

Introduction to Agriculture, Food and Natural Resources 18001

Rationale Statement:

This course allows students to study a variety of agricultural topics throughout the seven Agriculture, Food and Natural Resources pathways. It serves as an introduction to much of the coursework included within the Agriculture, Food and Natural Resources Cluster. Application of clinical and leadership skills are provided by participating in FFA activities, conferences, and skills competitions such as career development events (CDEs) and agricultural proficiency awards. Each student will complete a Supervised Agricultural Experience (SAE) Program/Internship.

Suggested grade level: 9

Topics covered:

- FFA
- Leadership
- SAE
- Natural Resources
- Animal Science
- Agribusiness
- Food Science
- Agriculture Systems Technology



Indicator #1: Examine the role of FFA in agricultural education programs.

Bloom's Taxonomy Level	Standard and Examples
Understanding	<p>ITA1.1 Summarize the history and organization of FFA.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Explain how, when and why FFA was organized. • Explain the mission and strategies, colors, motto, parts of the emblem and the organizational structure of FFA. • Recite and explain the meaning of the FFA Creed. • Design a program of activities for the local chapter.
Analyzing	<p>ITA1.2 Appraise opportunities in FFA.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Analyze how FFA develops leadership skills, personal growth and career success. • Participate in major local, state or national activities. • Compare FFA degree areas. • Summarize FFA proficiency awards. • Prepare a presentation on team and individual Career Development Events.

Indicator #2: Evaluate the benefits and types of Supervised Agricultural Experience programs.

Bloom's Taxonomy Level	Standard and Examples
Understanding	<p>ITA2.1 Describe the types of SAE programs.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Critique entrepreneurship, job site and directed lab SAE opportunities. • Explain research and exploratory SAEs. • Explain the characteristics of a good SAE and responsibilities involved.

Creating	<p>ITA2.2 Implement an SAE.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Write plans for an SAE. • Write the function of a training plan and or agreement in an SAE program. • Complete an annual SAE record book and summaries.
<p>Indicator #3: Discuss the concept of natural resources.</p>	
<p>Bloom's Taxonomy Level</p>	<p>Standard and Examples</p>
Understanding	<p>ITA3.1 Describe the major categories of natural resources in America.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Define natural resources. • Classify resources as renewable or non-renewable. • Describe local natural resources.
Understanding	<p>ITA3.2 Summarize the history of conservation in the United States.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Compare and contrast exploitation, conservation and preservation as they relate to natural resources management. • Summarize those individuals instrumental to the field of natural resources and their accomplishments. • Explain the role of the federal government in natural resource legislation.

Indicator #4: Describe the animal science industry.

Bloom's Taxonomy Level	Standard and Examples
Understanding	<p>ITA4.1 Examine the animal science industry.</p> <p>Examples:</p> <ul style="list-style-type: none">• Classify the common breeds of animals in each species.• Explain how to select animals for production or use of each species.• Illustrate types of animal production setups.• Illustrate facility needs for various animals.• Describe how animal product prices are affected by federal price supports and marketing orders.
Understanding	<p>ITA4.2 Discuss current topics in animal science.</p> <p>Examples:</p> <ul style="list-style-type: none">• Discuss present and future trends in the animal science industry.• Explain ways animals help people.• Determine ethics involved in animal production.• Explain animal welfare and animal rights issues.• Summarize animals used for genetic engineering and biotechnology.
Understanding	<p>ITA4.3 Explore career opportunities in animal science.</p> <p>Examples:</p> <ul style="list-style-type: none">• Identify interests and aptitudes to an occupational area.• Develop goals related to future employment.• Interview prospective employers.• Complete a job shadow experience in animal science.

Indicator #5: Describe plant structure and function.

Bloom's Taxonomy Level	Standard and Examples
Understanding	<p>ITA5.1 Explain functions and physiology of cells and seeds.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Summarize the cellular structure of plants. • Explain the structure and kinds of seeds. • Summarize the process of seed germination. • Summarize the conditions required for germination. • Explain the importance for seed quality. • Summarize plant responses to varying amounts of water, varying temperatures and soil fertility.
Understanding	<p>ITA5.2 Describe the processes of photosynthesis and respiration.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Explain functions of water in plant growth. • Explain the absorption and transport systems of plants. • Explain the role of light quality on plant growth. • Explain the effects of light quality on plant growth. • Explain the process of photosynthesis.

Indicator #6: Implement basic economic principles.

Bloom's Taxonomy Level	Standard and Examples
Applying	<p>ITA6.1 Execute basic economic principles as they relate to production agriculture and agribusiness management.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Complete basic SAE records. • Track income and expenses from a fundraiser. • Calculate net and gross income for tax purposes.

Indicator #7: Discuss basic food science technology.

Bloom's Taxonomy Level	Standard and Examples
Understanding	ITA7.1 Illustrate how raw commodities become table-ready food products. Examples: <ul style="list-style-type: none">• Discuss safe food handling practices.• Describe food processing and preservation techniques and procedures.• Explain marketing and advertising of agricultural products.

Indicator #8: Use basic principles of agricultural systems technology.

Bloom's Taxonomy Level	Standard and Examples
Applying	ITA8.1 Execute basic principles involved in agricultural systems technology. Examples: <ul style="list-style-type: none">• Use tools for given purposes.• Design a bill of materials for a selected project.• Demonstrate safe use of tools and equipment.• Use measuring tools with accuracy.