MIDDLE SCHOOL
CURRICULUM

MEET THE MEAT

BEEF UP FOOD SAFETY

Funded in part by
The Beef Checkoff

CONTENTS

Note:

This topical must be accompanied with the Overview for complete understanding.

I. Enduring Knowledge:

Students will learn how safety is a top concern throughout the beef industry; while raising the cattle, during the processing, and selling packaged meat. Students will understand that it is the consumer's job to maintain safe practices while preparing beef at home.

Learning Targets:

1. Students should learn that beef farmers must follow strict rules with feed and housing. There are government regulations about medicine and additives.
2. Students should learn that there are strict guidelines for slaughter, and that government inspectors be present.
3. Students should learn there are scientific procedures for packaging beef, storing it in grocery stores, and handling in restaurants.
4. Students should learn that they need to follow safe procedures when they handle and prepare meat at home.

Teacher Background Notes:

1. Information on beef handling: http://www.beefusa.org/beefsafety.aspx or http://factsaboutbeef.com/ or http://www.explorebeef.org/
2. The process of butchering cattle has gone through extreme changes. It still is controversial. This website gives a good background: http://www.cattlenetwork.com/e-newsletters/drovers-daily/Dr-Temple-Grandin-explains-beef-slaughter-process-in-video-tour-167549335.html
3. Here is a good resource for all aspects of beef including packaging and home preparation: http://www.fsis.usda.gov/Fact_Sheets/Beef_from_Farm_to_Table/index.asp

Vocabulary:

1. **growth promotants:** a product used with beef cattle to produce more lean beef while using fewer resources like feed. They can be fed or administered through a small pellet (called an implant) that is placed under the skin on the back of an animal's ear. These items must be approved by a regulatory body (Food and Drug Administration) before they are available for use and strict product use instructions must be followed.
2. **antibiotics:** agents introduced into the body that destroy the bacteria that can cause illness in animals or humans
3. **E coli bacteria E.coli O 157:** H7 is one of hundreds of strains of the bacterium Escherichia coli. Most strains are harmless and live in the intestines of healthy humans and animals. However, eating food that has not been cooked sufficiently to kill this particular strain, E. coli O157:H7, or has been cross-contaminated by other foods carrying bacteria, can cause severe illness in humans.

4. **cross-contamination:** the passing of bacteria, microorganisms or other harmful substances indirectly from one thing to another through improper or unsterile equipment or utensils, products, hands, or food contact surfaces. www.fightbac.org.
5. **Mad Cow Disease (BSE):** Bovine Spongiform Encephalopathy (BSE), commonly called "mad cow disease," is a degenerative neurological disease of cattle that is caused by misfolded proteins (called prions) that build up in the central nervous system (CNS) and eventually kill nerve cells. http://www.bseinfo.org/

II. Prior Knowledge:

Class discussion:

1. How should a cow be treated on a farm? How is the treatment different than for your cat or dog?
2. How are animals processed into meat? What is a slaughterhouse?
3. Why is meat refrigerated? Why do the packages have a date stamped on?
4. Why should you wash your hands before handling food?

III. Viewing Guide:

Answer the questions below while watching the video:

1. What are 2 important ways farmers treat cattle to keep them healthy?
2. What is the job of the government inspector?
3. Why is the date stamped on meat packages in the grocery store?
4. Why should you wash your hands before and after working with raw meat?

IV. Discussion Points:

1. Review questions and make conclusions.
2. Why do you think growth hormones and antibiotics must be strictly regulated?
3. Why is it so important to have so many safety factors in place when producing meat?
4. What do you think happens to meat that is rejected along the way?
5. In groups, make a flow chart showing safety actions of product at each of the following stages:

On Farm	Slaughterhouse	Packaging Plant	Grocer/Restaurant	Home

V. Evaluation:

Take the flow chart from #5 and make a poster showing the information.
Be sure it is easy to read, contains good information, and is eye-catching.

VI. Suggestions for extended learning

1. Research slaughterhouses. Look at the history, and compare early slaughter to today's processes. Who is Temple Grandin?
2. Take a field trip to a meat market. Examine different meat packages. List the information given on the label. List all the different types of meat, cuts, price/lb. What are things to look for when shopping for meat?
3. Take a field trip to a sit-down restaurant to learn about food preparation. Take note of the rules and regulations. Learn the steps in preparation.
4. Research e Coli O157:H7 or BSE – Bovine Spongiform Encephalopathy. Write a report.

Wisconsin Teacher Standards which can be met with this curriculum, including rationale.

Standard 1: Subject matter.
This curriculum provides information not readily available in other forms. A teacher using this material will be well-informed about the subject matter.

Standard 2: Broad range of ability.
This curriculum provides instruction that supports their intellectual, social, and personal development.

Standard 3: Adapt instruction.
Adapt instruction. This curriculum provides suggestions for learners with a variety of intelligences and levels of ability.

Standard 4: Instructional strategies.
This curriculum includes the use of technology to gain information and suggestion for using research in extending learning.

Standard 5: Individual and group motivation.
Both prior knowledge and carefully designed group projects promote motivation for students to learn.

Standard 6: Verbal and nonverbal communications.
Instruction media and technology that promotes active learning are key parts of this curriculum.

Standard 7: Organizes and plans systematic instruction.
This curriculum is organized to support teacher knowledge, to draw on and motivate students to engage in active learning, and promotes active inquiry, collaboration, and supportive interaction in the classroom.

Standard 8: Formal and informal assessments.
Suggestions for a variety of assessments, both formal and informal, are offered in the curriculum.

Standard 10: Fosters relationships.
This curriculum provides information regarding ways in which to actively interact with native communities, both face-to-face events and in using distance learning or technology (e.g. email) methods.

WISCONSIN STUDENT PROFICIENCY STANDARDS which can be met teaching
Beef Up Food Safety – Topic Video, Discover Mediaworks, 2012

Geography:

Students in Wisconsin will learn about geography through the study of the relationships among people, places, and environments.

History:

Students in Wisconsin will learn about the history of Wisconsin, the United States, and the world, examining change and continuity over time in order to develop historical perspective, to explain historical relationships, and analyze issues that affect the present and the future.

Political Science and Citizenship:

Students in Wisconsin will learn about political science and acquire the knowledge of political systems necessary for developing individual civic responsibility by studying the history and contemporary uses of power, authority and government.

Economics:

Students in Wisconsin will learn about production, distribution, exchange, and consumption so that they can make informed economic decisions.