

LESSON 1.8

Handling Cattle

COMPETENCY	STANDARDS
Demonstrate an understanding of livestock nutrition, health, reproduction, management, and marketing.	- AG3.AS1.C.o - AG3.AS2.C.p - AG3.AS3.C.q - AG3.AS4.C.r - AG3.AS5.C.s - LS1.C.2 - LS2.D.1 - SS.PS.2 - S.ID.6 - ELA.WHST.9-12.2 - ELA.RST.11-12.7

LESSON OBJECTIVES

During the lesson, the student will...

1. Demonstrate effective animal handling.

ENABLING OBJECTIVES

During the lesson, the student will...

1. Evaluate the body language of cattle.
2. Recognize flight zones and point of balance of the animal.
3. Apply low-stress handling principles for a novice animal handler.
4. Apply practices for handling babies for a novice animal handler.
5. Apply practices for moving groups at key times for a novice animal handler.

TIME

85 minutes	OR	2 45-minute segments/class periods
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RESOURCES, TOOLS, EQUIPMENT, AND SUPPLIES

- PowerPoint Slides

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- Printed activity sheets
- Space or props for students to role-play cattle-handling scenarios

REFERENCES

- **Industry Experts & Guidelines:**
 - Temple Grandin's research on cattle handling and low-stress techniques
 - USDA and beef industry's best management practices for livestock handling
- **Educational Resources:**
 - Videos on cattle flight zones and point of balance
 - Temple Grandin's cattle movement diagrams

KEY TERMS

1. **Flight Zone:** The area surrounding a cow that, when entered by a handler, causes the animal to move away.
2. **Point of Balance:** The location on an animal's body (typically the shoulder) that determines its direction of movement when pressure is applied.
3. **Low-Stress Handling:** Techniques used to move and manage cattle with minimal fear or agitation.
4. **Body Language:** Non-verbal cues such as ear position, tail movement, and posture that indicate a cow's mood or stress level.
5. **Pressure and Release:** A handling technique where applying pressure encourages movement, and releasing pressure rewards the correct response.

LESSON OVERVIEW

INTEREST APPROACH

- Students will be asked to compare cattle behavior to human interactions in stressful or crowded situations, making connections between body language, movement, and pressure.

OBJECTIVES

- Students will analyze cattle body language through photos and videos to identify signs of stress, comfort, or agitation. They will participate in a hands-on demonstration of flight zones and points of balance by simulating cattle movement in the classroom. A group discussion and practice session will reinforce low-stress handling techniques. Students will complete a Venn diagram comparing calf handling to full-grown cattle handling.

REVIEW

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- Students will summarize key takeaways about proper handling techniques and reflect on how low-stress methods benefit both cattle and handlers.

INTEREST APPROACH (5 MINUTES)

1. **Say:** Imagine you're at a crowded concert or trying to navigate through a busy shopping mall during the holidays. People are bumping into each other, some folks are stressed out, and there's this sense of chaos. But then, someone comes along who knows how to handle the situation calmly, giving directions, helping people move through the crowd, and reducing everyone's stress. Doesn't that make things easier?
2. **Say:** Handling cattle is actually a lot like that. Cattle, just like us, feel stress when things get chaotic. If we understand their behavior and know how to guide them properly, it makes their lives easier and keeps them safe, just like helping someone in a busy crowd.
3. **Ask:** Think about a time when you've been in a crowded or stressful situation. How did it feel when people around you were panicking or rushing? Now, how would you have preferred that situation to be handled? What if the person in charge was calm and knew exactly how to guide everyone? How would that change the situation?
4. **Do:** Allow students to share and discuss the questions posed. Encourage students to share their perspectives.
5. **Say:** Imagine how you would handle being in charge of that complicated situation. As we learn about handling cattle in this unit, think about how these same principles can be applied: understanding their behavior, moving calmly, and staying in control to reduce stress. It's about turning chaos into calm, whether you're at a mall or in a cattle pen!

OBJECTIVE 1: EVALUATE THE BODY LANGUAGE OF BEEF CATTLE. (20 MINUTES)

Teaching Strategies	Related Content
Do: Share Slide 3: Introduction to Cattle Body Language . Say: Cattle share with us how they are feeling through their body language. It is important for us to understand this language as we work with them.	Slide 3: Introduction to Cattle Body Language

Ask: What behavior do you think a cow might show when they are content, agitated, scared? Listen for: “Chewing their cud” for content, “Switching their tail or flipping their ears” for agitated, and “Moving/running away” for scared. Do: Share Slide 4: Evaluating Cattle Body Language. On this slide, multiple locations on cattle’s bodies should be marked. Use each of these markers to guide the class conversation. Say: Let’s take a look at each of these areas on cattle and identify what kind of body language they might communicate. Do: Encourage student answers throughout the following discussion and use the “Listen for” responses to supplement what students may not have covered in their answers. Ask: What kind of body language can be communicated with cattle’s posture, such as lying down or walking? Listen for: A relaxed, balanced stance indicates comfort. Shifting weight, reluctance to move, or abnormal posture can signal discomfort or pain. Cattle should lie down and get up without difficulty. Frequent or prolonged lying down, especially in isolation, can indicate illness or lameness. A smooth, even gait suggests good health, while limping or stiffness indicates injury or lameness. Ask: What is communicated with cattle’s ear position?	Slide 4: Evaluating Cattle Body Language
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Listen for: Forward ears indicate interest or alertness, while backward or drooping ears can indicate discomfort, pain, or submission. If their ears are constantly moving, this might be a sign of agitation or alertness to possible threats. Ask: What is communicated with eye expression? Listen for: Bright and alert eyes signify a healthy and content animal, and dull or sunken eyes can be a sign of illness, dehydration, or distress. Frequent blinking or eyes that are tearing up may indicate eye irritation or infection. Ask: What is communicated with tail position and movement? Listen for: A relaxed tail can indicate a calm and content state, while tail flickering can mean irritation, stress, or the presence of flies. A tucked tail can mean discomfort, fear, or submission. Ask: What do cattle's facial expressions and vocalization tell us? Listen for: Normal vocalizations include low, occasional mooing and bellowing. Excessive vocalization might mean distress, hunger, or discomfort. And grinding teeth is also a sign of pain or discomfort. Ask: What is communicated with body condition and grooming? Listen for: A healthy coat is shiny and smooth; a rough or patchy coat can mean nutritional deficiencies, parasites, or illness.	
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Cattle should groom themselves, if they are not, this may indicate illness or stress. Ask: What can we notice from cattle's social behaviors? Listen for: Normal behavior includes grooming, playing, and lying together. Abnormal behavior would be an animal that isolates themselves or becomes aggressive with other cattle. Ask: What is normal feeding and drinking behavior and what does it communicate to us? Listen for: Cattle should eat and drink normally to show they are healthy. If they have reduced appetite, this can mean illness, stress, or discomfort. If they are drinking water more excessively, this could mean an illness such as fever or a digestive issue. Ask: What do cattle's breathing patterns communicate? Listen for: Normal breathing should indicate a healthy animal, while rapid or labored breathing is an indicator they may have a respiratory illness, heat stress, or other health issue. Ask: And lastly, what does an animal's response to handling communicate to us? Listen for: Cattle should move calmly and follow handling procedures without excessive fear or aggression. If they are agitated or resisting, it may indicate fear, pain, or poor handling practices.	Slide 5: Body Language Examples
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Do: Show Slide 5: Body Language Examples. Ask: What do you notice about each of these animal's body language? What are they communicating? Listen for: Answers related to the elements of body language just discussed (i.e., ear position, eyes, grooming, etc.) and whether the animal looks content, agitated, or scared.	
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OBJECTIVE 2: RECOGNIZE FLIGHT ZONES AND THE POINT OF BALANCE OF THE ANIMAL. (15 MINUTES)

Teaching Strategies	Related Content
Say: Cattle have an area or zone that when entered by a person, will cause them to move away. Ask: Why do cattle move away from perceived pressure? Listen for: "They are afraid" or "They are aware." Do: Show Slide 6: Recognize Flight Zones. Say: Just like our personal "bubble," cattle have an area around them that we call their flight zone. By approaching an animal's flight zone, it will likely move to make sure you are not standing in its flight zone. Depending what angle you enter the flight zone, the cattle will move accordingly to make sure this zone is empty. Say: Let's try it out! Who will volunteer to be our handler(s) and cattle?	Slide 6: Recognize Flight Zones

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Do: Select at least two students to demonstrate a handler entering cattle's flight zone. To help the volunteer students understand, you may share a video that shows how the handler and cattle may respond to each other. Have students complete this demonstration in front of the class. Do: Show Slide 7: Practical Tips For Handling Cattle. Ask: Which of these practical tips did our example handlers demonstrate? Listen for: Varied answers based on the students' demonstration. Say: Let's try the demonstration one more time while the handlers use these tips for handling cattle. Do: Either have the same students or new volunteers demonstrate handlers moving cattle while they use the tips listed on Slide 7: Practical Tips for Handling Cattle. Say: Great job! Proper animal handling ensures the safety of both the animals and the handlers.	Slide 7: Practical Tips For Handling Cattle
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OBJECTIVE 3: APPLY LOW-STRESS HANDLING PRINCIPLES FOR A NOVICE ANIMAL HANDLER. (20 MINUTES)

Teaching Strategies	Related Content
Say: Next, we're going to discuss how to handle animals in a way that's so stress-free, they might just give you a high-five—or at least a tail wag!	

Ask: What are some things you think might stress an animal out during handling? Any funny stories? Listen for: Look for responses that show understanding of stress triggers, like loud noises or sudden movements. You might hear anecdotes about that one dog who definitely did <i>not</i> want a bath! Do: Show Slide 8: Apply Low-Stress Handling Principles. Play the video. Direct Link to Low-Stress Handling Video. Do: Show Slide 9: Practical Low Stress Cattle Handling. Say: Let's go through each of these points on screen. For each point, I'll ask the class what a good example would be, and what a bad example would be. For example, the first principle is to understand cattle behavior, including herd instinct, flight zone, point of balance, vision, and hearing. The good example would our previous demonstrations showed a handler effectively understanding and using cattle's flight zone. A bad example would be trying to separate cattle because it goes against their herd instinct. Ask: Our next principle is to maintain calm and patience. What is a good example and a bad example of this? Listen for: Good example: moving calmly and slowly and being quiet. Bad example: Being loud and making sudden movements	Slide 8: Apply Low-Stress Handling Principles Slide 9: Practical Low Stress Cattle Handling
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Do: Ask students for good and bad examples of each of the 9 principles on the slide. You may keep a running list on the board or have students write these answers in notes.

OBJECTIVE 4: APPLY PRACTICES FOR HANDLING BABIES FOR A NOVICE ANIMAL HANDLER. (10 MINUTES)

Teaching Strategies	Related Content
Say: Today, we're going to learn how to handle baby calves. We will also differentiate between handling baby calves and grown animals. Do: Share Slide 10: Handling Calves. Ask: What are some things you think are important to remember when handling baby calves? Any experiences with young animals that come to mind? Listen for: Look for responses that emphasize patience, gentleness, and awareness of the calf's body language. Listen for responses referencing handling babies due to their smaller extremities, joints, etc. You might hear someone mention how a curious calf will nuzzle but a shy one may back away. Do: Share Slides 11 & 12: Tips for Handling Baby Calves. Say: Those are all great ideas for handling young animals! Here is a list of tips that may help us handle baby calves, especially if we're not used to handling cattle. Now, some of these items may look familiar from our previous list we just looked at for handling tips for cattle. Let's think about	Slide 10: Handling Calves Slides 11 & 12: Tips for Handling Baby Calves

what might be similar or different about handling calves compared to full size cattle. Do: Hand out Activity Sheet 1: Handling Calves and Cattle for students to complete. Encourage students to work independently for about 5 minutes on this. Say: Let's see what we came up with! Let's go around the room and each person share one item they added to their Venn diagram and where they put it. Listen for: • Handling practices for both: use slow movements, don't make loud noises, use gentle pressure, minimize stress, keep them in groups, don't agitate them, etc. • Handling practices for full-grown cattle: use their flight zones, use proper handling tools, etc. • Handling practices for baby calves: use proper lifting methods, etc. Say: Great job! As we can see, many handling practices apply to cattle at any age. At the same time, we must be careful to apply the proper techniques to each individual animal.	Activity Sheet 1: Handling Calves and Cattle (BeefLesson1.8_AS1)
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OBJECTIVE 5: APPLY PRACTICES FOR MOVING GROUPS AT KEY TIMES FOR A NOVICE ANIMAL HANDLER. (10 MINUTES)

Teaching Strategies	Related Content
Say: Today, we're focusing on how to move groups of animals effectively. Remember, you can't push the drag ahead of the lead—just like trying to herd cats, it usually doesn't end well!	

Ask: What strategies do you think are important when moving a group of animals? Have you ever tried to move a group that just had other plans? Listen for: Look for responses that show an understanding of herd dynamics, such as the importance of leading from the front and keeping the animals calm. You might hear someone mention how animals tend to follow their leader—especially if that leader has snacks! Do: Share Slide 13: Moving Groups of Cattle. If you are able, watch the video on the slide together. Direct Link to Artificial Intelligence and Moving Cattle Video. Ask: What was interesting about the video? Listen for: The cattle moving robot Ask: What do you think this will mean for the future of cattle handling? Listen for: More cattle facilities might adopt this, safer animal handling, more innovative ways to include safe animal handling techniques.	Slide 13: Moving Groups of Cattle
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REVIEW ACTIVITY | (5 MINUTES)

- **Say:** We've covered some important aspects of handling beef and dairy cattle today, from understanding cattle behavior to using safe and efficient handling techniques. We learned how proper handling reduces stress on the animals, which leads to healthier, more productive cattle. Remember, low-stress handling isn't just about safety for the cattle—it's about keeping you safe too.

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- **Ask:** Think about what we discussed today. What are the key takeaways? How does understanding cattle behavior, like their flight zone or point of balance, change the way you approach handling? Can anyone share a moment when knowing these techniques would have helped in an experience with cattle?
- **Do:** Facilitate a conversation with students.
- **Say:** Now, if you ever find yourself running from a cow, remember, it's not a sprint—it's a mooooo-ving experience!

ASSESSMENT

Consider using the following artifacts from the lesson to assess student learning:

- Formative Assessment
 - Use Student **Activity Sheet 1** to assess their understanding and application of low-stress handling principles, baby animal handling practices, and group movement strategies appropriate for novice animal handlers.
- Summative Assessment
 - Use **Lesson 1.8 Assessment** to test student knowledge

EXTENDED LEARNING OPPORTUNITIES

Extended Learning Opportunities allow for the primary acquisition of knowledge and skills through instruction or study outside of the traditional classroom, including, but not limited to: Independent study, SAEs, FFA CDEs/LDEs, Internships, guest speakers, and apprenticeships.

Classroom

- Connect classroom lessons to real-world scenarios to make learning relevant and engaging. If a field trip opportunity to a local cattle farm or livestock market that practices proper cattle handling is available, it would be great for students to observe.
- Develop activities in the classroom where students play the roles of animals and the handlers to illustrate the different roles and use desks, tables, chairs, etc. to replicate pens, gates, etc. to examine movement.
- Show the movie “Temple Grandin” or find documentaries of Temple Grandin’s work, such as the “Glass Door” series of short videos.

FFA

- If students have a livestock production SAE or an Ag Mechanics SAE, such as fence building, have the group analyze some photos of the facility or do a sketch of the layout of the gates and pastures to see if they can understand how the animals will react to being moved throughout the facilities.

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SAE

- This would be a good topic for a public speaking LDE or an Ag Issues team event.

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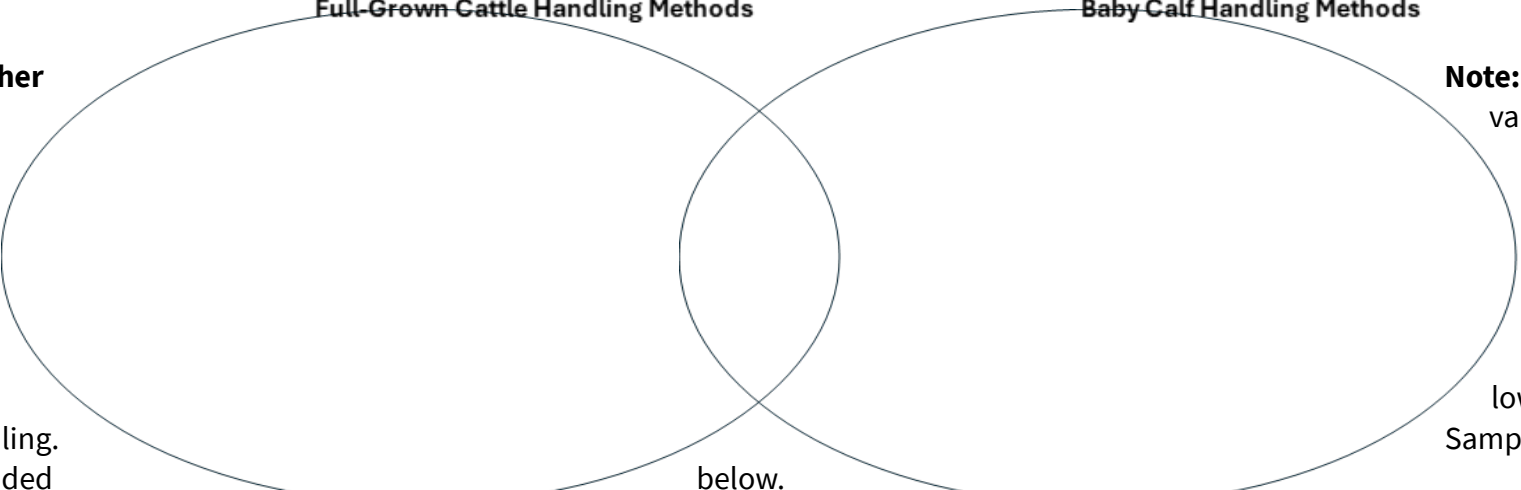
Handling Calves and Cattle

Student Name _____ . Date _____

DIRECTIONS

Use the Venn diagram to write handling practices for both full-grown cattle and baby calves. Consider what handling tips apply to both and write those in the middle. Then, write any handling methods that only apply to cattle or calves in their respective circles.

Full-Grown Cattle Handling Methods



Teacher will
safe, handling. provided

Full-Grown Cattle Only
Use the animal's flight zone and point of balance to guide movement.
Use handling tools such as sorting sticks, flags, or panels when appropriate.
Keep a safe distance from large animals and be aware of escape routes.

Baby Calf Handling Methods

Note: Student answers vary. Accept any reasonable handling practice that demonstrates an understanding of low-stress animal. Sample answers are

Baby Calves Only
Support the calf's body properly when lifting.
Lift only when necessary and avoid carrying long distances.
Handle gently to protect developing joints and bones.

below.

Both
Move calmly and avoid sudden movements.
Use a quiet voice and minimize loud noises.
Watch body language for signs of stress or fear.

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Move cattle through gates, chutes, and alleys safely.

Allow cattle to move with their natural herd instincts.

Reduce stress whenever possible.

Be patient and use gentle pressure.

Use proper restraint during health procedures.

Introduce calves gradually to new environments or people.

Sample Wrap-Up Responses

Students may conclude that:

- Many low-stress handling practices apply to cattle of all ages.
- Baby calves require additional care because they are smaller and more vulnerable to injury.
- Full-grown cattle require handlers to understand concepts such as the **flight zone**, **point of balance**, and safe use of handling facilities.
- Proper handling improves animal welfare and keeps both the cattle and the handler safe.

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Assessment

Student Name _____ Date _____

DIRECTIONS

Complete each question below to the best of your ability.

- 1) Interpret how a beef animal feels by observing the following actions.

a) The cow is standing, eyes alert, and flicking its tail.

The animal is feeling normal, watching your movement, and shooing flies away.

b) A yearling steer is mooing loudly and often, is not eating, and lies down for abnormally long periods of time.

The animal is most likely feeling some type of discomfort or possible illness.

- 2) A shiny, smooth coat on a beef animal generally indicates which of the following?

a) The animal requires deworming

b) The animal is suffering from a chronic illness

c) **The animal is experiencing good health**

d) It is time to call a veterinarian

- 3) Describe the flight zone of cattle and explain its importance in animal handling. Additionally, identify the point of balance of a cow and illustrate how a handler can use this understanding to guide and control the movement of the animal.

The flight zone of cattle is the area surrounding an animal that, when entered by a person or predator, causes the animal to move away. The size of the flight zone depends on factors such as the animal's temperament, previous experiences, and how accustomed it is to human contact. Understanding the flight zone is crucial for handlers as it helps them manage the animal's movement with minimal stress.

The point of balance is typically located at the animal's shoulder. When a handler stands behind the point of balance, the animal will move forward; when the handler stands in

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front of it, the animal will move backward. Handlers use this knowledge to position themselves strategically to control the animal's direction safely and efficiently.

- 4) What is the recommended way to approach a calf to avoid startling it?
 - a) Quickly and loudly
 - b) **Slowly and steadily**
 - c) By running towards it
 - d) With a flashlight in hand
- 5) Which method should be used to lift a calf safely?
 - a) By its hind legs
 - b) By its tail
 - c) **Supporting under the chest and hindquarters**
 - d) By both ears
- 6) How should a calf halter be introduced to a calf?
 - a) By forcing it on quickly
 - b) By placing it on while the calf is sleeping
 - c) **By gently introducing it and allowing the calf to adjust**
 - d) By tying the calf down
- 7) During procedures like tagging, what should be prioritized to minimize stress for the calf?
 - a) Use loud noises to distract the calf
 - b) **Keep handling quick and smooth**
 - c) Restrain the calf forcefully
 - d) Involve as many people as possible
- 8) What should be done when handling multiple calves to prevent crowding and stress?
 - a) Move all calves at once
 - b) **Work in small groups**
 - c) Ignore pathways and obstacles
 - d) Use loud music to keep them calm
- 9) List and explain three key practices a novice animal handler should apply when moving groups of cattle, particularly during critical times such as loading, unloading, or transitioning to new pastures.

Example Answers:

Maintain Calm and Steady Movement: Novice handlers should move cattle slowly and steadily to prevent panic or stress. Quick, abrupt movements or loud noises should be avoided as they can cause animals to become agitated or scatter.

Use Proper Positioning and Pressure: Handlers should position themselves correctly relative to the cattle's flight zone and point of balance to guide movement effectively.

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Applying gentle pressure from outside the flight zone and moving parallel to the animals will encourage them to move as a group in the desired direction.

Ensure Clear Pathways and Safety Measures: Before moving cattle, it is essential to check that pathways are clear of obstacles and that gates or pens are secure. This helps prevent injury to the animals and handlers and ensures smooth transitions. Proper planning minimizes stress on the animals and maintains control during key times.