



Agricultural Engineer

Skills Needed

- Communication
- Teamwork
- Analytical Skills

Foundational SAE Ideas

Develop technical skills through robotics clubs or engineering workshops.

Create a budget for engineering project materials or competitions.

Immersion SAE Ideas

Intern with an agricultural engineering firm to learn about design and testing of agricultural machinery.

Conduct experiments on soil erosion control or precision farming technologies.

FFA


Aerial Applicator/Agriculture Pilot

Skills Needed

- Technical Skills
- Problem-Solving
- Safety Awareness

Foundational SAE Ideas

Learn about aviation safety protocols and emergency procedures.

Educate peers on the role of aerial applicators in agriculture.

Immersion SAE Ideas

Study new technologies in aerial application methods and their efficiency in agriculture.

Develop educational materials on aerial application techniques for agricultural science classes.

FFA


Agriculture Lawyer

Skills Needed

- Problem-Solving
- Ethics
- Legal Knowledge

Foundational SAE Ideas

Shadow a lawyer specializing in agricultural law.

Develop critical thinking and argumentation skills through debate clubs or agricultural issues forum.

Immersion SAE Ideas

Intern at a law firm specializing in agricultural law to learn about case preparation and client representation.

Study agricultural regulations or policies and their implications for local farmers.

FFA


Assembly Technician

Skills Needed

- Mechanical Skills
- Technical Skills
- Safety Awareness

Foundational SAE Ideas

Participate in mock interviews to practice answering common interview questions.

Explore how technology is used in agriculture.

Immersion SAE Ideas

Work at a local manufacturing company.

Restore tractors and other equipment in your local agriculture department.

FFA



Automation Technician/ Coordinator

Skills Needed

- Technical Skills
- Programming
- Teamwork

Foundational SAE Ideas

Learn and apply safety procedures for working with automation systems and machinery.

Research how automation is used in agricultural settings.

Immersion SAE Ideas

Work at a local manufacturing facility or agricultural technology company.

Start an agricultural robotics club within your agriculture program, where students design and build prototype robots for tasks such as planting, spraying or harvesting crops.


FFA


Brand Manager

Skills Needed

- Creativity
- Strategic Thinking
- Leadership

Foundational SAE Ideas

Research and develop a budget plan for a hypothetical brand marketing campaign.

Study the role of branding in agricultural products, including how effective branding can impact market success and consumer perception.

Immersion SAE Ideas

Intern with a marketing or branding agency.

Develop and manage a branding project for your FFA chapter.


FFA


Chief Executive Officer

Skills Needed

- Visionary Leadership
- Conflict Resolution
- Decision-Making

Foundational SAE Ideas

Shadow a CEO of a local agricultural business.

Research and report on local agricultural businesses, such as farmers markets or co-ops.

Immersion SAE Ideas

Start a business that connects local farms directly with consumers.

Start and manage a student-run business focused on agriculture, such as a school garden.


FFA


Chief Financial Officer

Skills Needed

- Financial Literacy
- Problem-Solving
- Integrity

Foundational SAE Ideas

Create and manage a personal budget, tracking income, expenses and savings goals.

Participate in virtual stock market games or simulation.

Immersion SAE Ideas

Intern with the finance department of an agribusiness.

Work for a farm accountant or financial manager.


FFA



Chief Operating Officer

Skills Needed

- Management
- Logistics
- Strategic Thinking

Foundational SAE Ideas

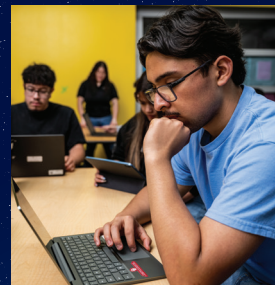
Identify a process within a school or community organization that could be improved. Propose and implement changes to enhance efficiency.

Shadow a local business manager or operations director.

Immersion SAE Ideas

Intern with the operations team of an agricultural company.

Start and manage a student-run business focused on agriculture, such as a school garden.


FFA


Computer System Analyst

Skills Needed

- Programming
- Database Management
- Analytical Skills

Foundational SAE Ideas

Evaluate and compare different software solutions for a specific need.

Learn about how IT systems are integrated into agricultural operations.

Immersion SAE Ideas

Research the impact of precision agriculture technologies on farm productivity and efficiency.

Intern with the IT department of an agricultural company.


FFA


Data Analyst

Skills Needed

- Data Analysis
- Analytical Thinking
- Attention to Detail

Foundational SAE Ideas

Develop and manage a personal budget plan, tracking income and expenses.

Explore career opportunities in data analysis.

Immersion SAE Ideas

Intern with an agricultural company or organization that uses data analysis.

Research trends in a specific agricultural area using data analysis techniques.


FFA


Data Processor

Skills Needed

- Data Entry
- Accuracy
- Attention to Detail

Foundational SAE Ideas

Learn about basic data security practices to ensure the safe handling of sensitive information.

Research the field of data processing, including career paths and required skills.

Immersion SAE Ideas

Work for an agricultural business to gain experience in data entry.

Develop and implement data management solutions for FFA fundraisers or events.


FFA



Digital Farming Lead

Skills Needed

- Precision Technology
- Data Analysis
- Project Management

Foundational SAE Ideas

Learn about cybersecurity practices to protect digital farming data and ensure the safe use of technology.

Research the impact of digital technologies on farming practices and productivity.

Immersion SAE Ideas

Create a school garden that uses digital tools, such as sensors and automated systems, to monitor and optimize plant growth.

Research the factors influencing the adoption of precision agriculture technologies among farmers.


FFA


Digital Marketing Lead

Skills Needed

- Content Marketing
- Social Media Marketing
- Creativity

Foundational SAE Ideas

Shadow a digital marketing professional.

Identify successful digital marketing strategies used in agriculture to understand how they drive engagement and sales.

Immersion SAE Ideas

Assist with managing digital marketing campaigns, content creation and analytics for your local FFA chapter.

Research the impact of different content types and strategies on user engagement.


FFA


Drone Technician

Skills Needed

- Data Analysis
- Technical Skills
- Attention to Detail

Foundational SAE Ideas

Understand local regulations and guidelines related to drone use and safety.

Explore how drones are used in agriculture.

Immersion SAE Ideas

Research the impact of drones on precision agriculture.

Start a business collecting drone footage and crop monitoring for local farmers.


FFA


Environmental Engineer

Skills Needed

- Environmental Impact Assessment
- Problem-Solving
- Technical Aptitude

Foundational SAE Ideas

Research solutions for environmental challenges in agriculture.

Shadow an environmental engineer.

Immersion SAE Ideas

Develop and implement water conservation projects in your local community.

Research the effectiveness of various soil and water conservation technologies in agricultural settings.


FFA



Ethanol Engineer

Skills Needed

- Safety Awareness
- Technical Skills
- Analytical Skills

Foundational SAE Ideas

Research the role of ethanol as a renewable energy source and its impact on agricultural practices and the environment.

Create a guide on personal safety equipment used in ethanol production facilities.

Immersion SAE Ideas

Work for a company that specializes in the production of ethanol and other biofuels.

Research the efficiency of biofuels made from different feedstocks.


FFA


Food Technologist

Skills Needed

- Food Processing
- Product Formulation
- Food Safety Protocols

Foundational SAE Ideas

Create a presentation on recent innovations in food technology.

Research and create a visual guide to different career pathways within food technology.

Immersion SAE Ideas

Start a food technology lab at school to experiment with food processing techniques, product development and quality testing.

Research how food technology affects the nutritional quality of food products.


FFA


Geospatial Analytics Scientist

Skills Needed

- Geospatial Data Analysis
- Remote Sensing Techniques
- Problem-Solving

Foundational SAE Ideas

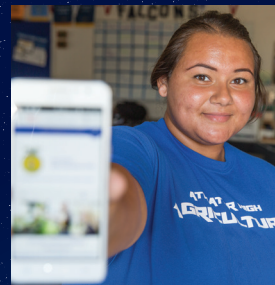
Develop a presentation on how Geographic Information Systems (GIS) are used in agriculture.

Create a checklist of key skills and software knowledge needed for a career in geospatial analytics.

Immersion SAE Ideas

Create maps for local agricultural initiatives.

Research how GIS technology improves precision agriculture practices.


FFA


Graphic Designer

Skills Needed

- Creativity
- Attention to Detail
- Time Management

Foundational SAE Ideas

Create a series of posters for agricultural events or awareness campaigns.

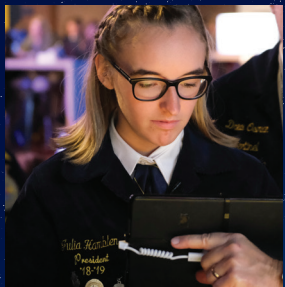
Create a financial plan for pursuing a career in graphic design.

Immersion SAE Ideas

Manage the marketing and design posters for your local FFA chapter.

Take on a freelance graphic design project for a local agricultural business or organization.


FFA



Information Technology (IT) Analyst

Skills Needed

- Data Analysis and Interpretation
- Network Security
- Database Management

Foundational SAE Ideas

Research and report on the role of IT in modern agriculture.

Shadow an IT analyst at a company that supports agricultural clients.

Immersion SAE Ideas

Intern with an IT consulting firm.

Program high technology equipment in your agriculture department.


FFA


Information Technology (IT) App Developer

Skills Needed

- Programming Languages
- Problem-Solving
- Attention to Detail

Foundational SAE Ideas

Interview professional app developers who work in the agriculture sector.

Research relevant certifications in app development.

Immersion SAE Ideas

Intern with a company that develops apps for the agriculture sector.

Purchase, set up and manage a Farm Bot in your agriculture department.


FFA


Information Technology (IT) Configurator

Skills Needed

- Software Installation
- Troubleshooting
- Attention to Detail

Foundational SAE Ideas

Identify certifications relevant to IT configuration.

Create a financial plan based on projected income from IT configuration roles.

Immersion SAE Ideas

Investigate how different IT configurations affect farm productivity.

Work for an agricultural business in the IT department.


FFA


Information Technology (IT) Programmer

Skills Needed

- Database Management
- Proficiency in Programming Languages
- Problem-Solving

Foundational SAE Ideas

Research career paths in IT programming within agriculture.

Shadow a professional IT programmer working in agriculture.

Immersion SAE Ideas

Work for a company that develops software for agriculture.

Develop a software application for your school's farm.


FFA



Information Technology (IT) Software Developer

Skills Needed

- Software Development
- Testing and Debugging
- Time Management

Foundational SAE Ideas

Research relevant certifications and degree programs in software development.

Research scholarship opportunities to help pay for higher education.

Immersion SAE Ideas

Work for a company that develops software specifically for agriculture.

Work for a local farm that uses modern farm equipment.


FFA


Information Technology (IT) Specialist

Skills Needed

- Network Administration and Security
- Software Troubleshooting
- Project Management

Foundational SAE Ideas

Study common IT issues related to agricultural equipment.

Research average salaries and available careers for IT specialists in agriculture.

Immersion SAE Ideas

Help provide IT support services for an agricultural cooperative.

Investigate cybersecurity risks specific to agricultural IT systems and develop strategies for protecting farm technology from cyber threats.


FFA


Information Technology (IT) Web Developer

Skills Needed

- Proficiency in Web Technologies
- Creativity
- Attention to Detail

Foundational SAE Ideas

Analyze websites of agricultural technology companies to understand common features and design elements.

Develop a financial plan for managing income from freelance web development work.

Immersion SAE Ideas

Create a website for the agriculture department and FFA chapter.

Manage a website for the agriculture department and FFA chapter.


FFA


Integrated Solutions Consultant

Skills Needed

- Technical Skills
- Documentation and Record Keeping
- Project Management

Foundational SAE Ideas

Research agricultural technologies in different countries.

Find a mentor who works as an integrated solutions consultant in agriculture. Meet regularly to discuss career goals.

Immersion SAE Ideas

Research and compare the effectiveness of various precision agriculture technologies in improving farm productivity and efficiency.

Investigate different soil sampling methods and their influence on crop yield.


FFA



Intern

Skills Needed

- Software Proficiency
- Eagerness to Learn
- Time Management

Foundational SAE Ideas

Shadow different departments within an agricultural business.

Research internships available for high school and college students in your area of interest.

Immersion SAE Ideas

Work for a local agricultural business in multiple and diverse areas.

Work as a teacher's assistant for the agriculture department.


FFA


Laboratory Manager

Skills Needed

- Safety Awareness
- Equipment Calibration and Maintenance
- Problem-Solving

Foundational SAE Ideas

Practice common interview questions related to this career.

Study different types of laboratory equipment used in agricultural research.

Immersion SAE Ideas

Work at an agricultural research lab.

Conduct agriculture-related research projects in your agriculture department.


FFA


Mechanical Electrician/ Electronics Technician

Skills Needed

- Systems Troubleshooting
- Problem-Solving
- Technical Aptitude

Foundational SAE Ideas

Develop a financial plan for pursuing further education or certification in electrical systems or electronics.

Research renewable energy sources.

Immersion SAE Ideas

Help a local agribusiness's maintenance team with the repair and upkeep of electronic systems in machinery.

Research how automated electronic systems improve efficiency and productivity in agricultural operations.


FFA


Mechanical Engineer

Skills Needed

- Engineering Design
- Manufacturing Processes
- Problem-Solving

Foundational SAE Ideas

Research various career pathways within agricultural engineering.

Shadow a mechanical engineer.

Immersion SAE Ideas

Create a prototype of a new or improved agricultural tool as part of a school project.

Work for an agricultural equipment manufacturer.


FFA



Mine Engineer

Skills Needed

- Mining Operations and Techniques
- Surveying and Mapping
- Planning and Design

Foundational SAE Ideas

Research educational requirements and career paths for mine engineering.

Learn about personal protective equipment (PPE) used in mining.

Immersion SAE Ideas

Conduct lessons to teach elementary students about mining.

Get an internship working for a survey company that contracts with mines.


FFA


Packaging Engineer

Skills Needed

- Regulatory Compliance
- Problem-Solving
- Attention to Detail

Foundational SAE Ideas

Develop a simple project tracker to manage tasks and timelines.

Research and compare the costs of different packaging materials for a specific product.

Immersion SAE Ideas

Create a business focused on providing sustainable and eco-friendly packaging options.

Work at a facility that processes recyclable packaging materials.


FFA


Policy Analyst

Skills Needed

- Data Collection and Interpretation
- Legislative Knowledge
- Relationship Building

Foundational SAE Ideas

Research a current agricultural or environmental policy issue.

Draft a mock proposal for a new policy or a policy change in an area of interest.

Immersion SAE Ideas

Intern with a government agency.

Start a blog that analyzes current agricultural or environmental policies.


FFA


Precision Agriculture Specialist

Skills Needed

- Precision Technology
- Crop Health Monitoring
- Technical Aptitude

Foundational SAE Ideas

Visit a farm using precision agriculture.

Research educational programs and courses related to precision agriculture.

Immersion SAE Ideas

Work for a local farm that uses precision agriculture.

Set up experiments at school to test different precision agriculture tools or techniques.


FFA



Process Engineer

Skills Needed

- Process Design and Optimization
- Safety Awareness
- Adaptability

Foundational SAE Ideas

Research various specializations within the field of process engineering.

Create a plan outlining the steps required to become a process engineer.

Immersion SAE Ideas

Work at an agricultural manufacturing company.

Organize and compete in a school-based engineering fair.


FFA


Process/Continuous Improvement Manager

Skills Needed

- Project Management
- Data Analysis
- Leadership

Foundational SAE Ideas

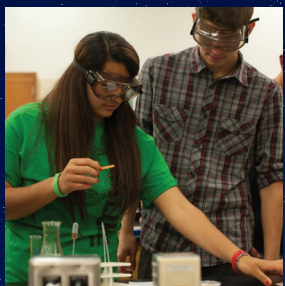
Develop a report on process improvement strategies used in agriculture.

Research various career opportunities related to process improvement and management.

Immersion SAE Ideas

Develop a detailed improvement plan for an FFA activity or event.

Intern with a logistics or supply chain company.


FFA


Research Associate

Skills Needed

- Research Skills
- Writing
- Statistical Analysis

Foundational SAE Ideas

Develop a presentation on a research topic or a project you have worked on.

Perform a basic safety inspection of your school's agricultural science lab.

Immersion SAE Ideas

Develop a research-based agricultural product.

Conduct research on the effectiveness of sustainable farming practices.


FFA


Research Scientist

Skills Needed

- Advanced Research Techniques
- Grant Proposal Writing
- Knowledge in Field of Study

Foundational SAE Ideas

Create a budget for a hypothetical research project.

Research the effects of genetically modified crops on agriculture.

Immersion SAE Ideas

Launch a blog or podcast focused on agricultural research.

Create educational resources that explain a key agricultural concept or practice.


FFA



Social Media Strategist

Skills Needed

- Social Media Knowledge
- Creativity
- Analytical Skills

Foundational SAE Ideas

Analyze the social media strategy of an agricultural company.

Develop strategies for managing and responding to online harassment or negative comments while maintaining a professional image.

Immersion SAE Ideas

Assist an agricultural business or organization with their social media accounts.

Create and run social media campaigns to raise awareness about local community issues or events.


FFA


Systems Administrator

Skills Needed

- Operating Systems
- Server Administration
- Troubleshooting

Foundational SAE Ideas

Prepare a professional resume and practice interview techniques.

Research emerging technology trends in agriculture.

Immersion SAE Ideas

Intern at an IT services company specializing in agriculture.

Utilize and manage software for monitoring plans in your agriculture department greenhouse or garden.


FFA


Technology Strategist

Skills Needed

- Data Analysis
- Project Management
- Analytical Thinking

Foundational SAE Ideas

Complete safety training on cybersecurity protocols.

Determine how technology impacts the agriculture industry.

Immersion SAE Ideas

Work at an agricultural business in the IT department.

Launch a technology startup focused on developing innovative solutions (e.g., software applications, IT services) to address specific industry challenges.


FFA