



AG ISSUES IN ACTION: ***Research, Analyze, and Communicate Agricultural Challenges***

Course: Agricultural, Food, and Natural Resources (AFNR)

Grade Level: 8–12

Lesson Title:

Time Frame: 2–3 Weeks

Learning Objective: Students will analyze current agricultural issues using provided briefs and data, evaluate multiple perspectives, and create a product that communicates a solution to an audience.

Student Learning Targets:

- **We will:** Analyze and communicate agricultural issues using data and multiple perspectives.
- **I will:** Use evidence to explain a solution to a real-world problem.

Differentiation: Instruction will be scaffolded using Tier 1, Tier 2, and Tier 3 supports to meet diverse student needs.

Standards Alignment: (TEKS – AFNR Employability Skills)

- Communication
- Critical Thinking and Problem Solving
- Teamwork and Collaboration
- Professionalism and Work Ethic
- Use of Information and Technology

Materials:

- Texas FFA Ag Issues Brief
- Farm Facts resource
- Research Organizer
- Student devices (for research and creation)
- Presentation tools (Google Slides, poster materials, etc.)

Key Vocabulary

- Sustainability
- Infrastructure
- Policy
- Stakeholder
- Data Analysis
- Agricultural Systems



LESSON CYCLE (5E MODEL)

ENGAGE (Hook the Students)

Time: 1 class period (45 minutes)

Objective: Activate prior knowledge and spark curiosity

Instructional Strategy: 4 Corners Activity

Teacher Actions:

- Present controversial agricultural statements
- Facilitate student movement and discussion

Student Actions:

- Take a position (Agree/Disagree)
- Justify reasoning
- Identify knowledge gaps

Formative Assessment:

- Student responses and discussion participation
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EXPLORE (Student-Driven Learning)

Time: 2–3 class periods (90-135 minutes)

Objective: Investigate agricultural issues through inquiry

Teacher Actions:

- Provide Ag Issues Brief and research organizer
- Facilitate group formation and guide inquiry

Student Actions:

- Select issue
- Conduct research
- Complete organizer

Formative Assessment:

- Research organizer completion
 - Teacher check-ins
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EXPLAIN (Concept Development)

Time: 1–2 class periods (45 -90 minutes)

Objective: Develop understanding and clarify concepts

Teacher Actions:

- Facilitate group sharing
- Address misconceptions
- Reinforce key concepts

Student Actions:

- Present initial findings
- Engage in discussion
- Refine understanding

Formative Assessment:

- Informal presentations
 - Class discussion
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ELABORATE (Application of Learning)

Time: 4–5 class periods (180 – 225 minutes)

Objective: Apply knowledge through creation

Teacher Actions:

- Provide project options and expectations
- Monitor progress and provide feedback

Student Actions:

- Create a project (news show, website, experiment, etc.)
- Apply research, data, and perspectives
- Develop solution

Formative Assessment:

- Progress checks
 - Peer feedback
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EVALUATE (Assessment of Learning)

Time: 1–2 class periods (45 – 90 minutes)

Objective: Demonstrate understanding and communication

Teacher Actions:

- Facilitate Ag Expo Day
- Evaluate using rubric

Student Actions:

- Present project
- Respond to questions

Summative Assessment:

- Final product
- Presentation
- Rubric scoring

Assessment Plan:

- Formative Assessments
 - 4 Corners discussion
 - Research organizer
 - Group check-ins
 - Peer feedback
 - Summative Assessment
 - Final project and presentation evaluated using rubric
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DIFFERENTIATION

Tier 1 (All Students):

- Participate in structured research and project-based learning
- Use guided research organizer and defined group roles

Tier 2 (Targeted Support – Students Needing Additional Support):

- Scaffolded notes and guided questions
- Reduced number of required perspectives
- Structured project templates and frequent check-ins

Tier 3 (Intensive Support – Individualized Needs):

- One-on-one support
- Chunked instructions and sentence stems
- Modified project or presentation format

**Extension (Advanced Learners):**

- Incorporate policy or economic analysis
 - Use additional sources
 - Present advanced solutions (debate, policy pitch, research defense)
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Instructional Strategies

- Inquiry-Based Learning
- Project-Based Learning
- Collaborative Learning
- Student Choice and Voice
- Real-World Application

Real-World Connections

- Students explore authentic agricultural issues such as water scarcity, disease outbreaks, and agricultural policy, connecting classroom learning to real-world agricultural systems and careers.

Classroom Management & Procedures

- Clearly defined group roles
- Established expectations for collaboration
- Structured timeline with checkpoints
- Active monitoring and redirection

Reflection / Closure

- Students will reflect on:
 - What they learned about agricultural issues
 - How their perspective changed
 - The effectiveness of their proposed solution

Administrator "Look-Fors"

- Student engagement and collaboration
- Use of real-world data
- Higher-order thinking and discussion
- Student ownership of learning
- Clear alignment to TEKS and employability skills

One-Sentence Summary (Evaluation Ready)

- This lesson engages students in inquiry-based, real-world agricultural problem solving through research, collaboration, and project-based learning, aligned to AFNR employability skills and college and career readiness.