



Lesson Three: Made for Success

Grade Level: 4th Grade

Time: 45-60 minutes

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

Objectives: Students will:

- Read and discuss how ranchers can be good stewards.
- Create a graphic of various Wyoming animals and their structures and make a claim as to why the animals are suited to Wyoming.

Purpose: Students will understand how different animal characteristics support survival of various Wyoming livestock.

Required Materials/Resources:

- All About Livestock characteristic cards (one set of cards per group)
- Livestock Characteristics sheets (5 sheets -1 of each animal per group)
- "Make a Claim" sheet

TEACHER NOTE:
Teacher may want to laminate the information cards for use again.

Suggested Teacher Preparation:

- Copy animal graphic organizers for groups
- Prepare copies of information cards for groups.
- Copy "Make a Claim" page for students
- Familiarize yourself with the Whip Around strategy

Standards:

Science: 4-LS1-1 (Explicit)

ELA: 4.RI.1, 4.RI.2, 4.SL.1, 4.SL.2 (Practiced/Encountered)

CVE: CV5.1.4, CV5.2.3, CV5.4.1, (Practiced/Encountered)

Vocabulary:

- **Aerate** - process of introducing air into the soil to improve plant growth
- **Economy** - financial system of interaction and exchange
- **Livestock** - animals kept for use and profit
- **Oversight** - the action of overseeing or supervising something
- **Rancher** - a person who raises livestock and may also cultivate the land or crops
- **Ruminant** - animal's stomach with four components or chambers enabling it to digest plant material
- **Sustainable** - able to be maintained, able to last or continue for a long time
- **Ungulate** - hoofed mammal

Instructional Procedures/Steps:

Students will work in small groups to diagram characteristics of livestock raised in Wyoming.

TEACHER NOTE: All structures mentioned on the card should be labeled on the graphic organizer. Make sure students read before they write.

1. Begin the lesson by posing the question, **“What would be considered part of the structure of a house?”** (responses may include roof, walls, ceilings, stairs, a deck, siding, brick, etc.) Lead the discussion to distinguish between what structures would be found inside and outside of the house. **“Just like a house, animals have internal and external structures that are important to their survival. Today, we will be looking at animals raised in Wyoming. We will examine the structure of the animals that makes them well-suited for Wyoming. You will also learn about the products we use every day from each animal.”**

2.  Place students in groups of 4-5. Pass out cards and animal graphic organizers to each group. The cards are: *#1 Beef, #2 Dairy Cattle, #3 Goats, #4 Sheep, and #5 Hogs*. Make sure the animals on the cards and organizers match. **“You will have 2-3 minutes to read the information on the card carefully. After reading, you will either label one internal/external structure that is important to this animal for survival in Wyoming or a byproduct of the animal and its use. Your response needs to be different from what anyone else has written on the page. Each structure needs to be labeled by the end of the activity. At my signal, you will pass your card and organizer clockwise to the next person and then repeat the process for your new animal. We will continue until all students have read and responded to all animals.”**
3. Allow time for reading the card and writing on the organizer. Signal students when it is time to pass their materials clockwise. This activity should take approximately 20-25 minutes (4-5 minutes per card/organizer); adjust time as needed for your students.
4. After the activity is completed, have students discuss in their small groups the question, **“What important structures were labeled for each animal’s survival in Wyoming?”** Monitor group discussions to identify any missing structures or misconceptions.
5. Conduct a class Whip Around identifying all of the important structures for each animal. Each group needs to identify structures that have not already been identified to ensure all structures are named. Students may reword a response to make it unique. Be sure to discuss all animals individually that were covered in the lesson. **“Are any of these structures more important**



In this task, students will be engaged in the higher order thinking skill of synthesis by using this reading strategy. Students will read the facts on the card, determine the important structures, and label the structure on a graphic organizer.

than the other? Why or why not? As you can see, all of these animals have structures that work as a system for their survival and make them well-suited to Wyoming. If one of these structures was missing, would the animal survive in Wyoming? Somewhere else? How do you know?"

6. Ask: **"How does animal structure impact stewardship decisions?"** Responses may include: forage is reliant upon the animals selected, areas needing weed control, fire prevention, animal hooves breaking up soil, etc.

Assessment: Hand out the "Make Your Claim" sheet, go over the directions with students, and then have students complete it. Students should be able to choose an important structure and support its importance with at least 1 valid reason.

Credits/Sources:

1. Animals, A-Z. (2019). *Goats - Facts, Diet, Milk & Habitat Information*. *Animal Corner*. Retrieved July 9, 2019, from <https://animalcorner.co.uk/animals/goats/>
2. Animals, A-Z. (2019). *Domestic Sheep - Facts, Diet & Habitat Information*. *Animal Corner*. Retrieved July 9, 2019, from <https://animalcorner.co.uk/animals/domestic-sheep/>
3. Dairy And The Environment | American Dairy Association North East. (2019). *What do dairy farmers do to protect the environment?*. Retrieved July 10, 2019 from <https://www.americandairy.com/dairy-farms/dairy-and-the-environment/>.
4. *Encyclopedia Britannica*. (2019). *Cow | Mammal*. Retrieved July 9, 2019, from <https://www.britannica.com/animal/cow>.
5. Nationwide, S. (2019). Environmental Benefits. Retrieved from <https://www.sare.org/Learning-Center/Bulletins/Profitable-Pork/Text-Version/Environmental-Benefits>

6. *Pig Facts - Animal Facts Encyclopedia*. (2019). Retrieved July 9, 2019, from <https://www.animalfactsencyclopedia.com/Pig-facts.html>.
7. *Products from animals*. (2019). Retrieved on July 9, 2019, from <https://animalsmart.org/feeding-the-world/products-from-animals>.
8. Science, Live. (2019). *Facts About Goats*. Retrieved July 9, 2019, from <https://www.livescience.com/52540-goat-facts.html>.
9. Thinglink.com. (2019). *Cow Adaptations By Kishan*. Retrieved July 9, 2019, from <https://www.thinglink.com/scene/649319210098360321>.