



Agriculture Program Implementation Guide

Engage students in animal science careers



High-demand careers

Below are just a few of the rapidly growing, high-demand careers our agriculture tools can help your students prepare for.

Farm and Ranch Managers

- Other job titles: Accredited Farm Manager (AFM), Cash Crop Farmer, Farm Operator, Ranch Manager, Sow Farm Manager, etc.
- Education: Most require a bachelor's degree
- On-the-job tasks: Inspect orchards or fields to determine crop maturity and condition; direct crop production operations; plan crop activities; maintain financial and production records
- Key soft skills needed: Critical thinking, decision making, communication
- **Median wages (2021): \$35.12 hourly; \$73,060 annually**



Agricultural Inspectors

- Other job titles: Brand Inspector, Consumer Safety Inspector (CSI), Food Sanitarian, Food Safety and Inspection Service (FSIS), Seed and Fertilizer Specialist
- Education: Most require a high school diploma or associate's degree
- On-the-job tasks: Inspect food products and processing procedures; set standards for the production of meat or poultry products; inspect agricultural commodities; interpret and enforce government acts
- Key soft skills needed: Active listening, critical thinking, comprehension
- **Median wages (2021): \$21.70 hourly; \$45,140 annually**



Nursery and Greenhouse Managers

- Other job titles: Farm Manager, Garden Center Manager, Grower, Harvesting Manager, Propagation Manager, Horticulturist
- Education: Most require a bachelor's or associate's degree
- On-the-job tasks: Manage nurseries that grow horticultural plants; identify plants and diseases; assign work schedules and duties to staff; determine plant growing conditions
- Key soft skills needed: Communication, active listening, management skills
- **Median wages (2021): \$35.12 hourly; \$73,060 annually**



Find more career options and information from the National Center for O*NET Development.

*National Center for O*NET Development. Link to Us. O*NET Resource Center. Retrieved February 23, 2023, from <https://www.onetcenter.org/linkToOnet.html>*

Agriculture Education Offerings

Our agriculture education teaching tools pair large-scale, interactive animal and plant models with curricula, student activities, and assessments. Visit our website to learn how these resources can help you engage students in skill development related to the following pathways:

- **Animal Science**
- **Vet Science**
- **Bovine Skills**
- **Plant Science**
- **Hydroponics**
- **Welding**

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"Our Agricultural Technology Program is looking to expand its animal science offerings and strengthen our curriculum so we can attract more students and be more competitive with other colleges. This equipment allows us to do that, recruit more students and give the classroom a stronger feel. It also helps us train the students to enter the workforce or take necessary skills back to farm operations. This equipment will help establish Iowa Central as a leader in animal science."

Mike R., Agriculture Instructor, Iowa Central Community College

Agriculture Curricula Overview

All curricula include lesson plans, presentation slides, assessments, and other student materials.

Experiential Learning Tools	Curriculum Length	Lesson Topic
Bovine Injection Simulator	2 lesson hours	• Bovine Injections • Bovine Growth Implants
Bovine Breeder artificial insemination simulator	3-5 lesson hours	• Cow and Bull Reproductive Systems • Basic Principles of AI • AI Technique • Pregnancy Palpation
Cow Anatomy 3D Flip Chart	3 lesson hours	• Beef and Dairy Cow Anatomy • Ruminant Digestive Tract • Cow and Bull Reproductive Systems
Calf Simulator	3-5 lesson hours	• Basic Calf Care • Castration • Feeding
Bovine Milking Udder Simulator	4 lesson hours	• Development of the Bovine Udder • Structure of the Bovine Udder • Milking Procedure • Managing Somatic Cell Counts
Bovine AI Cervix Kit	2-3 lesson hours	• Cow and Bull Reproductive Systems • Basic Principles of AI • AI Technique
Cow and Pig Ear Simulation	2 lesson hours	• Cow Ear Tagging • Pig Ear Notching
Swine Breeder™ artificial insemination simulator	3-5 lesson hours	• Swine Reproductive Systems • Basics of Artificial Insemination • Proper Insemination Techniques
Plant Mini Educational Hydroponics System Class Pack (5-pack)	2 lesson hours	• What is Hydroponics • Plant Life
Plant Lab and Plant Producer Educational Hydroponics Systems	2 lesson hours	• Introduction to Hydroponics • Plant Life
Plant Science Kit	10-14 lesson hours	• Introduction to Plant Science • Plant Cell Structure • Leaves, Roots, and Stems • Flowering Plants • Plant Identification Features • Photosynthesis, Respiration, and Transpiration • Exploring Botany and Plant Science Careers
Soybean Plant Model	2 lesson hours	• Soybean Plant Anatomy
Corn Stalk Model	1 lesson hour	• Corn Stalk Anatomy • Common Nutrient Deficiencies
Cat Model	4 lesson hours	• Cat Anatomy and the Five Senses • Cat Digestive and Urinary Systems • Cat Reproductive System • Cat Respiratory and Circulatory Systems
Chicken Model	1 lesson hour	• Understanding Poultry Anatomy
Cow Model	3 lesson hours	• Beef and Dairy Cow Anatomy • Ruminant Digestive Tract • Cow and Bull Reproductive Systems
Dog Model	3 lesson hours	• Dog Anatomy and Physiology • Dog Digestive Tract • Dog Reproductive System
Goat Model	3 lesson hours	• Goat Anatomy • Goat Digestive Tract • Goat Reproductive Systems
Horse Model	3 lesson hours	• Horse Anatomy • Horse Digestive System • Horse Reproductive Systems
Pig Model	3 lesson hours	• Pig Anatomy and Pork Cuts • Pig Digestive Tract • Pig Reproductive Systems
Dissected Fetal Pig	1 lesson hour	• Dissected Fetal Pig Anatomy
Rabbit Model	1 lesson hour	• Basic Anatomy of a Rabbit
Sheep Model	3 lesson hours	• Sheep Anatomy • Sheep Digestive Tract • Sheep Reproductive Systems
Suture Kit	1 lesson hour	• Suturing Basics

See more agriculture products and curricula at www.realityworks.com/product-category/agriculture/

Create a 21st Century Animal Science Program

Our comprehensive solutions for agriculture education include hands-on resources as well as curricula, presentation slides, and assessments. You can select from a variety of resources to create the 21st Century animal science program that best fits your unique program needs.

What could your classroom look like?

Beef & Pork 3D Meat Cuts Poster

This 3D poster depicts primal beef and pork meat cuts in realistic, full-color detail.



Bovine Injection Simulator

The Bovine Injection Simulator is a one-of-a-kind education tool. Use this simulator to teach proper cattle injection techniques and ear tagging as well as growth implant basics. Jugular injections and IV administration, intramuscular injections, subcutaneous injections, ear tagging, and growth implant placement can all be practiced on this life-sized simulator.

Bovine Breeder™ artificial insemination simulator

This unique learning aid teaches correct cervix manipulation, AI gun positioning and pregnancy palpation. It allows students to see inside the reproductive tract to identify reproductive system landmarks.

Cow Anatomy 3D Flip Chart

This portable relief chart splits down the middle and opens to reveal 3 separate bovine anatomical illustrations: the external cow, the skeleton, as well as the internal organs and reproductive tract.

Cow and Pig Ear Simulation

Address proper ear care and identification while providing safe, consistent ear tagging and notching practice. All ears are removable and replaceable

Calf Simulator

Use our multi-functional Calf Simulator to give students hands-on opportunities to practice addressing a variety of major calf issues, including tube feeding, ear tagging, and hormone injection.

Bovine Milking Udder Simulator

Use this hands-on tool to teach proper udder care as well as milk disease and infection treatment and prevention. You can even use it to conduct a California Mastitis Test.

Swine Breeder™ artificial insemination simulator

Use this life-sized female swine simulator to teach proper swine AI and birthing techniques. Students can sit on this sturdy, portable simulator to check for standing heat and replicate artificial insemination techniques.

Plant Mini Educational Hydroponics System Class Pack (5-pack)

Allow individuals or small-groups to grow a variety of plants. Use the 5 desktop-size systems to practice 3 hydroponics growth methods: Deep water culture, ebb and flow and microgreen.

Soybean Plant Model

Teach students about the different stages of soybean plant growth. This life-size replica includes the roots and nodes of the plant as well as the stalk, leaves, buds, and pods.

Agriculture Career Scenario Cards (10-pack)

These pathway/occupation-specific workplace scenario cards cover real-world situations in agriculture careers. Use them to teach soft skills within specific occupations through small-group discussions, large-group icebreakers or individual challenges.

Animal Models:

The large and small animal models in this package all separate at the midline to reveal removable parts and feature realistic, full-color details, giving students hands-on practice studying various animal systems.

***All products can be purchased separately or in Agriculture pathway package options.**

Create a 21st Century agriculture classroom that prepares students for success

Our turnkey and custom packages include hands-on learning aids and hours of course content.



Veterinary Science Package

5 hands-on resources plus curricula



Bovine Skills Bundle

5 hands-on resources plus curricula



Hydroponics Plant Systems Package

5 hands-on resources plus curricula



Animal Systems 1 Package

15 hands-on resources plus curricula



Animal Systems 2 Package

30 hands-on resources plus curricula



Animal Agriculture Education Kits Package

6 hands-on resources plus curricula



Plant Systems Package

6 hands-on resources plus curricula



Custom Pathway Package

Choose hands-on learning aids and curricula that meet your unique program needs.

Scan for details



See other agriculture package options at www.realityworks.com