



ACTIVITIES TO SUPPORT LEARNING WITH
THE RAW TRUTH
ABOUT BEEF

GRADES 9-12

HOW TO USE THIS GUIDE

This activity guide was designed to support the Texas Beef Council's Raw Truth About Beef interactive learning platform. Users of the platform get a behind-the-scenes look at the beef industry and explore the beef production process from pasture to plate. Using engaging videos, the program follows an executive chef and registered dietitian nutritionist on a hands-on tour through the beef life cycle. To learn how cattle are raised, they visit a purebred ranch, a cow/calf ranch, and tour a feedyard. Stops at a processing facility, a distributor, a retail store, and a restaurant explore how beef becomes a safe, nutrient-dense protein source.

Each stop on the tour has several learning opportunities built in to guide the learner through an immersive experience.

- Insights videos: These videos range from seven to eight minutes and are a synthesis of the facility tour. The cast meets with experts and learns about what happens at each step in the process.
- Reflection videos: These videos are between four and five minutes each and include the host debriefing the tour with the chef and dietitian.
- 360-degree videos: These videos explore different aspects of each stop and allow learners to dig deeper into content that interests them through interactive hot spots.

The activities in this guide are designed to support secondary students studying **agriculture, health and nutrition, and culinary arts**. They are not meant to be stand-alone lessons but to supplement a teacher's existing curriculum. They each involve watching the insights video for the tour stop in class and then having students complete an activity with a discussion prompt related to their area of study.

The activities are cross-walked to **Texas Essential Knowledge and Skills** for Career and Technical Education Standards (Chapter 130). Full standards are listed at the end of the guide.

Activities are designed to be between 20 and 35 minutes but can be lengthened or shortened depending on the amount of additional research you instruct your students to do. Links to additional resources are included in this document.

Before using these lessons in class, you must create an account at **rawtruthaboutbeef.com**. You will be prompted to complete a brief survey.

Non-formal educators can also use these activities with students in various settings:

- 4-H meetings
- Educational summer camps
- After-school programs



Outstanding in Their Field

Purebred

TIME: 20 minutes

Students discover how beef cattle genetics relates to their field.

MATERIALS:

Projector and access to the internet to play a video from RawTruthAboutBeef.com.

ACTIVITY SEQUENCE:

1. Watch the insight video from the purebred ranch.
2. Share the discussion question prompt (below) with your students, and have them capture their thoughts in a notebook.
3. Instruct students to pair up and share their answers with a partner.
4. After students are done sharing, have a few pairs share with the whole class.
5. As an added challenge, have students dig into deeper research on their own and report back. Here are some ideas of what they can research:
 - a. What new technology innovations are used in improving beef cattle genetics?
 - b. What genetic traits lead to high-quality beef for consumers?
 - c. How do cattle producers track genetic traits and improvements?

DISCUSSION QUESTIONS:

Agriculture: What role does technology play in purebred ranchers' ability to improve the genetic potential of their herds?

Culinary: How is beef quality and consistency influenced by cattle genetics?

Health: How do purebred ranchers' choices about cattle genetics influence human health?

STANDARDS:

Agriculture: §130.A.2.4e and §130.A.2.12d

Culinary: §130.I.253.3a and e

Health: §130.J.274.2

LEARN MORE AT RAWTRUTHABOUTBEEF.COM



On the Cow/Calf Ranch

Cow/Calf

TIME: 30 minutes

Students create a graphic that conveys an element of a cow/calf ranch.

MATERIALS:

Projector and access to the internet to play a video from RawTruthAboutBeef.com.

ACTIVITY SEQUENCE:

1. Watch the insight video from the cow/calf ranch.
2. Share the discussion question prompt (below) with your students.
3. Instruct students to create a graphic that represents the answer to the prompt. Allow them to do further research as necessary to add details to their graphic.
4. Post student graphics around the room, and have students do a gallery walk to look at their peer's graphics.

DISCUSSION QUESTIONS:

Agriculture: How do low-stress handling techniques create safe environments?

Culinary: Describe how beef cattle upcycle grass and convert it into animal protein.

Health: Why are animal identification systems important for tracking animal health?

STANDARDS:

Agriculture: §130.A.2.15c

Culinary: §130.I.255.15g

Health: §130.J.274.5

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Feeding Cattle

Feedyard

TIME: 30 minutes

Students create a concept map that illustrates concepts associated with a feedyard.

MATERIALS:

Projector and access to the internet to play a video from RawTruthAboutBeef.com.

ACTIVITY SEQUENCE:

1. Watch the insight video from the feedyard.
2. Share the discussion question prompt (below) with your students.
3. Instruct students to work in pairs to create a concept map (see example below) that illustrates the answer to the prompt. Allow them to do further research as necessary to add details to their concept map.
4. Have a few pairs share their finished work with the class.

DISCUSSION QUESTIONS:

Agriculture: How do cattle producers interact with the environment and natural resources?

Culinary: How do different feed rations affect the tenderness and flavor of beef?

Health: List common ingredients in feed rations and identify the nutrients they provide the animal.

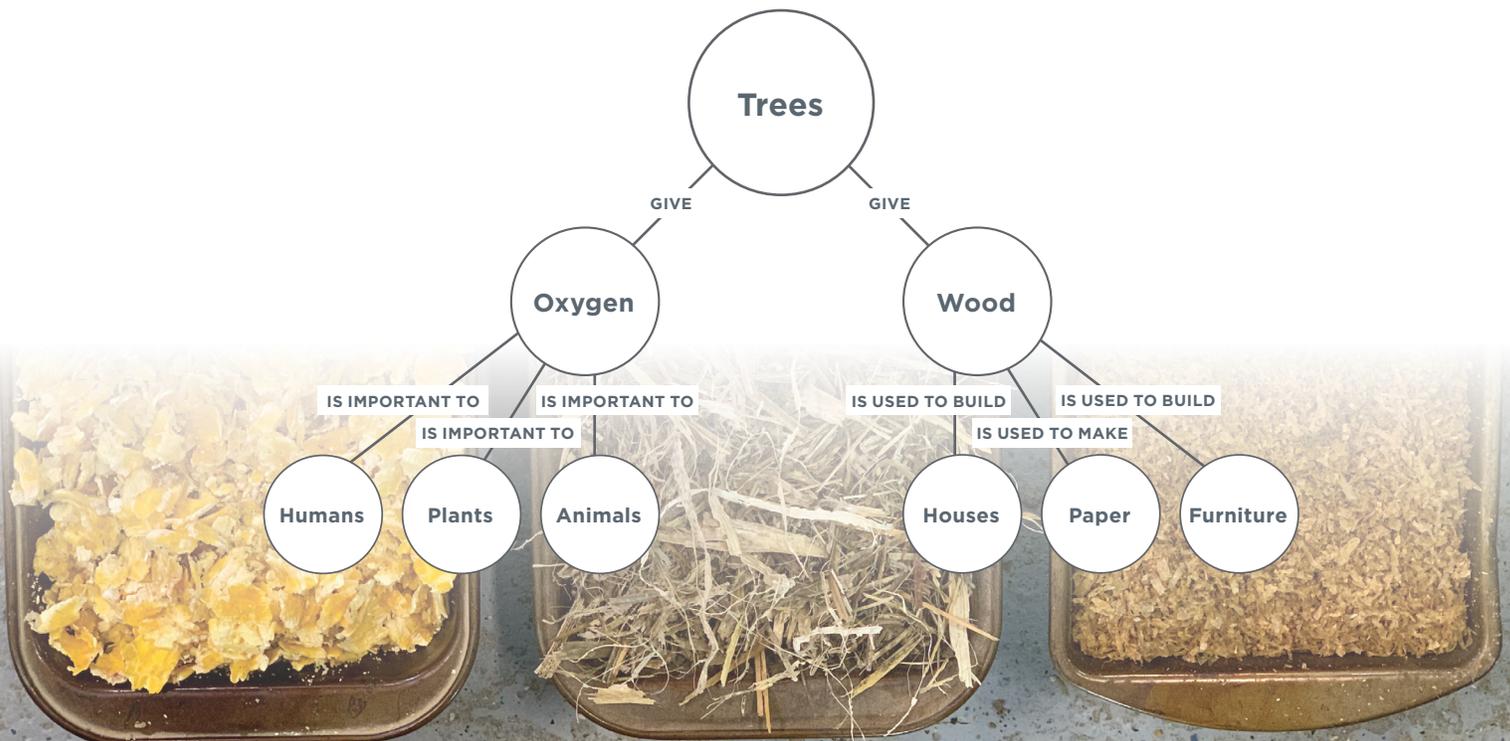
STANDARDS:

Agriculture: §130.A.2.15a

Culinary: §130.I.255.15a

Health: §130.J.274.2

LEARN MORE AT RAWTRUTHABOUTBEEF.COM



Becoming Beef

Processor/Distributor

TIME: 15 minutes

Students explore concepts associated with food safety and nutrition.

MATERIALS:

Projector and access to the internet to play a video from RawTruthAboutBeef.com.

ACTIVITY SEQUENCE:

1. Share the discussion question prompt (below) with your students.
2. Instruct them to capture down the answer to the prompt as they watch the video. Tell them there may be more than one answer.
3. Watch the insight video from the processor/distributor.
4. Instruct students to work in pairs to create a fact sheet with the facts they collected.
5. Then have the pairs group with another pair to see if there was anything they missed.

DISCUSSION QUESTIONS:

Agriculture: What protocols in a processing facility ensure food safety?

Culinary: What protocols in a processing facility ensure food safety?

Health: How does pre-trimming beef cuts influence the fat content in cuts of meat?
List lean cuts beef cuts.

STANDARDS:

Agriculture: §130.A.2.15c

Culinary: §130.I.253.7e

Health: §130.J.274.5 and §130.J.274.4

LEARN MORE AT RAWTRUTHABOUTBEEF.COM



At the Retail Counter

Retail

TIME: 25 minutes

Students create a poster of meat science concepts at a retail counter.

MATERIALS:

Projector and access to the internet to play a video from **RawTruthAboutBeef.com**.

ACTIVITY SEQUENCE:

1. Watch the insight video from the retail store.
2. Share the discussion question prompt (below) with your students.
3. Instruct students to work in pairs to answer to the prompt. Instruct them to do further research using tools found at **beeflovingtexans.com**.
4. Post student posters around the room and have students do a gallery walk to look at their peer's posters.

DISCUSSION QUESTIONS:

Agriculture: Describe beef quality and yield grades and how they influence beef's characteristics.

Culinary: Select a retail cut, identify the sub-primal and primal cut it came from.

Describe the characteristics of the cut. Visit **beeflovingtexans.com** and find a recipe to prepare that cut.

Health: Select a retail cut and visit **beeflovingtexans.com** and find a recipe to prepare that cut. Develop a nutritionally balanced menu for a meal using that recipe.

STANDARDS:

Agriculture: §130.A.2.13a

Culinary: §130.I.255.6b

Health: §130.J.274.4

LEARN MORE AT RAWTRUTHABOUTBEEF.COM

ADDITIONAL RESOURCES:

www.beeflovingtexans.com

www.beefitswhatsfordinner.com

<https://www.usda.gov/topics/animals/animal-production>

<https://www.agfoundation.org/on-the-farm/learn-about-beef>



Enjoying Beef

Restaurant

TIME: 35 minutes

Students create a visual representation that illustrates concepts associated with serving beef in a restaurant.

MATERIALS:

Projector and access to the internet to play a video from **RawTruthAboutBeef.com**.

ACTIVITY SEQUENCE:

1. Watch the insight video from the restaurant.
2. Share the discussion question prompt (below) with your students.
3. Instruct students to work in pairs to answer to the prompt. Instruct them to do further research using tools found at **beeflovingtexans.com**.
4. Have students create a visual representation of their work in a PowerPoint slide. Instruct students to script a conversation or film a video of them describing their work.

DISCUSSION QUESTIONS:

Agriculture: Choose a retail cut you would serve in a restaurant. Identify the sub-primal and primal cut it came from. What would you tell a customer about how that cut fits into a healthy diet? What recipe could they utilize?

Culinary: Choose a retail cut you would serve in a restaurant. Select an appropriate cooking method and describe why you chose that method.

Health: Develop a menu for a restaurant including nutrients found in available beef cuts. Account for portion size and a balance or healthful food options.

STANDARDS:

Agriculture: §130.A.2.13a

Culinary: §130.I.253.15h

Health: §130.J.274.4

LEARN MORE AT RAWTRUTHABOUTBEEF.COM

ADDITIONAL RESOURCES:

www.beeflovingtexans.com

www.beefitswhatsfordinner.com

<https://www.usda.gov/topics/animals/animal-production>

<https://www.agfoundation.org/on-the-farm/learn-about-beef>



STANDARDS REFERENCED

Agriculture, Food, and Natural Resources - §130.A.

§130.2. Principles of Agriculture, Food, and Natural Resources (One Credit), Adopted 2015

- (4) The student explains the historical, current, and future significance of the agriculture, food, and natural resources industry. The student is expected to (E) describe how emerging technologies and globalization impacts agriculture, food, and natural resources.
- (12) The student develops technical knowledge and skills related to animal systems. The student is expected (D) explain animal selection, reproduction, breeding, and genetics.
- (13) The student describes the principles of food products and processing systems. The student is expected to: (A) evaluate food products and processing systems.
- (15) The student explains the relationship between agriculture, food, and natural resources and the environment. The student is expected to: (A) determine the effects of agriculture, food, and natural resources upon safety, health, and the environment (C) identify and design methods to maintain and improve safety, health, and environmental systems in agriculture, food, and natural resource.

Hospitality and Tourism - §130.I.

§130.253. Introduction to Culinary Arts (One Credit), Adopted 2015

- (3) The student uses verbal and nonverbal communication skills to create, express, and interpret information to establish a positive work environment. The student is expected to: (A) develop and deliver presentations; (E) demonstrate active listening skills to obtain and clarify information.
- (7) The student understands the importance of health, safety, and environmental management systems in organizations and their importance to organizational performance and regulatory compliance. The student is expected to: (E) research sources of food-borne illness and determine ways to prevent them.
- (15) The student evaluates and determines equipment, ingredients, and procedures in a professional food setting. The student is expected to: (C) identify the types of knives and proper usage in a commercial kitchen; (H) describe the methods of cooking, including dry heat, moist heat, and combination heat.
- §130.255. Advanced Culinary Arts (Two Credits), Adopted 2015.
- (6) The student understands roles within teams, work units, departments, organizations, and the larger environment of the food service industry. The student is expected to: (B) investigate quality-control standards and practices.
- (15) The student evaluates nutrition concepts as they affect health and wellness, marketing, and menu planning. The student is expected to: (A) analyze the role of carbohydrates, vitamins, minerals, proteins, and fats as they relate to food choices (G) differentiate between proteins and identify factors such as types, grades, purchasing, and storage.



STANDARDS REFERENCED

Human Services- §130.J.

§130.274. Lifetime Nutrition and Wellness (One-Half Credit), Adopted 2015.

- (2) The student understands the role of nutrients in the body. The student is expected to: (A) classify nutrients and their functions and food sources and compare the nutritive value of various foods; (B) assess the effects of nutritional intake on health, appearance, effective job performance, and personal life; (C) analyze and apply various dietary guidelines throughout the life cycle, including pregnancy, infancy, childhood, and late adulthood; and (D) compare personal food intake to recommended dietary guidelines.
- (4) The student demonstrates knowledge of nutritionally balanced diets. The student is expected to: (A) research the long-term effects of food choices; (B) outline strategies for prevention, treatment, and management of diet-related diseases such as diabetes, hypertension, childhood obesity, anorexia, and bulimia; (C) determine the effects of food allergies and intolerances on individual and family health; (D) plan diets based on life cycle, activity level, nutritional needs, portion control, and food budget; (E) develop examples of therapeutic diets; (F) analyze advertising claims and fad diets with the recommendations of the Recommended Dietary Allowances; (G) analyze current lifestyle habits that may increase health risks; (H) identify community programs that provide nutrition and wellness services; (I) examine the nutritional value of fast foods and convenience foods; (J) read and interpret food labels; (K) examine and explain nutritional serving sizes; (L) compare organic and green food choices; and (M) determine sustainable food choices and their impact on society.
- (5) The student understands safety and sanitation. The student is expected to: (A) demonstrate safe and sanitary practices in the use, care, and storage of food and equipment; (B) explain types and prevention of food-borne illnesses; and (C) practice appropriate dress and personal hygiene in food preparation.

