Dealing with Drought: Managing Grazing to Benefit Wildlife

Media Type: *i*CEV Segment
Duration: 8 minutes

Goal: To provide insight into a grazing management strategy which can benefit wildlife during a drought.

Description: Proper grazing management during a drought is a vital part of rangeland management. This segment presents grazing management strategies which can be used during a drought to maintain a livestock operation and increase the quality of available wildlife habitat simultaneously.

Objectives:
1. To describe grazing management strategies during a drought.
2. To describe competition between livestock and wildlife in a drought.
3. To present a strategy which can be used to maintain livestock grazing while improving rangeland habitat for wildlife.

Common Core Standards

Agriculture, Food & Natural Resources Career Cluster (AG)

Cluster	Standard
	Demonstrate stewardship of natural resources in AFNR activities.
	Analyze the interaction among AFNR systems in the production, processing and management of food, fiber and fuel and the sustainable use of natural resources.
Agribusiness Systems Career Pathway (AG-BIZ)	Apply management planning principles in AFNR businesses.
Animal Systems Career Pathway (AG-ANI)	Utilize best-practice protocols based upon animal behaviors for animal husbandry and welfare.
	Evaluate environmental factors affecting animal performance and implement procedures for enhancing performance and animal health.
Natural Resources Systems Career Pathway (AG-NR)	Develop plans to ensure sustainable production and processing of natural resources.
	Demonstrate responsible management procedures and techniques to protect or maintain natural resources.

College & Career Readiness Anchor Standards for Reading

Reading Standards for Informational Text		
Key Ideas & Details		Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
	11-12.1	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
	11-12.2	Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.
	11-12.3	Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.

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Common Core Standards

College & Career Readiness Anchor Standards for Reading

Reading Standards for Informational Text		
Integration of Knowledge & Ideas	Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.	
	Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.	
	Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.	
	9-10.7	Analyze various accounts of a subject told in different mediums, determining which details are emphasized in each account.
	9-10.8	Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.
	11-12.7	Integrate and evaluate multiple sources of information presented in different media or formats as well as in words in order to address a question or solve a problem.
Range of Reading & Level of Text Complexity	Read and comprehend complex literary and informational texts independently and proficiently.	
	9-10.10	By the end of grade 9, read and comprehend literary nonfiction in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literary nonfiction at the high end of the grades 9–10 text complexity band independently and proficiently.
	11-12.10	By the end of grade 11, read and comprehend literary nonfiction in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11–CCR text complexity band independently and proficiently.

College & Career Readiness Anchor Standards for Writing

Writing Standards		
Text Types & Purposes	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.	
	Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.	
	9-10.1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
	9-10.2	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
Research to Build & Present Knowledge	Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.	
	9-10.7	Conduct short as well as more sustained research projects to answer a question or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
	9-10.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
	9-10.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.

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Lesson Plan

Begin by distributing the *Vocabulary Handout* and *Worksheet* for the students to fill in as they view the production. Show the *Dealing with Drought: Managing Grazing to Benefit Wildlife* segment. After completing the segment, hand out the *Grazing Management Activity* which can be completed in class. The *Diet Discovery Project* can be completed outside of class.

Video 11 min.

Lab Activity

Grazing Management
Directions:
Distribute the *Grazing Management Activity* sheet. Divide the class into three groups and assign each group a unique stocking rate (low, medium or high). Instruct each group to answer the questions provided as a group with each student recording the answers on their own sheet. Upon completion, have each group discuss their answers with the class.

Project

Diet Discovery
Directions:
Distribute the *Diet Discovery Project* sheet. Ask students to select one livestock and one wildlife species known to inhabit their state. Have them research the diets of each species, then have them compare and contrast the diets of each species in a typed report. The report may be presented to the class or simply turned in for a grade.

Lesson Links

Rangeland Management Before, During and After a Drought.
- http://ag.arizona.edu/pubs/natresources/az1136.pdf

Pasture and Grazing Management Under Drought Conditions.
- http://msucares.com/pubs/publications/p2710.pdf

Career & Technical Student Organizations

Society for Range Management
- Student Section

FFA
- Range Management
- Livestock Management

The Wildlife Society
- Student Section

Career Connections

Using the *Career Connections Activity*, allow students to explore the various careers associated with this lesson. See the *Activity* for more details. *If student licenses have been purchased:* Students will select the interviews to watch based on your directions. *If only a teacher license is purchased:* Show students all the career interviews and instruct them to only complete the interview form for the required number of interviews.
- iCEV50044, Jim Johnson, Cattle Producer,
- iCEV50082, Chris Skaggs, Ph.D., Associate Professor, Animal Science, Texas A&M University
- iCEV50092, Mike Wallace, Sheep Operations Manager, U.S. Meat Animal Research Center