
- Compare your standardized test scores and interpretations from the counselor's office with your own personal career aspirations.
- Videorecord or photograph one or more agricultural enterprises in the community and share the information with other class members.
- Secure a resource person to discuss agricultural enterprises in the community.
- Report on a videorecording or slide program of past supervised agricultural experience programs in the community.
- View a "Stars Over America" video program from the National FFA Organization.
- Locate and review records of a former agriscience student's SAEP.
- Place agriscience department or FFA newsletters or brochures in local businesses.
- Review an application for the "Star Greenhand" FFA Award and discuss the entrepreneurship production, entrepreneurship agribusiness, agriscience, or placement award categories with the teacher of agriscience.
- Obtain and discuss a copy of a completed FFA Proficiency Award application.
- Contact the local radio station to ascertain the need for news and features from the agriculture department or FFA chapter.
- Create an Internet home page for the FFA Chapter.
- Describe a non-traditional SAEP (for example, dog breeding, agricultural radio show presenter, community improvement project leader, alligator raising, and "pet sitting").
- Complete "expense and income" sheets for current and non-current assets using an online record book system.
- Complete an end-of-year inventory of all operating and capital assets.

Other Approved Activities:

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B. Identification of Concepts Related to Cultural Diversity

- Research two products produced in the community and compare them to the preferences of people for food, clothing, and industrial products.
- Develop a strategy for marketing a locally produced agricultural crop in the community to diverse groups of people and discuss the strategy in class.
- Observe and record the physical makeup, language, clothing, etc. of different cultures in attendance at a folk festival.
- Interview a person from a minority group to record the person's perspective of the community, state, nation, and world.
- Identify 10 foreign-made products available in a supermarket as to their origin.
- Plan a lunch or dinner meeting at a non-traditional restaurant.
- Explain ways that the community can market itself to other communities.
- Search the Internet for agricultural connections in other countries.
- Research and report on the topic "Why do businesses or corporations want employees with an international perspective on life?"
- Contact the local Rotary Club and/or Lions Club and serve as a host for an international student for a day, week, or month.
- Invite non-members to a FFA Chapter meeting or social.
- Translate an agricultural newsletter into the language of another country.
- Study and apply for a USDA/FAS International Internship using information available at www.ffa.org/international/html/glance.html.

Other Approved Activities:

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C. Description of the Historical, Current, and Future Significance of the Agricultural Industry

- Present an oral report on the scope of agriculture (for example, "The Livestock Industry," "Crop Production," and "Processing Agricultural Products").
- Prepare a written report on the benefits of recent technologies in agriculture.
- Report on our country's contribution to world trade for five agricultural commodities.
- Research another country's agricultural development during the past 50 years.
- Discuss the effects on world agriculture of a natural disaster [for example, a late frost in Brazil (coffee production), a drought in Northern Africa (cattle production), and a massive flood in southern United States (cotton production)].
- Prepare and display ten pictures depicting scenes of chronological development of agriculture in the nation.
- Secure and post ten photographs or pictures of changes in methods of planting and harvesting crops in the community or region.
- Research and report on changes in United States agriculture during the last 50 years.
- Select an agricultural item (production agriculture machinery or equipment), trace the history of the item from its inception to present day use, and report findings to the class.
- Prepare an essay on the immigration of your ancestors to the United States.
- Develop a family tree to trace your roots in agriculture.
- Plant a vegetable garden with a stick as your only equipment.

- Collect, mount, and label five different edible wild plants grown in the community.
- Demonstrate differences in two hand-operated and mechanically-powered machines or equipment (for example, an electric-powered grain auger compared to a hand-held grain scoop for moving grain).
- Construct a model of early agricultural equipment (for example, a steam-powered tractor) using only toothpicks and display the model in school.
- Construct a broom using only grain crop straw (or broom corn), string, and a branch.
- Compare present-day crop yields with those of 10, 20, 30, or 40 years ago and use graphs, charts, tables, etc. to show differences in yields to other members in the class.
- Prepare and display a scrapbook of pictures or photographs of pre-1990 machinery, equipment, and agricultural practices.
- Collect and display ten pictures of out-dated agricultural equipment or machinery.
- Research and report on agricultural developments during a pre-1900 time period.
- Tour an antique implement dealership on one day, compare it with a tour of a new implement dealership on another day, and discuss the tour with other class members.
- Prepare, label, and exhibit a flow chart of "how an agricultural product goes from producer to consumer."
- Visit with the agriscience teacher and/or county extension agent about the employment opportunities in the community and county.
- Contact the county or district soil conservationist about soil and water conservation practices used in the community, county, or district and report the findings to the class.
- Interview a person not associated with agricultural work, beginning the interview with the question - "How important is agriculture to you?"
- Describe ten factors that have an effect on an agricultural commodity's supply.
- Orally report on the development of an agricultural assistance agency, such as the Natural Resource Conservation Service (NRCS), Consolidated Farm Service Agency (CFSA), and Rural Development, USA.
- Develop a written or oral presentation explaining "why agriculture in some countries requires more labor than does agriculture in the United States."
- Research literature for agricultural development in the United States compared to its development in a foreign country and discuss the information in class.
- Invite an elderly producer to explain parts and uses of agricultural equipment to the class.
- Secure a person in the agribusiness field to discuss changes in agriculture to the class.
- Interview a person who has been in agricultural production for 10 years or more and inquire about changes in agriculture since the producer's first days in the business.
- Review a video/slide/Internet/CD-ROM program describing agriculture in the state, nation, and world.
- "Show-and-tell" agriculture of the past to an elementary school class using a PowerPoint presentation.
- Use a bar graph to illustrate the loss of useable agricultural resources (cropland, forest, and wildlife habitat) during the previous twenty-five years.
- Graph the price changes of an agricultural product during a two-month period.
- Review a video/slide/Internet/CD-ROM program that describes activities involved in producing, processing, marketing, and researching/developing an agricultural product.

- Identify twenty agricultural-related occupations in the United States.
- Research five agricultural-related activities in the community, determine average attendance and/or income generated from each activity, and discuss the data in class.
- Identify ten domestic and/or imported food items that are available locally.
- Report on an agricultural product that uses a new processing method, explaining how the new process works and why it is better than existing methods.
- During the day, record your contacts with agriculture (for example, clothes worn; paper used for handwriting and word processing, and meals eaten).
- Research the production and use of one agricultural commodity in a foreign country as compared to its production and use in the United States.
- Describe five different monetary (currency) systems using the current exchange rates published in major newspapers.
- Contact the State Department of Agriculture for information showing percentages of agricultural production exports from the state.
- Identify and report on five new developments in agriculture during the twentieth century.
- Secure the services of a biology or biotechnology teacher to clone a plant using tissue culture or another method.
- Research and report on how cloning has changed or will change the future of animal and crop production.

Other Approved Activities:

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D. Analysis of the Structure of Agricultural Leadership Organizations

- Research and report the background for the FFA Creed.
- Explain and/or recite the FFA creed.
- Participate in a "FFA Creed Speaking" leadership development event.
- Prepare a written report of exhibiting a project at an organized exposition, including the goal and objectives of showing the project.
- Develop a 30-question test with answers using the Official FFA Manual.
- Formulate a 30-question test with answers using Robert's Rules of Order or another parliamentary procedure reference.
- Study for and participate in a "FFA Quiz" leadership development event.
- Attend a local service club meeting and report on the correct and/or incorrect use of parliamentary procedure by the service club.
- Participate in a "FFA Greenhand Chapter Conducting" leadership development event.
- Complete an application for an award in agriculture (for example, FFA Star Greenhand Degree Award and FFA Proficiency Award).
- Increase knowledge of the FFA using the state association's Internet home page or the National FFA Organization's Internet site at <http://www.ffa.org>.
- Invite a chapter officer to discuss the FFA Motto and FFA Creed during class.
- Attend a FFA chapter meeting at which the officers in "Official FFA Dress" demonstrate parliamentary procedure practices with the class.
- Inquire about how one becomes an officer of an agricultural organization and report findings to the class.

- Secure a FFA officer from the district, area, state, or national association to present a program at the FFA banquet or a FFA Week program.
- List ways that one can be an asset to the school, home, and community (for example, taking part in a home chore, reading literature related to effective life skills, and participating in a government affair).
- Attend a district, area, state, or national FFA meeting or convention.
- Plan for and participate in a "Food for America" FFA chapter project.
- Discuss the strong and weak traits of yourself with other class members.
- Identify the necessary steps to becoming a National FFA Officer.
- List the qualities of leadership of former FFA members who became congressional leaders, successful business people, community leaders, etc.
- Identify and describe characteristics of cultures other than your own, being sure to include other people's dress, language, eating habits, etc.
- Develop a local "FFA Chapter Trivia" leadership development event.
- Participate in a "FFA Skills" leadership development event.
- Develop a "Move Yourself Up" game for reviewing the FFA organization and/or parliamentary procedure (Note: The object of the game is to move to the front of the classroom. FFA organization or parliamentary procedure questions are asked. A correct response allows one to move forward, but an incorrect response moves one backward.).
- Contribute to a local FFA meeting by presenting or offering discussion to a main motion, presenting a committee report, etc.

Other Approved Activities:

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**E. Explanation of the Food and Fiber System
at Local, State, National, and International Levels**

- Identify and research a locally produced commodity that is exported, reporting on where it goes, what is received in trade for it, etc.
- Research and prepare a written report on the trade climate between the United States and another country of choice.
- Prepare a written report on "Uses of Local Agricultural Products in Foreign Countries."
- Compare and contrast two reports on a specific agricultural subject by different authors.
- Submit a consolidated class report on "Uses of Local Agricultural Products in Foreign Countries" to the local newspaper for publication after consulting with the journalism teacher in the school.
- On a selected day, prepare a meal using food products from a chosen country.
- Research and prepare a written report on an international trade career as to job availability, salary, educational requirements, etc.
- Develop a simulation of a new product.
- Create an advertisement to market an agricultural product.
- Survey businesses about important issues in agriculture and discuss the issues in class.
- Contact an agribusiness, university, etc. to obtain information about the importance of agriculture in the world and share the information with other class members.

- Contrast the free enterprise system with a socialist country's system by describing different work habits between people who own their own businesses and those who work in government-owned businesses.
- Research and report on the prices of five common domestic agricultural food and fiber items with foreign-produced items of the same type.
- Collect and display ten newspaper or magazine articles dealing with United States trade.
- Select various food products (for example, one meat and two vegetables) and record the price of each item during a three-month period.
- Tour a supermarket or other food marketplace, prepare a list of ten items that came from other states and countries, and share the information with other class members.
- Research and report on an environmental career as to job availability, salary, educational requirements, work duties, working conditions, career advancement, etc.
- Describe effects that natural disasters have on the ecosystem with other class members.
- Identify and report on alternative energy sources (such as nuclear, solar, and wind).
- Prepare and exhibit a collage of ten pictures (collected from outdoor magazines) of animals in their native habitats.
- Collect and post ten pictures (collected from newspapers or magazines) showing animals misplaced from their native habitats.
- Report on how wild animals must change if their habitats change.
- Tour the community and list sources of air pollution (for example, smokestack emissions, exhaust pipe emissions, loud noises, and foul odors).
- Visit a solar energy home or business to determine cost of equipment, cost of operation, and relative benefits to the environment from using solar energy.
- Tour areas in the community to recognize importance of different ecosystems.
- Collect and exhibit ten pictures or photographs of people working in the field of ecology.
- Determine if agriculture caused the problems found in an environmentally unsound area.
- List agricultural practices that can improve an environmentally unsound area.
- Tour agricultural production enterprises having pollution and/or soil erosion problems.
- Visit a paper mill to observe maximum use of all parts of cut timber.
- Tour a human-made lake (for example, a gravel pit) to view water quality.
- Contact a legislator concerning information on expected agricultural development of a Third World country and report findings to the class.
- Compare and contrast a dollar, peso, yen, marc, and franc with other members of the class as an exercise in foreign exchange rates.
- Contact a Natural Resource Conservation Service (NRCS) technician to discuss waterway designs with the class.
- Prepare a written report on water issues in the county, region, or state.
- Interview a manager of a local water control entity regarding source and supply of the community's water and report the findings to the class.
- Contact a local agricultural producer relative to the adverse effects of the environment on the agricultural producer's operation and report the findings to the class.
- Select a "candy" of choice, list its ingredients, identify the ingredients' sources (agricultural products), and report the findings to the class.

- Compare marketing techniques for a common commodity (for example, corn, cotton, and wheat) that give the commodity its "best" price and discuss the information in class.
- Research and report ways that local businesses trade products with businesses in other parts of the state or other states and countries.
- Correspond with a district congressperson to request information on a specific agricultural subject (for example, trade restrictions by the United States on imports).
- Chart the weekly price changes of particular crops grown in the community or region and post the chart on the bulletin board.
- Critique a video/slide/Internet/CD-ROM program to identify methods of protecting the environment and report findings to the class.
- Exhibit a jar of soil, a glass of water, a piece of lumber, and a can of motor oil (label each with the following question – Is this resource renewable or non-renewable?).
- Organize a community improvement project (for example, Adopt-A-Street to pick up litter along the roadway on a bi-monthly basis).
- Identify five methods of conserving energy at home and discuss the methods in class.
- Present a brief oral report on methods of protecting the community's environment.
- Estimate water usage at home and identify methods for curbing increased consumption.
- Secure information from the Natural Resource Conservation Service (NRCS) on methods currently used to conserve water in the nation and share the information with the class.
- Collect litter from the school campus to become aware that a "pollution" problem exists.
- Participate in a paper products, aluminum, plastic, and glass recycling program.
- Analyze five different agricultural crops in the community, identify the effects of environment on the crops, and discuss the information with other class members.

Other Approved Activities:

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F. Demonstration of Appropriate Personal and Communication Skills

- Compare and contrast different types of organizational dress (for example, FFA dress and 4-H dress) and discuss the dress types in class.
- Collect and display pictures and photographs of ten or more people wearing different organizational dress attire (for example, Official FFA Dress and formal dinner attire).
- Word process and publish a newspaper article that reports a chapter event or activity.
- Research and prepare a written report on an agricultural career of choice as to job availability, salary, educational requirements, work duties, working conditions, career advancement, etc.
- Collect and exhibit pictures or photographs of ten people or more working in the field of agricultural communications.
- Tour local newspaper offices, radio stations, television stations, and other communication businesses and report the findings of the tour to the class.
- Research the effects of using tobacco, alcohol, and other drugs and then contact the local Lions Club in the community about presenting the report as a part of the annual "Youth Outreach Program" drug awareness speech contest and scholarship award.
- Interview an employer of a business in the community and discuss differences and similarities among the employer's expectations and the job's opportunities.

- Invite an employer to discuss "first impressions" with the class.
- Interview an agricultural employer and ask what he/she expects from employees concerning professionalism, ethics, and grooming.
- Consult with the school counselor and develop a personality inventory and analysis profile of yourself.
- Attend a seminar or workshop on proper etiquette and report the proceedings to the class.
- Demonstrate proper etiquette to the class (for example, seating others at the table and eating a meal).
- Present a five-minute oral report on a topic of modern agriculture.
- Write and submit a newspaper or magazine article, announcement, bulletin, etc. in cooperation with the school's journalism department.
- Contact a resource person from a business to explain the "importance of communicating during an interview" to the class.
- Interview a local agricultural producer or business person about the effects of agricultural communications on the interviewee's operations.
- Conduct a mock interview, pairing with another person to demonstrate examples of good and poor interview techniques.
- Attend a workshop or seminar on positive communication skills and report findings to other members in the class.
- Use an exhibition-type animal to explain that poorly groomed animals do not win (and neither do poorly groomed people).
- Identify and list the good and bad traits of a movie character (examples of selected movies include "Clueless," Ferris Bueller's Day Off," and "The Breakfast Club").
- Prepare and post a collage of five pictures or photographs of good and bad personal appearance and health habits.
- Critique a video, slide set, Internet web page, CD-ROM, magazine, or newspaper that reflects the detrimental effects of tobacco, alcohol, narcotics, and other harmful drugs.
- Review a video/slide/Internet/CD-ROM program on various etiquette or behavior skills.
- Practice personal grooming skills (such as tying a necktie or scarf, caring for footwear, and mending clothes) during class time.
- Demonstrate personal relations skills with another person (such as hand shaking, eye-to-eye contact, and introducing oneself) during class time.
- Properly prepare a table for a meal setting.
- Discuss the proper dress to be worn at a particular function (for example, FFA Chapter banquet, school prom, job interview, and dance).
- Compare and discuss viewpoints on proper dress for FFA activities.
- Present an oral report on your views of the importance and use of good manners and etiquette in our society.
- Demonstrate sloppy dress and poor manners during a class session.
- Describe and debate the proper dress that should be maintained at social events.
- Discuss ways that people become friends.
- Demonstrate good posture (for example, carrying the body straight while walking or standing and sitting erect in a chair) and poor posture (for example, slumping the shoulders and placing hands in the pockets).

- Conduct a "Personal Nutrition Evaluation" by keeping and reviewing a daily diary of the foods eaten during one week.
- Search the Internet homepages for determining the nutritional value of a daily diet.
- Obtain films, videos, or CD-ROMs relating to agricultural communications careers for review and discussion by all members of the class.
- Critique a video related to oral communications skills and discuss the critique in class.
- Review a video program that demonstrates poor and good speech presentation skills resulting from poor and good preparation and delivery skills, respectively.
- Practice answering a telephone and recording phone messages.
- Plan, organize, and conduct a social event involving the FFA chapter and another school-sponsored organization.
- Review a video program that demonstrates poor and good radio broadcasting skills resulting from poor and good preparation and delivery skills, respectively.
- Demonstrate the proper procedure for introducing a guest speaker and/or presenting an award to a person.

Other Approved Activities:

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G. Application of Appropriate Research Methods on Agricultural Topics

- Use the Internet to research any segment of the aquaculture industry.
- Report on the uses of computers and other technologies in agriculture.
- Identify and discuss procedures used to get an agricultural product's label approved.
- Report on five health products that are developed from agricultural commodities.
- Research a major development (for example, embryo transfer and gene splicing) that has influenced (pro and con) United States agriculture during the past 20 years.
- Prepare stencils for labeling different types of chemical products (vaccines, pesticides, fuels, etc.) used in and around the home.
- Develop an exhibit with collections of ten labels from products such as feeds, feed supplements, fertilizers, fertilizer amendments, pesticides, etc.
- Prepare a written report given the following information: "It is now the year 2020. Agriculture has changed much since you were in an agriscience class. What are some changes that have been made?"
- Perform basic agricultural research (for example, "Advantages of Using Computerized Programs to Keep SAEP Records," "Methods of Enhancing the Use of Methane Gas from Livestock Enterprises," and "Developing a Fruit Fly Lure and Trap").
- Read and discuss a newspaper, magazine, or journal article about a problem in agriculture during class time.
- Report on growth, problems encountered, and eventual outcomes of growing a crop.
- Contact a research technician and report on a topic of current research and the expected use of the data obtained.
- Collect and post pictures or photographs of ten or more people working in the field of agricultural research and development.
- Select four or more samples of different agricultural products and prepare a written report on how each was developed.

- Tour an agricultural research and development facility to view current projects and report on the tour to the class.
- Present an oral report on the use of genetic engineering in agricultural industries.
- Interview someone who developed a specific product or process to find out how he/she developed the product and report the findings to the class.
- Contact a local agricultural producer or agribusiness person relative to the effects of research and development on the interviewee's operation and report findings to the class.
- Request information from the Natural Resource Conservation Service (NRCS) on agricultural land or other reclamation projects currently underway and share the information collected with other members of the class.
- Create an idea for an agricultural invention and list items required to test the invention.
- Review and discuss a film, video, Internet web page, CD-ROM, etc. program relating to agricultural research and development (R&D) careers.
- Critique a video or film describing improvements in agriculture as a result of research and development (for example, time-saving devices and computerized record keeping).

Other Approved Activities:

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H. Identification of Basic Plant and Animal Science Concepts

- Tour a broiler farm to identify methods of keeping records, calculating feed conversions, managing labor, etc. and report findings to the class.
- Demonstrate the process of preparing yarn from wool.
- Manufacture raw paper from an old newspaper.
- Create a crossword puzzle, word scramble, etc. that requires use of agricultural terms.
- Develop and patent a "Wheel of Fortune" game that uses agricultural terms.
- Cook a meal using various food items from animals or plants from around the world.
- Collect recipes and compile them into an agriscience "cook book."
- Prepare a mural illustrating origin of various foods produced from animals.
- Conduct a cereal grain "taste test" event to identify the grains and their possible uses.
- Collect and exhibit ten samples of wood from different countries.
- Obtain and describe ten samples of cotton at different stages of growth.
- Collect and exhibit ten samples of feed/food grains produced in the United States.
- Secure samples of five agricultural commodities used for food or fiber products.
- Collect and post pictures of ten people working in the food and fiber industry.
- Visit and report on a food and/or fiber processing facility.
- Tour a cottonseed oil mill, rice bran mill, or other type of processing plant to identify best management practices used and report findings to the class.
- Prepare a dictionary of 20 agricultural terms for one unit of instruction in the course.
- Report on the route taken by wheat grain on its way to becoming a bread product.
- Identify methods of cooking a selected vegetable in different countries.
- Prepare a meal using a non-traditional method of cooking.
- Explain a fiber product's production, processing, and distribution process to the class.
- Obtain clothing made from different fibers (for example, cotton, wool, and flax) and perform a test of each item for texture, weight, and appearance.

- Identify and discuss types of fibers used in various samples of ropes.
- Record different terms having similar meanings (such as milo and grain sorghum, pond and tank, and tool and wrench).
- Compare the world production of a commodity to the consumption of that commodity.
- Identify and discuss domestic and foreign uses of livestock and poultry.
- Compare domestic per capita consumption of a major agricultural commodity to its per capita consumption in another country.
- Discuss differences in food values and prices of fresh produce and processed foods.
- Contrast food prices of today with those of 25 years ago.

Other Approved Activities:

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I. Safe Application of Basic Science and Mathematical Skills to Mechanical Agricultural Systems

- Research types of jobs and educational requirements for a career in agricultural mechanics (especially those involving metal work).
- Plan and prepare a construction project involving cold metal working tools.
- Demonstrate skill in the use of various hand tools for cold metal working.
- Interview a blacksmith about job requirements and report findings to the class.
- Report on the "Importance of Metal Working Skills in Agricultural Mechanics."
- Identify safe shop practices when working with cold metal working tools and supplies.
- Discuss various types of cold metal and their uses in agricultural mechanics.
- Cut a piece of cold metal using a hack saw.
- Drill a piece of cold metal using a drill press.
- File a piece of cold metal using the appropriate hand file.
- Shape a piece of cold metal using a bending jig.
- Tap and thread a hole after drilling into a piece of cold metal.
- Bolt and/or rivet two pieces of cold metal together.
- Remove a broken bolt using correct procedures for the task.
- Loosen a frozen or rusted bolt.
- Identify different types of metal screws used in cold metal work.
- Fuse two pieces of metal using an arc welder.
- Weld two pieces of metal using oxyfuel equipment.
- Demonstrate skill in the use of various power tools for cold metal working.

Other Approved Activities:

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NOTES: Although participation in a Supervised Agricultural Experience Program is not required for the completion of Agriscience 101, doing so will be an asset when applying for advanced degrees and awards.

Refer to IMS catalog number H101 for an explanation of some of the activities listed in this publication and for a listing of additional activities.



**SAEP ACTIVITIES FOR
APPLIED AGRICULTURAL SCIENCE AND TECHNOLOGY
AGSC 102**

This publication contains a partial listing of potential SAEP activities that can be used to enhance learning. Plan, seek approval of, and verify the activities with the teacher of agricultural science and technology.

**A. Knowledge of the Employability Characteristics of a Successful Worker
in the Modern Workplace**

- Participate in an agricultural career day and share information collected with the class.
- Apply for awards and degrees in the FFA (for example, proficiency award recognition and outstanding student award programs).
- Exhibit an agricultural experiment in competition (for example, FFA Skills Team and UIL Science Fair) and prepare a report upon completion of the exhibition.
- Interview the owner of an agricultural business regarding job entry requirements.
- Conduct a survey of agricultural-related jobs in the community and post the job listing.
- Tour an agribusiness and report observations to other members of the class.
- Demonstrate parliamentary procedure skills attained to the FFA booster club parents.
- Discuss agricultural career opportunities with the school counselor.
- Request agricultural career information from a college, university, or technical school.
- Identify twenty or more occupations related to agriculture.
- Plan a SAEP for the next four years (or for the years remaining in high school career).
- Illustrate and discuss the different types of SAEPs adapted to the community.
- Describe a successful Supervised Agricultural Experience Program (SAEP).
- Train for and participate in a Career or Leadership Development Event.
- Critique a leadership training event and discuss the event with the class.
- Demonstrate proper dress and manners for a job interview.
- Present a five-minute program related to agriculture to the class.
- Serve as an officer or committee member of an agricultural-related club.

Other Approved Activities:

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B. Identification of the Nature and Properties of Soils and Soil Formations

- Construct a soil monolith and exhibit it at a science fair or project show.
- Research and report on factors that influenced soil formation in the community.
- Collect and identify rocks and minerals from land areas in the community.
- Conduct an experiment to illustrate the formation of soil and report the findings.
- Prepare a soil and water conservation plan for a ranch or cropland area.
- Conduct an experiment to determine components or properties of a soil sample.
- Graphically illustrate the uses of soils in the state and discuss them in class.
- Contact the Natural Resource Conservation Service (NRCS) about the varied uses of soils in the community and report findings to the class.
- Map the geological regions of the state with its land resource areas and post the map on the bulletin board.
- Collect samples of soils having different components or properties for class discussion.
- Illustrate the components or properties of soils for class discussion.
- Contact an agronomist about soil science research and report the findings to the class.
- Illustrate the horizons for a soil profile in a home or cropland area for class discussion.
- Identify the common soil series in the community (using a published soil survey).
- Collect and submit a soil sample to a soils lab for testing and analysis.

- Interpret the analysis of a laboratory tested soil sample as a class report.
 - Identify the components or properties of the soil in a home lawn or cropland area.
- Other Approved Activities:

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- _____

C. Performance of Technical Skills Related to Plant and Soil Science and Technology

- Research and report on traditional and new uses of plants.
- Carry on an experiment related to the chemical alteration of plant hormones.
- Conduct an experiment related to asexual or sexual plant reproduction.
- Undertake a plant genetics experiment and record observations for class discussion.
- Experiment with germination rates of various species of seed.
- Collect and post pictures and photos of twenty or more nursery or landscape plants.
- Contact a botanist about plant science research and report the findings to the class.
- Define plant growth terms (for example, photosynthesis, respiration, transpiration, and food storage) and post them on the bulletin board.
- Request information from a college, university, or research center on current research in the field of plant genetics and breeding and share the information with class members.
- Prepare a labeled diagram of the reproductive parts of a plant for class discussion.
- Label the vegetative parts of a typical dioecious or monoecious plant for class discussion.
- Illustrate the classification of crops grown in the community for discussion in class.
- List fifteen or more common fruits and vegetables and identify the plant part (for example, stem, leaf, flower, and root) from which each comes.
- Collect and mount five or more different specimens of vegetative and reproductive parts of grasses or woody plants.

Other Approved Activities:

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D. Performance of Technical Skills Related to Animal Science and Technology

- Research and report the advantages and disadvantages of using "pedigree" and "visual appraisal" when selecting a livestock or poultry species.
- Draw and label the skeleton, digestive tract, or circulatory system of an animal.
- Attend, participate in, and report on an agricultural field day.
- Research and report on different animal breeding systems.
- Illustrate the relationship of ingredients listed on a feed product's label with the nutritional requirements of a livestock or poultry species.
- Identify and report differences in physical characteristics between a "young" animal and an "old" animal of the same livestock or poultry species.
- Describe blood flow and nutrient and waste exchange that take place in the circulatory system of a livestock or poultry species.
- Diagram typical growth or development patterns of a livestock or poultry species.
- Tour a genetics laboratory, commercial feedlot, or livestock or poultry operation and report findings to the class.
- Consult with a veterinarian on a livestock management skill (for example, vaccinating, dehorning, and palpating) and report findings to the class.
- Request information on embryo transfer techniques from a lab and share with the class.
- Obtain artificial insemination information from an AI school or company.
- Graphically illustrate the anatomy of a male or female reproductive system.
- Secure information on animal genetics research from a laboratory for use in class.
- Request information on animal nutrition from a feed company for use in class.
- Label and describe illustrations of the external anatomy of a livestock or poultry species.
- Identify livestock or poultry breeds and classes raised commercially in the community.
- Summarize the history and importance of a livestock or poultry breed, species, or class.
- Collect and identify pictures of ten or more different livestock or poultry breeds.

- Describe the ideal characteristics of a specific livestock or poultry breed or species.
- Discuss reasons for the breeds of livestock raised in the community.

Other Approved Activities:

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E. Description of the Principles of Food Science Technology

- Develop an "imaginary" food product and plan a marketing strategy for it.
- Research price differences among canned, frozen, dried, and fresh food products and use PowerPoint graphs, charts, etc. to report the findings to the class.
- Conduct an experiment on chemical and/or natural ways to preserve foods.
- Experiment with methods of packaging food products to extend shelf life.
- Research new technologies in food processing, packaging, storing, or preserving.
- Tour a supermarket or food store and categorize shelved produce as raw or processed agricultural products and then discuss the categories in class.
- Illustrate uses of livestock, poultry, or seafood crops with their processing methods.
- Secure USDA information on the imports and exports of agricultural products.
- Request information on new/innovative technologies used by food processors.
- Illustrate and post a food chain on the bulletin board.
- Collect ten or more different types of packages used by food processors.

Other Approved Activities:

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F. Safe Performance of Basic Mechanical Skills in Agricultural Applications

- Develop an "imaginary" tool and illustrate its use(s).
- Prepare a display of twenty different nails and other fasteners.
- Safety color code the school or home shop.
- Compute a "bill of materials" for a shop project.
- Illustrate safe shop or laboratory equipment and practices.
- Prepare a listing of the different areas of agricultural mechanics (for example, electronics, welding, and fencing) and post the list on the bulletin board.
- Identify various mechanical skills needed to be performed at home, school, etc.
- Describe fifteen or more different hand tools and/or power equipment items to the class.
- Plan and build an agricultural mechanics project for exhibition and/or use at home.

Other Approved Activities:

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- _____

G. Explanation of the Relationship Between Agriculture and the Environment

- Research and report on uses of chemical products in other countries.
- Prepare and present a brief oral report on the effects of chemical product misuse.
- Design a new energy or water saving device or procedure and report on it to the class.
- Research and report on methods of conserving water.
- Weatherize a home or other building for energy conservation.
- Research and report on alternative energy sources for agriculture.
- Conduct an experiment related to alternative energy sources (for example, wind, solar energy, and methane gas) and present the experimental findings to the class.
- Interview an agricultural extension agent about restrictions placed on chemical product uses in the county and discuss the findings in class.
- Simulate emergency first-aid procedures for insecticide poisoning, etc. during class.
- Secure and discuss information from the State Department of Agriculture (SDA) on the effects of chemical products on the environment.
- Request and report on information from the Environmental Protection Agency (EPA) on proper handling and uses of agricultural chemicals.
- Illustrate safe handling and uses of agricultural chemicals to other members of the class.

- Identify and discuss methods of protecting the community's environment.
- Collect fifteen or more different fertilizer or pesticide labels for class discussion.
- Secure and share information on fossil fuel conservation from an oil company.
- Calculate actual usage (number of KWHs) and cost of electricity for a building for three consecutive months and compare usages with other students in the class.
- Request and discuss information from the United States Department of the Interior on current research with alternative energy sources.
- Obtain energy conservation information from an electric company for class discussion.
- Illustrate and post methods of energy conservation.
- Repair a machine or piece of equipment for efficient operation.

Other Approved Activities:

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H. **Demonstration of Agricultural and Personal Business Management Skills**

- Use a mock situation (such as a feedlot) to buy, feed, water, and medicate animals.
- Report on various money investment strategies (for example, IRA and MMA).
- Record personal expenses for a week and report on suggestions to reduce expenses.
- Prepare inventories of all personal assets and discuss the sources of assets.
- Locate and discuss examples of online financial records and physical records.
- Develop a personal budget using actual weekly and/or monthly incomes and expenses (for example, keep an account of all income and expense for one week, and with the income and expense records, develop a workable budget).
- Collect and post pictures or photographs of ten people working in agricultural finance.
- Balance a real or simulated checking account.
- Discuss procedures for reconciling a bank statement with the checkbook.
- Tour a local financial institution (bank, credit union, PCA, etc.) to observe operations and personnel and report the findings to the class.
- Visit a local business and obtain a copy of its annual budget for class discussion.
- Contact a bank official to discuss record keeping, budgeting, and financing.
- Interview an officer at a loan institution about requirements for obtaining a loan.
- Collaborate with a local business owner about the importance of a budget and report the findings to the class.
- Visit with an agricultural producer about the effects of financial institutions on the management of the interviewee's operations and report the findings to the class.
- Interview a local agribusiness manager or owner about the importance of accurate records to the business and report the findings to the class.
- Contact a bank official about requirements for opening a checking or savings account.
- Visit a savings and loan agency about requirements for opening a savings account and borrowing funds for the SAEP.
- Budget the projected expenses of your Supervised Agricultural Experience Program for one feeding or growing period.
- Write a personal check and record the information on a check stub (or similar check book journal) and then explain the procedure for writing a check to the class.
- Use a mock auto purchase to illustrate loans and borrowing procedures using a computer program that allows one to determine payments of varied principals, interest rates, and re-payment periods.
- Review a film or video program relating to agricultural finance careers.
- Develop a plan to find a job and explain how much you will need to survive given the situation in which you quit school and move to a town of choice.

Other Approved Activities:

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July 2001 edition