



Lesson Seven: Agriculture Adventure

Grade Level: 5th Grade

Time: 60-90 minutes (You may wish to divide the lesson at step 4.)

Essential Question: How can we be stewards of Wyoming's agriculture to benefit current and future generations?

Objectives: Students will:

- Apply principles of cost-benefit analysis to inform decision-making.
- Define both economic cost/benefit and cultural cost/benefit.

Purpose: Students learn about economic costs and benefits and cultural costs and benefits. By practicing cost-benefit analysis, students discover that decision making is a complex task.

Required Materials/Resources:

- 4 Lenses - 4 Corners cards (one set cut apart for the class)
- *Choose Your Ag Adventure* Power Point slideshow (Sources 1-6)
- Electronic device for each student/pair of students
- Chart paper (optional)

Suggested Teacher Preparation:

- Familiarize yourself with the 4 Lenses - 4 Corners activity.
- Prepare 4 Lenses - 4 Corners cards.

- Familiarize yourself with the *Choose Your Ag Adventure* slideshow. It is a PowerPoint file that can be downloaded under either Teacher Resources, or Student Resources at: <https://wyaitc.org/curriculum/student-resources/>
- Prepare the check for understanding questions (see **Assessment**) on chart paper, board, or smart-board slide.

Standards:

Social Studies: SS5.2.2, SS5.3.2 (Explicit)

ELA: 5.L.6 (Explicit)

Vocabulary:

- **Cost-benefit analysis** - a type of thinking in which you carefully consider what will be needed (cost), and what you will gain (benefit) if a certain action is present
- **Culture** - a way of thinking, behaving, or working that exists in a place or organization
- **Economic cost** - the time, money, and resources required for a task or job

Instructional Procedure/Steps:

1. Begin the lesson by recapping with students how they've developed their ability to make stewardship decisions based on science ideas over the past four lessons. Say: **"In the next two lessons, we will be revisiting the idea from Lesson 1 that stewardship decisions require multiple lenses. Today, we are going to start learning to use culture and economic cost as additional lenses for making stewardship decisions."**
2. Introduce the definitions of the terms, and share some examples to help students understand them:
 - Say: **"The definition of economic cost is the time, money, and resources required for a task or job. Here is an example. If I wanted to start raising chickens, the economic cost would include buying chickens, buying feed, finding an appropriate space, buying a coop**

or getting materials for a coop and investing time in setting it up, and caring for the chickens each day.”

- Say: **“The definition of culture is a way of thinking, behaving, or working that exists in a place or organization. Here is an example. The culture of our classroom is that we support each other. We sometimes have friendly competitions, but we always want to see each other succeed. When someone is struggling, we help that person out. One part of the culture of our town is _____.”**

Provide students with specific examples of aspects of your local community’s culture or examples they will relate to. For example, one part of the culture of Laramie is that many of the people who live here spend a lot of time recreating outdoors. Another example might be one part of the culture of Douglas is that many of the families who live here have someone who works in the energy industry.

3. To give students an opportunity to build familiarity with the terms culture and economic cost, play the game 4 Lenses - 4 Corners.

- Hand each student one of the 4 Lenses - 4 Corners cards
- Assign one corner of the room to be the economic benefit lens corner, one corner to be the economic cost lens corner, one corner to be the cultural benefit lens corner, and finally, one corner to be the cultural cost corner.



- Have students read through their card and decide which lens their statement fits into best.
- At a given signal, tell students to move to the corner that best fits their statement.

TEACHER NOTE:

If students completed the 4th grade agriculture unit, they completed a lesson dealing with cost-benefit analysis. This lesson is intended to support students in developing an understanding of cost-benefit analysis that extends beyond business earnings and expenditures.




In this task, students will be engaged in the higher order thinking skills of analysis and synthesis by organizing new ideas based on previous knowledge and making and defending a claim.

- Once students are in their corners, have them read their statements one at a time. Ask each student: **“What part of your statement made you choose this corner?”** Some cards may spark discussion about belonging in multiple corners. If students struggle, have them choose the one they think fits best and assure them that overlap in lenses often occurs.
 - At the end, collect cards, and have students return to their seats.
4. Say: **“Often when we consider the economic and culture lenses when making a decision, we use a type of thinking called cost-benefit analysis. In this type of thinking, you carefully consider what will be needed (cost) and what you will gain (benefit) if a certain action is present. We are going to practice doing this type of thinking by analyzing decisions that a rancher or farmer would have to make concerning their business.”**
 5. Say: **“We are going to be doing an activity where you will be given a scenario in which you will inherit a ranch. During the activity, you will have to make a series of decisions about how to manage your ranch.”**
 6. Have students log on individually or in pairs to *Choose Your Ag Adventure* slideshow. Once all students are ready, read the following scenario out loud to the group: **“Your grandfather passed away, and your family will be moving to his cattle ranch that has been in your father’s family for 3 generations. You have spent several summers at the ranch and are excited for the opportunity to live in the mountains on your own ranch. However, your father will need to quit his job, therefore, leaving the life you have known in order to manage the many aspects of the ranch. Revenue from the ranch comes from the sales of calves in the fall,**

TEACHER NOTE:
This may be a good place to split the lesson if time is a concern. Begin again later by reviewing what was discussed in step 4.

TEACHER NOTE: As students are playing the game, circulate the room to ensure that students are discussing the relevant lenses when making a decision.

grass hay production, and the outfitters that come to utilize your land to hunt with groups in the fall.”

7.  After reading the scenario, say: **“You will have a series of decisions to make about how to manage your ranch. Read the situation and click on your choice to reveal the next step. Continue through the activity until you have made all of the decisions.”**
8. At the end of the activity or after students get through as many decisions as time allows (make sure students make at least 3 different decisions), ask the following questions to the whole group: **“How did thinking about the cultural costs and benefits and the economic costs and benefits help you to make decisions on your ranch? What lens/lenses do you think you used the most in making your decisions?”** *Bring up a decision that was approached differently by two individuals and ask them to share what considerations/lenses they used that may have led to the difference.*
9. When students are finished discussing the questions, say: **“Remember, decision making is an extremely complex task. Many different lenses should be considered before coming to any final decision not only on farms and ranches but in life in general.”**

Assessment: As an assessment/check for understanding, present the following multiple-choice statements on chart paper, the board, or project a slide. Ask students to indicate which option(s) they think is/are correct by holding up their fingers to indicate the number of the correct answer(s). Let them know that there may be more than one correct answer.

- **What is economic cost?** *Students should indicate both 2 AND 4 with 2 fingers on one hand and 4 on the other.*



In this task, students will be engaged in the higher order thinking skill of evaluation by judging the choices given.

- 1. The amount of effort it will take to accomplish a task.**
 - 2. The amount of time and money it will take to accomplish a task.**
 - 3. The changes that must occur in order to accomplish a task.**
 - 4. The resources it will take to accomplish a task.**
- **Which is NOT a characteristic of culture?**
Students should only pick option 3.
 - 1. Way of behaving**
 - 2. Way of working**
 - 3. Way of walking**
 - 4. Way of thinking**

If students disagree or seem unsure about any of the questions, immediately clarify and remediate before moving on to the next question.

Evaluate where students are with regard to becoming master stewards in the board game. If students are far behind or have a small chance of completing the game, give bonus points based on active participation in the *Choose Your Ag Adventure* slideshow.

Credits/Sources:

1. MachineFinder. (2007-2018). *Wyoming John Deere Dealers*. Retrieved August 11, 2018, from <https://www.machinefinder.com/ww/en-US/john-deere-dealers/wyoming>
2. Wyoming Edge Outfitters. (2016, December). *Wyoming hunting at its best!* Retrieved August 11, 2018, from <http://www.wyoedge.com/home.htm>
3. Boone and Crockett Club. (2017). *125-YEAR SNAPSHOT: BOONE AND CROCKETT CLUB 1887-2012*. Retrieved August 11, 2018, from http://www.boone-crockett.org/about/about_overview.asp?area=about
4. Consumer Reports. (2015, August 24). *Why grass-fed beef costs more?* Retrieved August 11, 2018, from <https://www.consumerreports.org/cro/magazine/2015/08/why-grass-fed-beef-costs-more/index.htm>
5. Dude Ranchers' Association. (n.d.) *Welcome to the Dude Ranchers' Association*. Retrieved August 11, 2018, from <https://duderanch.org/>