

Introduction to Agriscience

State Standards

Life Knowledge and Cluster Skills (CS)

- CS.02.02.01.b Discover the different cultures that exist in one's community.
- food customs of major world populations
- CS.02.03.01.a Explore various career interests/options.
- career clusters and pathways
 - personal career interests and skills
- CS.02.03.03.a Identify the skills required for various careers.
- steps to setting career goals
 - degree requirements, salary and job availability for agricultural careers
- CS.06.02.01.a Use proper safety practices/personal protective equipment.
- CS.06.03.01.a Demonstrate the importance of safety, health, and environmental practices in the workplace.
- maintaining shop safety
- CS.07.04.02.a Handle chemicals and equipment in a safe and appropriate manner.
- common hazards
 - welding safety
- CS.08.01.01.a Identify standard tools, equipment, and safety procedures related to a specific task.
- welding tools and equipment
 - cutting tools and equipment
 - fire classes and extinguishers
- CS.08.01.02.a Follow operating instructions related to specific tools and equipment needed to complete a task.
- operating a welder and cutting torch
- CS.08.02.01.a Use the appropriate procedures for the use and operation of specific tools and equipment.
- operating a welder and cutting torch

Agribusiness Systems (ABS)

- ABS.01.02.01.a Describe the meaning, importance and economic importance of entrepreneurship.
- types of SAEs
- ABS.03.01.01.a Maintain production and agribusiness records.
- inventory assets
 - record keeping transactions
 - closing records
- ABS.04.01.02.a Identify financial concepts associated with production and profit.
- sales and income
 - expenses
 - liabilities
- ABS.05.01.01.a Identify accounting information in AFNR business reporting and management.
- types of records kept
 - recording transactions

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Animal Systems (AS)

AS.01.01.01.a Identify the origin, significance, distribution and domestication of animal species.

- history of beef cattle, dairy cattle, swine, sheep, goats, horses, poultry, small animals

AS.01.01.02.a Define major components of the animal industry.

- specie breeds and characteristics
- economic importance

AS.01.01.02.b Outline the development of the animal industry and the resulting products, services and careers.

- phases of production
- animals for work and recreation
- consumer products
- types and uses of small animals

AS.02.01.02.a Identify major animal species by common and scientific names.

AS.02.02.06.a Describe the functions of the animal body systems and system components.

- anatomy/parts of beef cattle, dairy cattle, swine, sheep, goats, horses, poultry
- milk production
- egg development and incubation

AS.06.02.02.a Describe how animal identification systems can track an animal's location, nutrition requirements, production progress and changes in health.

- swine universal ear notching system
- advances in the dairy industry

Environmental Service Systems (ESS)

ESS.03.02.01.a Explain the process of soil formation through weathering.

ESS.03.02.03.a Explain how the physical qualities of the soil influence the infiltration and percolation of water.

- sand, silt, clay
- textural triangle

Food Products and Processing Systems (FPP)

FPP.01.01.01.a Discuss the history and describe and explain the components (e.g., processing, distribution, byproducts) of the food products and processing industry.

FPP.01.02.01.a Explain the purposes of organizations that are part of or regulate the food products and processing industry.

- quality assurance
- government regulations

FPP.04.02.01.a Identify and describe foods derived from meat, egg, poultry, fish and dairy products.

FPP.04.02.02.a Identify and describe products derived from fruits and vegetables.

FPP.04.02.02.a Identify and describe products derived from grains, legumes and oilseeds.

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Plant Systems (PS)

PS.01.01.01.a Explain systems used to classify plants.

- taxonomy
- life cycles
- structures

PS.01.01.02.a Describe the morphological characteristics used to identify agricultural plants.

- structures
- monocot and dicot

PS.01.03.01.a Explain the basic process of photosynthesis and its importance to life on Earth.

PS.01.03.02.a Explain cellular respiration and its importance to plant life.

PS.02.01.01.a Describe the qualities of light that affect plant growth.

PS.02.01.02.a Describe the effects air, temperature and water have on plant metabolism and growth.

PS.02.02.01.a Identify the major components of growing media and describe how growing media support plant growth.

Power, Structural and Technical Systems (PST)

PST.04.04.07.b Distinguish welding processes, positions and materials preparation.

- welding methods and equipment
- striking an arc
- running a bead
- cutting equipment, gasses and process