

# Common Diseases of Livestock Animals: Cause & Control

## Lesson Overview

**Media:** Video (18 minutes)

**Seat Time:** 5 Classes | 250 minutes teaching

**Goal:**

To analyze common diseases of livestock animals by identifying the cause, spreading pathway and prevention techniques of each disease.

**Description:**

This lesson defines disease in livestock animals and assesses the importance of understanding, preventing and controlling disease spread by evaluating causes, spreading pathways and management practices.

**Objectives:**

1. To identify common diseases in livestock animals and their causes.
2. To evaluate the various pathways of disease transmission.
3. To understand biosecurity and the principles which should be included in a prevention protocol.

## Lesson Plan

### Class 1

**Class Overview:**

- *Diseases of Livestock Animals* Video Segment
- Action Plan
- Physiological Disorders Student Handout
- Vocabulary Handout
- Key Concepts
- Diseases of Livestock Animals Check for Understanding

**Essential Questions:**

1. What is a disease?
2. What causes a disease?
3. What is a pathogen and what are the common types found in livestock?

**Step 1: Bell Ringer:**



- Have each student identify a common disease in livestock animals. Facilitate a discussion with the class to determine a group definition for disease.

**Step 2: Distribute the Action Plan, Student Handout, Vocabulary Handout and Key Concepts.**



- The **Action Plan** lays out a list of tasks for students to complete during the lesson.
- The **Student Handout** is additional information over a specific topic.
- The **Vocabulary Handout** is a list of terms used throughout the lesson.
- The **Key Concepts** is an outline which identifies the main ideas presented in the lesson which students can fill in to aid in note taking during the lesson.

**Step 3: Show the *Diseases of Livestock Animals* video segment.**



- This video is five minutes long.
- Be sure students utilize the **Key Concepts** for this segment of the lesson.

**Step 4: Administer the Diseases of Livestock Animals Check for Understanding.**

- The Check for Understanding is a short review of the content presented in the segment.

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## Lesson Plan

### Class 1 (continued)

#### Step 4: Administer the **Diseases of Livestock Animals Check for Understanding**.



- The Check for Understanding is a short review of the content presented in the segment.

#### Step 5: Exit Ticket:



- Have students evaluate the definition they developed at the beginning of class with the one included in the lesson. Instruct students to write a comparison between the two.

### Class 2

#### Class Overview:

- *Spreading of Disease* Video Segment
- Action Plan
- Vocabulary Handout
- Key Concepts
- Spreading of Disease Check for Understanding

#### Essential Questions:

1. What are the ways in which a disease can be spread?
2. How does being knowledgeable about the spread of disease aid in prevention?

#### Step 1: Bell Ringer:



- Provide the students with the following scenario and have them determine the potential disease transmissions. Instruct students to write down their responses.
  - A fellow classmate just came back from a friend's house and before going inside, he heads out to feed his pigs. When he opens the bag of feed, rats run out of the bag. He decides the feed is still good and gives it to his pigs anyway. He notices his pigs are coughing so he decides to separate them because they are close together in the pen. He then goes inside for the night.

#### Step 2: Show the **Spreading of Disease** video segment.



- This video is seven minutes long.
- Be sure students utilize the **Key Concepts** for this segment of the lesson.

#### Step 3: Administer the **Spreading of Disease Check for Understanding**.



- The Check for Understanding is a short review of the content presented in the lesson.

#### Step 4: Exit Ticket:



- Have students write down the answer to the second **Essential Question** and turn in.

### Class 3

#### Class Overview:

- *Management Practices* Video Segment
- Action Plan
- Vocabulary Handout
- Key Concepts
- Management Practices Check for Understanding
- Review Sheet Activity

#### Essential Questions:

 If you see this icon, the item is available to be completed interactively on iCEV.

1. What is biosecurity?
2. What are the three different levels of biosecurity?

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## Lesson Plan

### Class 3 (continued)

#### Essential Questions:

1. What is biosecurity?
2. What are the three different levels of biosecurity?
3. What principles should be included in a prevention protocol?

#### Step 1: Bell Ringer:



- Have students develop a list of principles they feel would be necessary in a prevention protocol.

#### Step 2: Show the *Management Practices* video segment.



- This video is six minutes long.
- Be sure students utilize the **Key Concepts** for this segment of the lesson.

#### Step 3: Administer the **Management Practices Check for Understanding**



- The Check for Understanding is a short review of the content presented in the lesson.

#### Step 4: Students should complete the **Review Sheet Activity**.



- Students will create a review sheet by going through their notes and filling in the main points for the topics provided.
- If not completed in class, assign as homework.

#### Step 5: Exit Ticket:



- Have students add any newly learned protocol principles to the list of principles they developed at the beginning of class.

### Class 4

#### Class Overview:

- Action Plan
- Common Diseases of Livestock Animals: Cause & Control Final Assessment
- Infographic Project

#### Step 1: Bell Ringer:



- Students should review for the assessment.

#### Step 2: Administer the **Common Diseases of Livestock Animals: Cause & Control Final Assessment**



- The Final Assessment is a comprehensive assessment covering material throughout the entire lesson.

#### Step 3: Students should begin the **Infographic Project**.



- Students will be creating an infographic on livestock disease outbreaks to present a simplified representations of complex data, engage interest and deliver an easily understandable message.
- Students should continue working on the project for homework.

#### Step 4: Exit Ticket:



- Students should share what their topic for the project will be to ensure it is approved before moving forward.

# Common Diseases of Livestock Animals: Cause & Control

## Lesson Plan

### Class 5

#### Class Overview:

- Action Plan
- Infographic Project

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#### Step 1: Students should complete the **Infographic Project**.



- Students will be creating an infographic on livestock disease outbreaks to present a simplified representations of complex data, engage interest and deliver an easily understandable message.

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#### Step 2: **Exit Ticket:**



- Students should submit their Infographic Project as directed.

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## Activity

### **Review Sheet**

Students will create a review sheet by going through their notes and filling in the answers to the topics provided. This will be a resource to help them organize key ideas discussed throughout the lesson.

#### **Accommodations:**

Allow students to complete the activity in small groups or pairs.

#### **Modifications:**

Provide specify information to include in the blank areas.

#### **Extension:**

Challenge students to create their own test questions based on the information they put on their review sheet. Peers can ask one another the questions they have developed.

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## Project

### **Infographic**

Students will be creating an infographic on livestock disease outbreaks, allowing students to apply their gained knowledge to real life situations.

#### **Accommodations:**

Allow students to complete the project in small groups or pairs.

#### **Modifications:**

Create an outline for students to follow while creating their infographic. Limit the components to information found within the presentation and do not require citations.

#### **Extension:**

Challenge students to compare and contrast the different disease outbreaks presented in class.

# Common Diseases of Livestock Animals: Cause & Control

## Career & Technical Student Organizations

### FFA

- Veterinary Science

## Career Connections

### Career Connections

Using the **Career Connections Activity** allows students to explore careers associated with this lesson by viewing career interviews with various industry professionals. The career interviews are located on the Select Playlist drop down menu on the lesson page. If Student Licenses are being utilized, students can select the interviews to watch based on your directions. If only a Teacher License is being utilized, show students all of the career interviews and instruct them to only complete the interview form for the required number of interviews. See the **Career Connections Activity** for more details.

- Frank Garry, D.V.M., Veterinary Professor, Colorado State University
- Jessica Bacon, Veterinary Technician, Emergency Pet Hospital of Collier County in Naples, FL

