

Adopt-A-Cow: Beef

LESSON 3: CALF HEALTH

KEY TERMS

Colostrum, Vaccine, Veterinarian

EDUCATION STANDARDS

English Language Arts

- SL.1, SL.2, SL.3

Educational Technology

- ET.EL.2

Science

- 3-LS4-3, 3-LS1-1

Science Practices

- SEP 1, SEP 4, SEP 7

TIME NEEDED

Part I: Calf care and Ear Tag Design Activity (30 min)

Part II: Vet Video and Vaccination Scenario: (20 min)

MATERIAL LIST

Materials for the whole class:

- Computer/Projector/TV/Promethean board
- PowerPoint
- Felt or paper cows and germs

Materials for the individual or teams of students

- Ear tags
- Markers or Paint Pens



EXPECTED LEARNER OUTCOMES

OBJECTIVE 1 – Youth will discuss ways that ranchers care for calves and compare it to how their caregivers keep them safe.

OBJECTIVE 2 – Youth will observe a new calf check-up and listen to a vet discuss the importance of animal care.

OBJECTIVE 3 – Youth will create ear tags like what ranchers use to track individual animal health.

BACKGROUND

The most important job of a rancher is to ensure that his/her livestock remain healthy and safe. Ranchers care for their animals like parents and other guardians care for their children. They ensure their animals have all their basic necessities (food, water, and shelter) and they ensure that they remain in good health. To ensure their health they provide vaccines to protect them from illnesses and antibiotics to treat infections. On occasion, they also employ veterinarian assistance in caring for these animals. Ranchers track the health history of their livestock, just like doctor's track growth charts and immunizations for humans.

VOCABULARY

Colostrum – a nutrient rich, first milk produced by a mother during pregnancy. It provides newborn animals with a boost of immunity support during their first weeks of life.

Placenta – the organ that serves as the sac where the baby grows when in its mother's uterus.



Pneumonia – an infection that affects the lungs causing them to fill with fluid.

Scours – diarrhea of young animals that can cause severe dehydration and even death in young animals.

Uterus – the muscular organ that protects a baby while it develops.

Vaccine – a medical solution used to provide active immunity to specific infections or diseases.

Veterinarian – medical professional who practices medicine on animals.

Weaning – the process of removing the baby calf from its mother's milk and replacing the milk with a grass and/or grain-based diet.

LESSON PREPARATION

**Lesson is designed using a PowerPoint format. This is done to provide structure and speaking points. It also provides visual aids to help youth understand what is being discussed. In a less formal setting, a PowerPoint may not be appropriate, and educators may select not to use the formal presentation. Individual slides can be printed to provide visual aids.*

- Ensure the ability to play YouTube videos.
- Prepare for Ear Tag Design Activity
- For this activity, paper, cardboard, wood or other materials can be used for tags or actual livestock tags can be utilized.
 - Paper ear tags can be printed using the template included with this lesson. For these ear tags, markers, crayons, and colored pencils can be utilized to create the tags.
 - You may also select to find other materials for the tags. Some retailers may also carry craft tags that can be utilized, like these wooden tags found on Amazon (a.co/d/0U2d8Mc)
 - Livestock ear tags can be purchased from a local farm store or veterinary supply store like Runnings, Fleet Farm, and Tractor Supply Company. For these ear tags, permanent markers or paint pens will work best
 - There are many types of ear tags available. If possible, purchase tags with button backs. This is because the piercing component of these tags is separate and will remove the risk of sharp items around youth. If these are not available, it is suggested that the piercing portion of the tag be removed.
 - To enhance the experience, consider also purchasing the tagger, to demonstrate how ear tags are put on calves. For this demonstration, tags can be put onto a piece of cardboard.
- Prepare for lesson's Calf Health Scenario
- Part of the lesson follows two calves, one vaccinated and one not. To make this more interactive you may choose to use props. Some suggestions include:
 - Magnetic calves– An example can be found in Figure 1.
 - Print the calves using the template included with this lesson. and place one on a magnetic surface and one on a non-magnetic surface. The calf on the non-magnetic surface is the vaccinated calf, Sammi.
 - Utilize small magnets as germs. They will stick to the unvaccinated calf but fall off the vaccinated calf.



Figure 1. Magnetic Calves for lesson

- Felt cows – An example can be found in Figure 2.
 - Make/purchase two felt cows. The vaccinated one will be covered with a clear page protector to keep felt circles from sticking to it. The cow can be placed inside the page protector, or the page protector can be attached using Velcro strips.
 - Small felt circles can be purchased or made to represent the germs. Ideally these will fall off the page protector and stick to the felt. In the case that they do not fall off, have youth remove them.

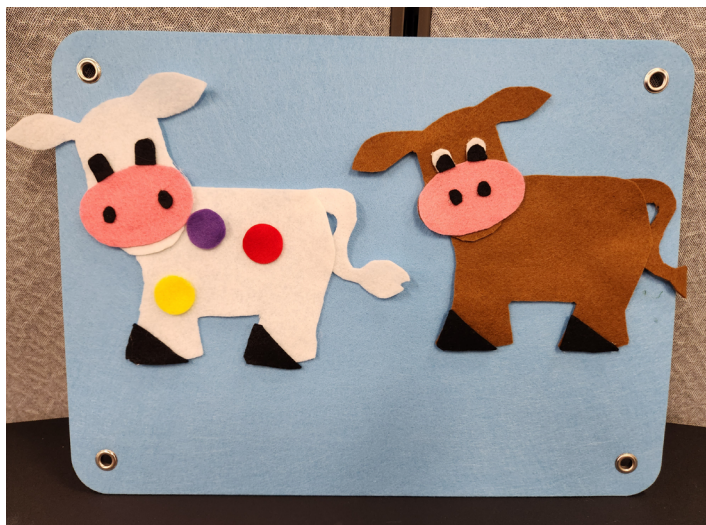


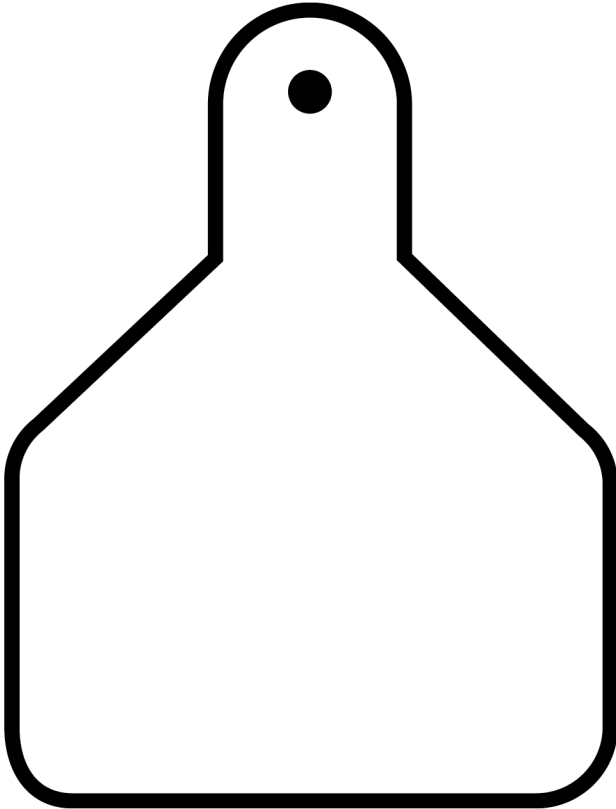
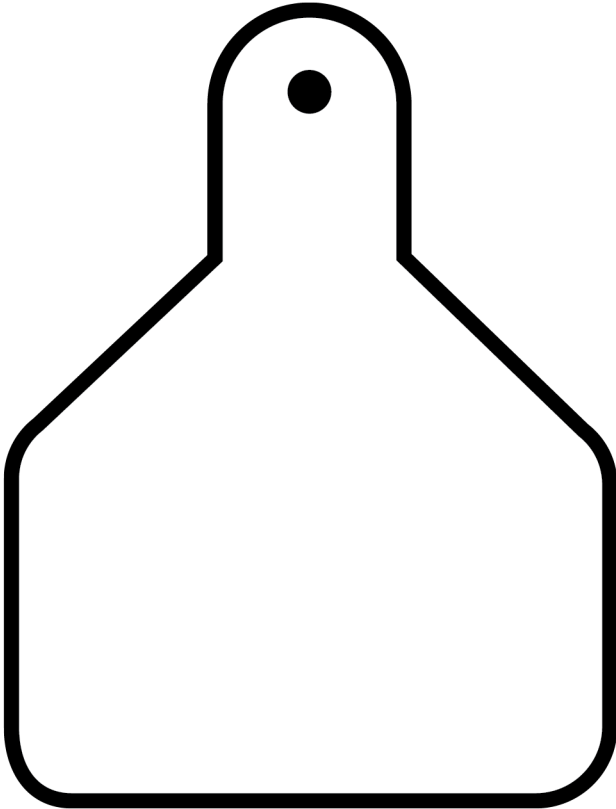
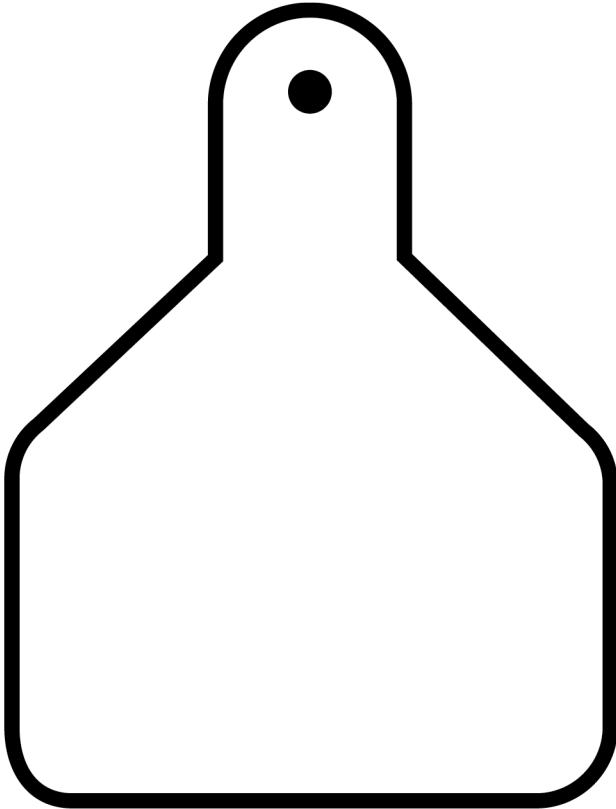
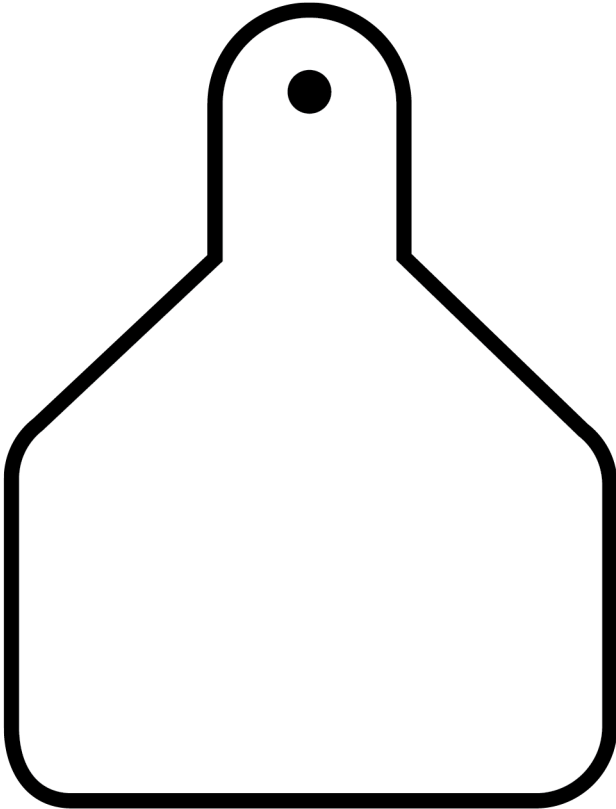
Figure 2. Felt Calves for lesson

LESSON INSTRUCTIONS

**Detailed notes are contained within the PowerPoint notes section for each slide.*

- I. Lesson 2 Review (slide 2)
- II. Discussion: How do caregivers keep you safe and healthy? (slide 3)
- III. Animal Health and Safety (slide 4)
- IV. Providing necessities (slide 5)
- V. Fences for safety (slide 6)
- VI. Ranchers work to keep their animals healthy (slide 6)
- VII. Tracking animals through identification (slide 7)
- VIII. Ear tags (8)
- IX. Revisit Werning Cattle Company Ear Tag video (slide 9) – youtu.be/ts85GGZI0m0
- X. Creating ear tags (slide 10)
- XI. Meet a vet and learn about a newborn calf check (10 min) (slide 11)
 - a. This video has two versions. The shorter abbreviated version is embedded into PowerPoint. However, if you are using this lesson as part of an approved Youth Livestock Literacy program you will need to utilize the longer version of the video found here youtu.be/7SyggDwtYKk (17 min).
- XII. Calf Health scenarios (slide 12-20)







EXTENDED LEARNING

Lesson 3.5 – Moo Management Board Game

Discuss disease transmission and outbreaks on the farm through 'Bring Home the Blue, Not the Flu!' from National Ag in the Classroom: agclassroom.org/matrix/lesson/787/

Learn more about vaccination injections and placements through one of the following lessons:

'Animal Science Anywhere: Livestock Injection Methods & Placement' canr.msu.edu/animal_science/uploads/files/4H1669_AnimalScienceAnywhere-LivestockInjections_NEW.pdf

'Quality Assurance: Practicing Injections' 2012 Quality Assurance Hands On Activities (unl.edu)

LITERATURE TO EXPLORE

Looking for literature to further explore topics from this lesson? Check out these books:

C is for Care by Amanda Radke

This book covers the A to Z of caring for cattle.

The Winter Cowboy by Stephanie White

Caring for cattle during the winter months can be a challenge, follow along and learn how ranchers care for their animals during this cold season.

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