

Bringing the Principles of Agriculture to Life: A Pacing Guide

Step-by-step guidance for integrating Realityworks' hands-on tools and curriculum



Bringing the Principles of Agriculture to Life: A Pacing Guide



Why this Guide?

Realityworks' Principles of Agriculture curricula includes over 25 hours of content and hands-on activities. This pacing guide helps you plan effectively and meet AFNR standards while keeping lessons interactive, skill-based, and engaging.

What's Inside?

- A recommended semester-long sequence for Principles of Agriculture
- Week-by-week breakdowns of lessons, teaching tools, and activities
- Approximate instructional hours for each quarter

By the end, you'll be equipped to turn core agriculture lessons into meaningful, hands-on experiences that boost engagement and skill development.

How to Use This Guide:

- Follow the suggested pacing for math skills, measurement, animal systems, and plant science
- Use sample activities to reinforce hands-on learning
- Adjust for holidays, testing, and school events as needed

Planning Tips:

- Hours listed per quarter are approximate
- Weekly pacing allows time for projects, instruction, and hands-on learning
- This guide is flexible — adapt it to your classroom needs

1st Quarter	The Agriculture, Food, and Natural Resources (AFNR) Career Cluster Content Standards	Lesson Focus: Math for Agriculture Animal Science	Hands-On Resource	Sample Activities Included
Week 1	Foundational Pathway Skills Content Standards Career Ready Practices Content Standards	• Metric and Standard Readings	Measurement Math Training Kit	• Use videos, sample problems, and online lessons to review metric and standard readings
Week 2		• How to Read a Ruler and Tape Measure		• Practice converting from metric to standard and back
Week 3		• How to Read and Use a Caliper		• Use a fraction war card game to reinforce the value of fractions, specifically halves, fourths, eighths, and sixteenths
Week 4		• Decimals		• Learn about the standard units of measure on a ruler and tape measure and how to read them
Week 5		• Conversions		• Understand how to read a caliper and measure interior/exterior/depth measurements using a caliper
Week 6	Animal Systems Career Pathway Content Standards	• Measurements Using a Ruler and Tape Measure	Cow Model	• Convert metric readings on a caliper to standard and vice versa
Week 7		• Measurements Using a Caliper		• Use videos, sample problems, and online lessons to learn to read, write and use decimals
Week 8		• Beef and Dairy Anatomy		• Play a decimal class game to understand the four basic operations — addition, subtraction, multiplication, and division
Week 9		• Two-Ruminant Digestive Tract		• Use videos, sample problems, and online lessons to convert fractions to decimals and decimals to fractions
		• Cow and Bull Reproductive Systems		• Solve word problems using decimals and fractions
				• Take accurate standard and metric measurements using a ruler and tape measure
				• Problem-solve scenarios using measurement skills involving fractions
				• Take accurate measurements, including metric, using a caliper
				• Solve word problems that require the use of a caliper
				• Correctly name and identify the location of external beef and dairy body parts
				• Name, locate, and describe the functions of the parts of a ruminant digestive system
				• Correctly identify terms, functions, and structures associated with cow and bull reproduction
Total Hours	10 hours			

2nd Quarter	The Agriculture, Food, and Natural Resources (AFNR) Career Cluster Content Standards	Lesson Focus: Plant and Soil Science Food Systems & Food Safety	Hands-On Resource	Sample Activities Included
Week 1	Plant Systems Career Pathway Content Standards	• Introduction to Plant Science	Plant Science Kit	• Create a mind map identifying connections relating to plant systems
Week 2		• Plant Cell Structure		• Classify different types of plants and their uses
Week 3		• Leaves, Roots, and Stems		• Identify the parts of a plant cell and understand the function of each part
Week 4		• Flowering Plants		• Create a 3-D plant cell model
Week 5		• Plant Identification Features		• Identify the functions and internal and external parts of a leaf, root, or stem
Week 6		• Photosynthesis, Respiration, and Transpiration		• Complete an in-depth research project on roots, leaves, and stems and share findings
Week 7		• Exploring Botany and Plant Science Careers		• Dissect a real flower to take a closer look at each part under a microscope and identify its parts
Week 8	Food Products and Processing Systems Career Pathway Content Standards	• Introduction to Butcher Poultry Cuts	Butcher Chicken Cut Models	• Learn key vocabulary terms relating to flowering plants, their parts, and their functions
Week 9		• Poultry Harvesting Process • Poultry Fabrication		• Using real leaves, will identify the type of venation found in each leaf
Total Hours	13-17 hours			• Identify, describe, and illustrate 40 leaf shapes

Ready to elevate your core agriculture concepts?

This pacing guide helps you deliver engaging, hands-on lessons that connect math, plant science, and animal science to real-world skills. These activities go beyond standards to build confidence, curiosity, and career-ready understanding.

Next Steps:

- **Explore more resources:** Find lesson plans, videos, and teaching tips at www.realityworks.com
- **Get support:** Contact our team for training or implementation assistance with these tools.
- **Plan ahead:** Use this guide as a flexible roadmap — adapt it to your schedule and classroom needs.



Want to Explore More Agriculture Tools in Action?

Scan the QR code or visit our website to see product details, classroom ideas, and educator resources designed to support your program.