

## APPENDIX 5

# GROWING A NATION

THE STORY OF AMERICAN AGRICULTURE

## ASSESSMENT TECHNIQUES

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An assortment of assessment tools can be used to evaluate learning. Using the research-based assessment strategies outlined below provides teachers and students with flexibility for assessment meeting the needs of different types of information, including content and processes, and different learners. Several of these assessment techniques are accomplished in the *Growing a Nation* lessons and *Embedded Resources*.

**Questioning:** One of the most useful methods of differentiation assessment (Northey) is questioning. Oral or written, teachers have always used questioning techniques for assessment. Teachers can use questions to make written quizzes and content tests. Multiple choice questions are used for objective questions to determine right answers. This is the most common method of assessment. At the beginning of each *Growing a Nation* lesson “Essential Questions” are asked. Each of these questions helps students to arrive at the “**Enduring Understanding.**” (*The significant events throughout American agricultural history that have changed American society and the lives of her citizens.*)

### **Essential Question: Lesson 1: 1600-1929**

*What are the major events or inventions that changed American families and communities, science and technology, education, economy, business, trade, labor, and legislation from 1780-1929?*

### **Essential Questions: Lesson 2: 1930-1949**

*What was the cause of the Dust Bowl?*

*How did the Dust Bowl and agriculture contribute to The Great Depression?*

*How did the Dust Bowl impact the environment?*

*What was government’s response to help farmers during the 1930s?*

*What ended The Great Depression?*

### **Essential Questions: Lesson 3: 1950-1969**

*How has America fed itself and much of the world?*

*What has happened in the last 200 years to reduce farm labor and increase production?*

*How has agriculture made it possible for Americans to pursue their hopes and dreams?*

### **Essential Questions: Lesson 4: 1970-Present**

*Does America need to farm in the 21st Century?*

*Who supports the 2% who grow products on farms and then ensure a finished product arrives as food, clothes, shelter, or energy? (Another 9% of the population in the role of scientists, specialists, processors, business professionals, etc.)*

*Who will be the next generation of farmers, agricultural scientists and agricultural educators?*

*What is sovereignty as it relates to America’s food and energy supplies?*

These “Essential Questions” can be answered and assessed in a variety of ways. These questions are usually answered by:

- Comparing and contrasting—example: How is one thing different or the same as another thing?
- Observing—example: What do you see when this happens?
- Ordering—example: What patterns do you notice when this happens?
- Communicating—example: Can you summarize your findings?
- Categorizing—example: How would you group these things?
- Applying—example: How did your evidence help you determine the answer to your question?

- Inferring-example: How do you know this is correct?
- Relating-example: What factors caused this to happen?

Some things to keep in mind when creating or assessing essential questions:

- They may have more than one answer
- They should be more engaging and challenging
- Concepts often cross over from one area of learning to another
- Usually occur naturally in real world contexts

#### **Bloom's Taxonomy Questions:**

- Knowledge: Who, what, where, when, and how?
- Comprehension: Explain the meaning of this in your own words.
- Application: How is this an example of \_\_\_\_\_?
- Analysis: Outline or diagram the \_\_\_\_\_.
- Synthesis: How would you create/design a \_\_\_\_\_ from what you have learned?
- Evaluation: Do you agree?

**Conference/Interview:** Provides teachers an opportunity to assess student thinking as student verbalizes their knowledge.

**Demonstration/Performance:** Presentations of what a student can do before an audience; gives all students an opportunity to show their mastery of subject content.

**Journaling and Learning Logs:** Contain factual information which is less personal and more focused on content. This assessment technique assesses the affective domain of a student's learning through reflective writing about a concept or topic in a journal or learning log.

**Integrated Projects:** Comprehensive demonstrations of skills and knowledge learned during a unit or over time; there is usually a series of connected interdisciplinary activities which involve both "in class" and "out of class" time.

**Performance Task:** Activities which require students to demonstrate what they know or can do; an individual task that is usually small in scope.

**Portfolio Self-Assessment:** Individual samples of student work which demonstrate what has been learned or accomplished over time.

**Round-Robin Assessment Questions:** Write or type assessment questions onto the center of index cards. Next write or type the answers to the questions randomly on the upper right hand of the index card (be sure the correct answer is not on the same card as the question, see example on next page). Pass out the cards and ask a student to read his or her question on the card; someone in the class has the card with the correct answer in the upper right hand corner. As the questions are read, each student checks his or her card to see if the answer is on their card. If they have the correct answer, they raise their hand and share the answer with the class. It is now their turn to read their question; someone else will have the answer. This "round-robin" continues until all questions have been asked and answered.

**Source:** Northey, S. S. (2005). *Handbook on differentiated instruction for middle and high schools*. Larchmont, NV: Eye on Education.

Example Round-Robin Assessment Questions:

A: 10%

Q: Which state produces the most food?

A: 5 years

Q: Why was the Homestead Act repealed in 1976?

A: California

Q: Which country is our best export customer \_\_\_\_\_.

A: The amount of land for homesteading was decreased or taken by other governmental acts.

Q: How big is an acre?

A: Canada

Q: How old did you have to be to file a homestead claim?

A: Football field, including the end zones.

Q: The erosion rate by water on U.S. croplands has been reduced by more than \_\_\_\_\_ since 1982.

A: 21

Q: To file a homestead claim cost \$18; how long did you need to stay (build a home and farm) on the land to claim complete ownership?

A: 40%

Q: What allowed farmers to increase production by 300% over the last 40 years?

A: Research and Education

Q: What is the percentage of the total U.S. population that farms in the United States?

A: 2%

Q: While only 2% of the population farms, another 9% supports farmers through science, processing and sales; the number increases to about 20% when you add in transportation, but how many Americans need agriculture every day?

A:100%

Q: Which one of these crops is not produced in the United States?  
wheat, cotton, rice, corn,  
or soybeans.

A: All are produced in the U.S.

Q: What percent of the average U.S. disposable income is spent on food?