

Animal Science
Beef Cattle Stages of Production

BASIC INFORMATION	
Summary	Students are to discover the six stages of beef cattle production from seedstock to beef marketing by first recognizing their own knowledge, then by taking notes, and finally summarizing articles regarding each stage.
Grade Level	10-12
Time Frame	54min
Subject(s)	CTE – Animal Science
Topic(s)	Beef Production Sectors
Instructional Materials & Prep	<ul style="list-style-type: none"> • PowerPoint • KWL Posters • Articles • Article Summary Page • Computer • Lecture Notes
STANDARDS AND OBJECTIVES	
CA Content Standard(s)	<ul style="list-style-type: none"> • D12.0 Understand how animal products and by-products are processed and marketed. • D12.1 Research animal harvest, carcass inspection and grading, and meat processing safety regulations and practices and the removal and disposal of non-edible by-products, such as those outlined in Hazard Analysis and Critical Control Point, Sanitation Standard Operating Procedures, and good manufacturing practices documents. • D12.5 Evaluate how meat products and non-meat products are marketed.
CA ELD/ELA Standard(s)	<ul style="list-style-type: none"> • Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationship between the key details and ideas. • Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text.
Lesson Objective(s)	<p>By the end of the lesson, students will...</p> <ul style="list-style-type: none"> • Determine what they know and what they want to learn about beef production using the KWL method. • Define the six sectors of beef cattle production • Summarize various news articles regarding different

	<p>production stages and write three major facets of each.</p> <ul style="list-style-type: none"> Summarize what they have learned using the KWL method.
PLANNING CONSIDERATIONS	
Differentiated Instruction/UDL/Culturally Relevant Pedagogy/SDAIE	<ul style="list-style-type: none"> 504 Student – Extended time to complete assignments <ul style="list-style-type: none"> KWL chart is to be turned in at the end of class, however, can be turned in the next day. Low ELA Level Students – KWL method <ul style="list-style-type: none"> Evaluation of student comprehension of content Front-loading vocabulary in the lecture before major activity (listed below) Allowing for oral responses when called upon. Apathetic Students – Provide specific responsibilities <ul style="list-style-type: none"> Assign task reading sticky notes
Vocabulary and/or Vocabulary Resources	<ul style="list-style-type: none"> Seedstock Cow-Calf Operation Calving Feedlot Stocker operation Yield Grade Quality Grade
ASSESSMENT	
Assessment of Learning	Students are to show the progression of knowledge through the KWL method. Student base knowledge is written in the Know section. What students have learned is filled in the Learned section.
LEARNING EXPERIENCES	
Sequence of Activities	<p>Interest Approach – KWL– K & W Sections</p> <ul style="list-style-type: none"> Students are posed with the questions: <ul style="list-style-type: none"> What do you know about the beef industry? What perceptions do you have about the beef cattle industry? <ul style="list-style-type: none"> Students will complete a 30sec Thought-Jot answering those questions on a sticky note. At the completion of the 30sec, students will post them on the K section poster. Apathetic student to read a few notes on sticky notes off poster. Students are then posed with the question: <ul style="list-style-type: none"> What do you want to know about the beef industry? <ul style="list-style-type: none"> Students will complete a 30sec Thought-Jot answering those questions on a sticky note At the completion of the 30sec, students will post them on the W section poster. Apathetic student to read a few notes on sticky

notes off poster.

- The class will proceed into the lecture portion.

Lecture – Student Notes

- Stages of Production
 - Seedstock → calving → cow-calf → stocker → stocker → feedlot → marketing beef
- Seedstock
 - Produce genetics
 - Bulls
 - Semen
- Sell Genetics
 - Commercial Cow-Calf Bulls
 - Semen to other seed stock producers
 - Live Bulls
- Calving
 - Time of giving birth.
 - Spring season calving is best.
 - All calves to be born within 40-60 days
 - Think-pair-share: why would spring calvings be advised?
 - ELA Students - Call upon low ELA Students to respond to posed questions, allowing them to think before sharing aloud.
- Cow-Calf
 - Cows bred each year to produce calves.
 - Calves are then sold as feeders/stockers.
 - The rangeland used is unsuitable for crop production.
- Stocker
 - Grow weaned calves to a larger size and weight prior to the feedlot.
 - Calves enter as stockers, leave as stockers
- Feedlot
 - To fatten or “finish” steers and heifers.
 - High-quality meat if fed correctly.
 - Grain Fed using corn, milo, wheat, etc.
 - Cattle bought from stocker or cow-calf operations.
 - Target weight of 1150-1250lbs.
 - Types of feedlots
 - Family owned
 - Commercially owned
- Marketing Beef
 - Yield Grade – the “HOW MUCH”
 - Cutability of the carcass
 - Quality Grade – the “HOW GOOD”
 - Palatability of the meat

	<ul style="list-style-type: none"> ○ What would the pricing of these items consist of? <ul style="list-style-type: none"> ▪ ELA Students - Call upon low ELA Students to respond to posed questions, allowing them to think before sharing aloud. <p>Activity – Article Walk</p> <ul style="list-style-type: none"> • There are 6 articles scattered around the room. • One about each beef industry sector. • In student groups, each article will be read. • Students are to summarize three major facets of that industry sector. • Write those ideas back on the KWL chart next to each sector. • Groups will have 5 min per article, then rotate <u>clockwise</u> when announced. <p>Assessment – KWL– L Section</p> <ul style="list-style-type: none"> • Students are to complete the L section of the KWL chart summarizing what they have learned during a 1min thought-jot. <ul style="list-style-type: none"> ○ 504 Plan Student - Announce that the chart is to be turned in by the end of class but can be turn in tomorrow if extra time is needed
CLOSURE	
Closure	Students are to complete the L portion of the KWL chart summarizing what they have learned in the lesson. Charts to are to be turned in by the end of class.