PART 1: Teacher Lesson Plan

Animal Behavior and Milk Production

Background Info

Have you ever worked with cattle and they did exactly the opposite of what you wanted them to do? It is frustrating, isn’t it? We can use our knowledge of animal behavior to move cattle more efficiently. This is called stockmanship, and all it takes is some basic understanding of how cattle think and a little practice.

Pre-Lesson

Questioning

- What wild animals are prey animals? How do they behave? As a prey species, cattle have an inherent fear of unfamiliar objects, situations, smells, sudden movements and noises. They can also experience fearfulness in situations where they are solitary or isolated.
- Which livestock species are raised on the farm that would be considered prey animals? (Most livestock are prey animals)
- Have you ever worked with cattle and they did exactly the opposite of what you wanted them to do? What do you think happened? What was done poorly?

Expand the Knowledge

- Hand out the worksheets to all students.
- Allowing students to work in groups of 2-3 can help them think through what they have learned with multiple perspectives. Individual work is also acceptable.
- Students should complete the first two sections, “Document your Understanding” and “Fill in the Blank”, individually or in small groups.
- As a class discuss each of the questions in the “Putting this concept into practice” and have students document their thoughts after each discussion question. This can also be done individually.

Extras

- Plan a trip to a dairy farm. To locate a dairy farm, contact Midwest Dairy: (763) 355-9697
- Invite a dairy farmer to speak to your class.

Video Link:
- Dairy Stockmanship - https://www.youtube.com/watch?v=gWM5MDkC5Gs

News Link:
- Low-stress handling more effective than conventional stockmanship. (www.capitalpress.com)
  http://www.capitalpress.com/Livestock/20171226/low-stress-handling-more-effective-than-conventional-stockmanship

Visit umash.umn.edu for FREE resources on animal handling and farm safety/health (barn posters, fact sheets, videos and more.)

Developed by UM Agricultural Education faculty, staff, and students as part of a collaborative initiative to advance agricultural safety education within school-based agriculture
Student Knowledge Organizer
Animal Behavior and Milk Production

Document your understanding

Define stockmanship.

List 5 factors that impact livestock well-being on farms today.

What specific factors were identified in the video as the benefits of stockmanship (good cattle handling practices)?

Fill in the blank
A cow's behavior is shaped by her species' ________________, and the animal's past ________________.
Cows want to work with us, however, the ________________ from humans have to be clear.
If a cow is not doing what we asked her to do, we likely

Putting this concept into practice
Stockmanship uses UNIVERSAL and PREDICTABLE behavior. Describe these behaviors and how they apply to stockmanship.

How does stockmanship have a positive impact on cows and handlers?

How can stockmanship be practiced?
How a cow uses her senses.

Cows are prey animals, therefore, they rely on their senses for survival, even on the farm. Because cattle have eyes on the side of their heads, they are able to see almost 360 degrees around them, but do have a small blind-spot right behind them. With this heightened sense of sight, cattle can see things long before they enter a pen or pasture. Cattle have excellent hearing, sense of smell and touch.

Pre-Lesson Questioning

- For those that have been around cattle before, what senses are acute?
- Why is it important that a prey animal has an excellent long-range sight?
- Cattle have an excellent sense of hearing, which means some human sounds we use around cattle may actually be too loud or sharp. What are some sounds that may not be productive when working with cattle?
- How can farmers positively use touch to promote animal well-being? What should they avoid using/doing to move cattle in order to keep interactions positive?

Expand the Knowledge

Stockmanship Part 2 - How a Cow Uses Her Senses - https://youtu.be/MvjUnw-oKEc
- Watch the video as a class

Extras

- Plan a trip to a dairy farm. To locate a dairy farm, contact Midwest Dairy: (763) 355-9697
- Observe cattle in the pen and observe the use of the cattle senses.

Video Links:
- Using Cow Senses in Handling Cattle - https://youtu.be/HESeDRvVAAw

News Link:
- We Must Communicate to Cattle Senses - (Hoards Dairyman) - https://hoards.com/article-6069-we-must-communicate-to-cattles-senses.html

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How a cow uses her senses.

Creating a human diagram of cow senses.

Groups will develop a human diagram of a cow describing her senses. Using the resources your teacher provides, you will have a picture or model of a cow. Using this worksheet, fill out the information on Sight, Smell, Hearing and Touch. You will be able to use this information while presenting your human diagram to your classmates.

1. Look at the cow’s ______ and ______ to know when you have her attention and, over time, positive experiences lead to easier interactions in the future.

2. When working with cows, the ______ and ______ you are, the better.

3. When a cow is stressed, she will secrete alarm substances in her ______, which her herd mates can smell. That can slow down the entire herd long after she is gone from the milking parlor.

4. Cows prefer to be approached in ______ lines because then your movement is predictable to the cow.

Putting this concept into practice

When approaching cattle, what 3-4 things should you keep in mind relating to your behavior?

When moving cattle, how can you use senses to help you be productive?
We have learned about the flight zone of cattle, but there is another bubble around the flight zone called the pressure zone. This is the zone we, as cattle handlers, want to stay in to reduce the amount of stress a cow may experience because of our intervention in their space. When gradual pressure is put on a cow, she is less stressed, therefore, the interaction will be more positive for the cow, the herd and the handler.

Pre-Lesson Questioning

Choose a student in your classroom. Talk to them before class and confirm they can use body language, in this demonstration, that they do not like people standing close to them. You can choose another person that you feel doesn't mind when people are close. Have them stand in the middle of the classroom or in two separate corners. Encourage the class to note observations. Approach them slowly while making eye contact and get close, without actually touching them. Discuss the following questions:

1. Do humans have comfort zones? What did you notice about the facial expressions and behaviors of your classmates as I approached them?
2. Did you notice rings in their comfort zone? Was the reaction different as I got closer to them?

Stockmanship Part 3 - Working with the Pressure Zone - https://youtu.be/k_9TvX2PIp0

- Watch the video as a class

Expand the Knowledge

- Hand out the worksheets to all students.
- Allowing students to work in groups of 2-3 can help them think through what they have learned with multiple perspectives. Individual work is also acceptable.
- Students should complete the first two sections, "Document your Understanding" and "Fill in the Blank", individually or in small groups.
- As a class, discuss each of the questions in the "Putting this concept into practice" and have students document their thoughts after each discussion question. (this can also be done individually).

Extras

- Plan a trip to a dairy farm. To locate a dairy farm contact Midwest Dairy: (763) 355-9697
- Invite a dairy farmer into the classroom to speak to your class.

Video Links:

News Link:
- "How to approach cattle. (Drovers Magazine) - https://www.drovers.com/article/how-approach-cattle

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Define the pressure point related to an animal's flight zone. What makes using the pressure zone a lower stress method?

Describe how to identify where the edge of the flight zone is.

How can you apply low-stress pressure using this model?

If you were standing in the "handler movement zone" and wanted to move this cow in the opposite direction, where would you move and why?

How does the point of balance and blind spot contribute to movement from the pressure zone?

Fill in the blank

When handling cows, remember to stay ______ of the flight zone.
Use the ________ ________ to influence their movement.
_________ your behavior and pressure based on what the cow is telling you.
Give ________ commands to the cows to make them move as desired.

Putting this concept into practice

When moving cattle, please describe what you have learned from Part 1, 2 and 3 of the stockmanship videos to give both the handler and the cattle a successful experience.
When moving cattle effectively, the way that we approach and move with livestock can either help us, or hurt us. Considering the anatomy of the cow, approaching the cows from behind does not help us move them forward since they cannot see us. We must also think about where we are positioning ourselves as we move livestock from one area to another to reduce stress and make the task go more smoothly.

1. When someone approaches you from behind, how do you feel? What is your reaction? What do you do with your body? How do you feel? Why do you think you react that way?
2. When you are walking with another person what happens if the person walks slightly in front of you? How about slightly behind you? What is your reaction and responses with your body movement?

Watch the video as a class


**Hand out the worksheets to all students.**
- Allowing students to work in groups of 2-3 can help them think through what they have learned with multiple perspectives. Individual work is also acceptable.
- Students should complete the first two sections, "Document your Understanding" and "Fill in the Blank", individually or in small groups.
- Have student pair up and work on "Putting this concept into practice". The students should describe the movement they would make, as the cattle handler, and the movement of the cows to the holding pen.

Plan a trip to a dairy farm. To locate a dairy farm contact Midwest Dairy: (763) 355-9697

Invite a dairy farmer into the classroom to speak to your class.

Video Links:
- NCBA - Moving Cattle on Foot - https://youtu.be/g6Sxfw4F_gQ
- Ranch TV - Adjusting the speed of cattle by moving along side the herd  https://youtu.be/pQuv_5Q3AW4

NewsLink:
- Start Herd Movement the Right Way (Drovers Magazine) - https://www.drovers.com/article/start-herd-movement-right-way

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Moving Cows More Effectively

Document your understanding

When approaching a cow what should you keep in mind to move her effectively?

Describe the zip-zag method and how it works to move cows effectively.

Fill in the blank

Walking with the cow will _________ her down.
Try using the ______-____ technique to move the herd
With a little ___________ , you and your cows will learn how to interact more effectively

Putting this concept into practice

You have been given the task to move these two cows into the holding pen (Marked with an X). Describe, in detail, your movement while approaching the gate and how you will move the cows. Then, draw your movement in the pen upon entrance of the gate until the cows are at X.
Making the Milking Parlor a Happy Place

PART 5: Teacher Lesson Plan

Background Info

A stress-free milking parlor is always the goal of any dairyman. Stress causes low milk production and can make animal handling much more difficult. A successful milking experience starts back at the pen when cows are moved towards the holding pen. Utilizing the pressure zone and keeping in mind the importance of a quiet and stress-free movement to the holding pen will make the parlor a place cows want to be.

Pre-Lesson

Questioning

1. When moving cows to the milking parlor, what are the top things that should be considered to make it a positive interaction?
2. How do you think stress will impact the milking process?
3. When a fresh heifer enters a parlor for the first time what should be considered?

Expand the Knowledge

- Hand out the worksheets to all students.
- Allowing students to work in groups of 2-3 can help them think through what they have learned with multiple perspectives. Individual work is also acceptable.
- Students should complete the first two sections, "Document your Understanding" and "Fill in the Blank", individually or in small groups.
- As a class, discuss each of the questions in the "Putting this concept into practice" and have students document their thoughts after each discussion question. (This can also be done individually).

Extras

- Plan a trip to a dairy farm. To locate a dairy farm contact Midwest Dairy: (763) 355-9697
- Invite a dairy farmer into the classroom to speak to your class.

Video Link:
- UMASH Video #5 - Stockmanship Part 5 - Making the Milking Parlor a Happy Place - https://youtu.be/W6BONPedPF0
  - Watch the video as a class

News Link:

Visit umash.umn.edu for FREE resources on animal handling and farm safety/health (barn posters, fact sheets, videos and more).

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Cows under stress reduce production of milk. Name two specific things listed in the video that reduce the release of milk from cows due to stress.

If cows are not entering the milking parlor from the holding pen, what are some ways you would help them move into the right area?

**Fill in the blank**

Work with the cattle ________ zone.
Use ________ movement.
Make the parlor a _______ ______ and familiar place.

**Putting this concept into practice**

Research shows that it takes about 40 minutes for an upset animal to fully settle down after a stressful experience. How would you train those moving your cows to the parlor from their pen?

If you were training a new milker and fresh heifers were about to be milked for the first time, what advice would you give?