Agriculture Career Development: Livestock Evaluation
Instructor’s Manual

Upfront
Objective Sheet
Instructor’s Guide
Answers
LAP Sheet
Written Test

Developed by the
Curriculum and Instructional Materials Center
for the Division of Agriculture Education
Oklahoma Department of Career and Technology Education
# AGRICULTURE CAREER DEVELOPMENT: LIVESTOCK EVALUATION

## PROFILE OF TRAINING MASTERY

Instructor: ____________________________________________ Date: ___________________

Program: ____________________________________________

School: ____________________________________________ Grade: ___________________

Name: ____________________________________________ Soc. Sec. No. ________________

Address: ____________________________________________ Phone: __________________

In Case of Emergency, Contact: ______________________________

Address: ____________________________________________ Phone: ________________

Allergies/Disabilities that might require special accommodation for training (please specify):

The above information can be used for school records and/or to ensure safety of students. This confidential information is not to be released to employers or the general public.

Date of Enrollment: ________________ Date of Withdrawal: ________________

Date of Completion: ________________ Total On-the-Job Training Hours: ________________

Total Class Hours: ________________ Total Lab Hours: ________________

Total Hours Tardy: ________________ Total Hours Absent: ________________

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Use of This Document

This document can be used to record information about the student and skills mastered. This information is useful in documenting student progress during training and in providing information about the student’s qualifications to potential employers and/or for entry into advanced training programs. Instructors using these materials are authorized to reproduce this document as required for use in their training programs.

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AGRICULTURE CAREER DEVELOPMENT: LIVESTOCK EVALUATION
SPECIFIC JOB COMPETENCIES

INSTRUCTOR:
As each competency is mastered, place your initials and the date in the blank on the left. This will verify that the student can perform the skill with a minimum of supervision.

UNIT 1 — BEEF
1. Identify characteristics of major breeds of beef cattle.
2. Identify considerations in selecting beef cattle breeds.
3. Match breeds and characteristics to a market. (Assignment Sheet 1)
4. Identify the parts of a beef animal.
5. Choose correct responses about indicators of muscling.
6. Choose correct responses about indicators of finish.
7. Identify types of defective front and hind legs.
8. Identify desirable characteristics of a cow.
9. List desirable characteristics of a bull.
10. Label wholesale cuts of beef.
11. Choose correct responses about USDA quality grade standards for slaughter cattle.
13. Identify the effect of yield grade factors on yield grade.
14. Choose correct responses about the primary desired traits for the ideal market steer.
15. Evaluate a class of slaughter cattle. (Assignment Sheet 2)
16. Choose correct responses about criteria used for grading feeder cattle.
17. Distinguish among USDA frame size standards for feeder cattle.
18. Distinguish among USDA thickness standards for feeder cattle.
19. Evaluate a class of feeder cattle. (Assignment Sheet 3)
20. Distinguish among common performance data used to calculate EPDs.
21. Interpret an EPD. (Assignment Sheet 4)
22. Choose correct responses about the primary desired traits when evaluating beef cattle for production.
23. Distinguish between genotype and phenotype.
24. Select correct responses about determining replacement animals.
25. Respond to keep/cull scenarios. (Assignment Sheet 5)
26. Research industry and consumer trends in livestock production. (Assignment Sheet 6)

UNIT 2 — SWINE
1. Identify characteristics of major breeds of swine.
2. Choose correct responses about types of swine production.
3. Choose correct responses about selecting a swine breed for production purposes.
4. Research a topic related to the swine industry. (Assignment Sheet 1)
5. Identify the parts of a hog.
6. Choose correct responses about indicators of muscling.
7. Choose correct responses about indicators of fat.
8. Choose correct responses about types of front and hind legs.
9. Identify wholesale cuts of pork with their percentage of carcass yield and common retail cuts associated with the wholesale cuts.

Student ratings on specific competencies evaluated during the course are available upon student's written request and/or by calling the instructor. Parent's or guardian's signature is necessary if student is under 18 years of age.
AGRICULTURE CAREER DEVELOPMENT: LIVESTOCK EVALUATION

10. Choose correct responses about identification methods used in swine production.
11. Label swine identification ear notches. (Assignment Sheet 2)
12. Distinguish between genotype and phenotype.
14. Interpret EPDs. (Assignment Sheet 3)
15. Identify desirable characteristics of a breeding gilt.
16. Evaluate a class of breeding gilts. (Assignment Sheet 4)
17. Select correct responses about evaluating swine for production.
18. Respond to keep/cull scenarios. (Assignment Sheet 5)
19. Choose correct responses about USDA grade standards for feeder pigs.
20. Evaluate a class of feeder pigs. (Assignment Sheet 6)
22. Identify the standards of a market hog according to the National Pork Producers Council.
23. Evaluate a class of slaughter swine. (Assignment Sheet 7)

UNIT 3 — SHEEP

1. Identify characteristics of major breeds of sheep.
2. Choose correct responses about types of sheep production.
3. Choose correct responses about selecting sheep for production purposes.
4. Label the parts of a sheep.
5. Identify indicators of muscling.
6. Choose correct responses about appropriate finish.
7. Choose correct responses about types of front and hind legs.
8. Identify wholesale cuts of lamb and the common retail cuts associated with the wholesale cuts.
9. Choose correct responses about lamb and wool production.
10. Choose correct responses about the quality of wool.
11. Respond to scenarios about characteristics and traits of sheep. (Assignment Sheet 1)
12. Distinguish between genotype and phenotype.
13. Identify common performance data used in selection of breeding sheep.
14. Interpret EPDs. (Assignment Sheet 2)
15. Identify desirable characteristics of a breeding ewe.
16. Evaluate a class of breeding ewes. (Assignment Sheet 3)
17. Select correct responses about evaluating sheep for production.
18. Research the use of sheep selection and EPDs. (Assignment Sheet 4)
19. Choose correct responses about USDA standards for grades of slaughter lambs, yearlings, and sheep.
22. Distinguish among USDA quality grades for slaughter sheep.
23. Distinguish among USDA yield grades for slaughter lambs, yearlings, and sheep.
24. Choose correct responses about evaluating market lambs.
25. Identify desirable characteristics of a market lamb.
26. Evaluate a class of market lambs. (Assignment Sheet 5)
27. Research a topic related to the sheep industry. (Assignment Sheet 6)
AGRICULTURE CAREER DEVELOPMENT: LIVESTOCK EVALUATION

UNIT 4 — EQUINE
1. Choose correct responses about characteristics of major light horse breeds.
2. Identify the parts of a horse.
3. Identify common body colors of horses.
4. Identify common leg markings of horses.
5. Identify common head markings of horses.
6. Select correct responses about areas of emphasis related to muscling.
7. Choose correct responses about correct front and hind leg structural correctness.
8. Identify conformation defects of forelegs.
9. Identify conformation defects of hindlegs.
10. Match correct names to the anatomy of a horse’s foot and lower leg.
11. Select correct responses about correct and incorrect movement of front and hind legs.
12. Recall factors to consider in judging halter classes.
13. Evaluate a class of halter horses. (Assignment Sheet 1)
14. Identify factors to consider in evaluating a brood mare.
15. Recall factors to consider in evaluating a working horse.
17. Identify points of emphasis as related to evaluating a western pleasure performance.
19. Identify points of emphasis as related to evaluating a hunter under saddle performance.
21. Identify points of emphasis as related to evaluating a western riding performance.
22. Choose correct responses about components of a reining performance.
23. Identify points of emphasis as related to evaluating a reining performance.
25. Identify points of emphasis as related to evaluating a trail performance.
26. Select correct responses about tack used in western and English performance.
27. Select correct responses about proper attire for performance areas.
28. Select correct responses about key issues regarding management practices used in the equine industry.
29. Recall key issues regarding horse nutritional needs.
30. Choose correct responses about colic.
31. Select correct responses about pedigree information.
32. Interpret a pedigree. (Assignment Sheet 2)
33. Distinguish between genotype and phenotype.
34. Recall considerations in selecting horses for production purposes.
35. Research current issues in the horse industry. (Assignment Sheet 3)

UNIT 5 — DAIRY CATTLE
1. Identify characteristics of major breeds of dairy.
2. Match terms associated with the dairy industry to their correct definitions.
4. Identify the parts of a cow.
5. Identify desirable characteristics of a dairy cow.
7. Choose correct responses about judging dairy heifers.
8. Identify traits used by the Holstein Association in the linear evaluation process.
10. Evaluate and score a Holstein cow based on the Holstein Linear Evaluation guidelines. (Assignment Sheet 1)
12. Select correct responses about main management considerations in operating a dairy farm.
13. Evaluate a class of dairy cows. (Assignment Sheet 2)
14. Evaluate a class of dairy heifers. (Assignment Sheet 3)
15. Practice Dairy Cattle Career Development Events. (Assignment Sheet 4)

UNIT 6 — POULTRY

1. Identify characteristics of major breeds of chickens.
2. Identify terms associated with classifying poultry.
3. Identify terms associated with the poultry industry.
4. Choose correct responses about types of poultry production.
5. Identify the parts of a chicken (anatomy).
6. Choose correct responses about desirable characteristics of broilers.
7. Choose correct responses about desirable characteristics of chickens for market egg production.
8. Choose correct responses about specific factors used to determine the USDA grade of ready-to-cook carcasses and parts of chickens and turkeys.
9. Choose correct responses about criteria for USDA grades of ready-to-cook carcasses and parts of chickens and turkeys.
10. Identify poultry carcass parts.
11. Grade a class of ready-to-cook chicken and/or turkey carcasses and/or parts. (Assignment Sheet 1)
12. Choose correct responses about quality indicators associated with processed poultry meat products.
13. Place a class of four further-processed poultry meat products. (Assignment Sheet 2)
14. Choose correct responses about criteria used to determine the USDA grade of shell eggs.
15. Choose correct responses about criteria used to determine consumer grades and weight classes of shell eggs.
16. Identify factors that influence grading cartons of shell eggs.
17. Place a class of four one-dozen cartons of chicken eggs. (Assignment Sheet 3)
18. Select correct responses about appropriate facilities for specific poultry uses.
19. Select correct responses about management considerations for poultry producers.
20. Identify common health, disease, and parasite issues in the poultry industry.
21. Select correct responses about culling.
22. Respond to keep/cull scenarios. (Assignment Sheet 4)
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One set per unit of the following components:

• Objective Sheet
• Instructor's Guide
• Answers
• LAP Sheet
• Written Test

Student Workbook

One set per unit of the following components:

• Objective Sheet
• Information Sheet
• Assignment Sheets (as appropriate)
• Job Sheets (as appropriate)

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ACKNOWLEDGMENTS

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SPECIAL THANKS

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USE OF THIS PUBLICATION

Each unit of instruction is based on the performance needed for successful employment in an occupational area. Animal Science contains 19 units of instruction. A complete unit may contain most or all of the following components: Objective Sheet, Instructor’s Guide, Answers, Transparency Master, Written Test, Handout, Information Sheet, Assignment Sheet, and Job Sheet.

STUDENT WORKBOOK

Objective Sheet

The Objective Sheet summarizes each unit for the student and the instructor. The Objective Sheet includes the following:

- **Introduction**—This section introduces students to the unit topic and its importance to them. The introduction also relates the unit to the students’ experiences and their “need to know,” in order to help capture their interest and focus their attention on the specific topic.

- **Unit Objectives**—The Unit Objective states the overall goal of the unit. It identifies what the student will be able to do after successfully completing the unit, as well as the standards used to measure student performance.

- **Specific Objectives**—The Specific Objectives outline the teaching sequence of the competencies required to reach the Unit Objective.

The Specific Objectives on the Objective Sheet should be emphasized to all students at the start of each unit and throughout the teaching and learning processes. This will help answer student questions about performance requirements for each unit. Specific Objectives can also assist instructors in determining teaching strategies and instructional methods. Instructors should prepare for each unit by deciding how each objective could best be taught.

Instructors should modify, delete, or add objectives to meet the needs of students. When objectives are added, the instructor should remember to provide the needed information, Assignment and/or Job Sheet, and criterion-referenced test items.

Information Sheet

The Information Sheet provides the “must know” content essential for meeting the cognitive objectives in the unit.

Many objectives on the Information Sheet begin with a “Words to Learn” section. This boxed item identifies terms relating to the objective. Students should fill in the definitions, which can be found in the Glossary of Terms. Terms in the “Words to Learn” boxes are tested only indirectly with the objective information (not on the Written Test as a matching exercise).
Students should read the Information Sheet for each unit before it is discussed in class. Space is provided in the margins for both students and instructors to add notes that clarify and/or expand upon the information presented.

Review questions are provided at the end of each Information Sheet. Instructors may choose to have students answer the review questions as an additional assignment.

Assignment Sheets

The Assignment Sheets address the learning levels at or above the application level of Bloom’s taxonomy. They allow students to perform non-psychomotor activities related to occupational tasks. Assignment Sheets also provide students with an opportunity to use higher-order thinking skills, such as problem-solving, synthesizing, analyzing, and evaluating. In addition, they may provide opportunities for cooperative learning and more detailed oral/written communication activities.

Assignment Sheets activities can be “paper and pencil” activities, as well as those using computer software, videotapes, models, handouts, or other resources as appropriate. Several bonus assignments are included, which can be completed by students for extra credit. Basic Skills for the Assignment Sheets are identified in the Instructor’s Guide.

Before teaching an Assignment Sheet, review the directions and any specific guidelines. Make certain that any needed materials from the Instructor’s Manual are available. Once students have completed the Assignment Sheet, evaluate each student’s performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery. Instructors may return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

Job Sheets give students step-by-step procedures for performing manipulative or psychomotor occupational tasks or jobs. The Job Sheet also functions as a Skill Test Record, facilitating the instructor’s evaluation of each student’s performance. Both the process and the end-product are evaluated. Diagrams, illustrations, and photographs are included, as needed, to assist students in completing the job.

Before teaching a Job Sheet, review the introduction and evaluation criteria. Remind the students that they should not fill in the blanks in the Yes/No columns. Explain all general guidelines, safety cautions, and warnings. Make sure that all tools, equipment, and supplies are available. Demonstrate each of the procedures outlined in the Job Sheet and allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary. Once students have completed the Job Sheet, evaluate each student’s performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery. Return the completed Job Sheets to the students so that they may use them for later reference if needed.
INSTRUCTOR’S MANUAL

The Instructor's Manual includes instructor reference materials, as well as a copy of the Student Workbook, all in loose-leaf format. Tabbed page dividers have been provided so that this information can be organized in any method the instructor sees most convenient.

Instructor's Guide

The Instructor's Guide leads instructors step by step through the unit. It recommends instructional strategies for each of the Specific Objectives. Resources (publications, videos, computer software, and other media) are listed, as well as unit references. These resources can be used to supplement the instructor's knowledge of the subject area and to help students with particular interests or occupational objectives. The Instructor's Guide also includes the definitions of the “Words to Learn,” which appear in the student's Information Sheet.

Instructors should study the Instructor's Guide before introducing the unit and allow time to obtain supplemental materials, prepare audiovisual materials, and contract outside resource persons. Specific tasks of the instructor will vary with each unit.

Answers

This component lists the answer to all of the Assignment Sheets and Written Tests.

Written Test

The Written Test provides criterion-reference evaluation of the Specific Objectives from in the Information Sheet. If instructors have added, deleted, or modified any objectives, appropriate changes should be made to the Written Test. The Written Test serves as both a pretest and a posttest. The Written Tests may be photocopied for classroom use.
EVALUATION

Pretest

Use the unit Written Test for both the pretest and posttest. Give the students the pretest before they begin the unit. Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Assignment Sheet

Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity. Complete each student’s Profile of Training Mastery.

Skill Test

Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test. Describe the rating scale used on the skills test. Reteach and retest as necessary. Complete each student’s Profile of Training Mastery.

Posttest

After they have completed the unit, give students the Written Test again. Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives. Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains. Complete the appropriate sections of the Profile of Training Mastery. Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.
BASIC SKILLS IN CURRICULUM

CIMC has always been mindful of the importance of reinforcement (and sometimes remediation) of students’ academic skills as they progress through career and technology training, and has always included activities in its materials to enhance and promote use of these skills.

State and federal legislation mandates vigorous basic skills development in career and technology education in the wake of demands by industry that workers must be academically, as well as technically, competent, given the nature of the highly complex workplace. In response, CIMC has taken the following steps to document that, indeed, the instructional materials do combine academic skills training with the career and technology training. In addition, concerted efforts have been made to “beef up,” or enhance the basic skills instruction already present.

To assist teachers and students in identifying activities that promote basic skills development, basic skills are identified in the Instructor’s Guide for each Job Sheet or Assignment Sheet. The 10 broad skills areas include reading, writing, mathematics, science, oral communication, interpersonal, creative thinking, employability, social studies, and technology.
CORRECTIONS AND SUGGESTIONS

The Curriculum and Instructional Materials Center (CIMC) wants to provide vocational instructors and students with accurate and effective materials. Although the CIMC strives to maintain the highest standards of development and production, oversights sometimes do occur. If you find any errors in this or other CIMC publications, or have suggestions for improving their usefulness in vocational programs, please notify the CIMC staff. To do this, please identify the page(s) affected and write any comments to clarify the error or suggestion. Use the spaces below. Then, simply fold (bottom of page upward, top downward), secure, and mail.

This information will be used to correct the publication before the materials are reprinted. To ensure that the material is updated on a timely basis, notify the CIMC of necessary corrections as soon as possible after discovering the error.

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Agriculture Career Development: Livestock Evaluation

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Thank you for your comments. If we have questions, how may we contact you:

____________________________________________________________________________________

1 Fold upward
INTRODUCTION
Beef cattle production contributes significantly to the economy of the United States. Beef cattle are a commodity and can be graded for quality and yield. The consumer ultimately determines the ideal beef animal. Consumers want beef that is healthy and lean but still retains its taste. As a producer of beef cattle, the more you know about breeds, quality and yield grades, and how to determine desirable characteristics of different classes of cattle, the better prepared you will be to make profitable decisions in your operation.

FOCUS ASSIGNMENT
1. Read the Texas Agricultural Extension Service publication Genetic Strategies for Beef Cow Herds. It is available online at http://animalscience-extension.tamu.edu/rain/academics/genetics/L5341-genstrategies.pdf.

2. Write a brief summary of the publication indicating the key points in the article.

UNIT OBJECTIVE
After completing this unit, you will show the following competencies by mastering the activities on the Assignment Sheets and by scoring at least 85% on the Written Test.

SPECIFIC OBJECTIVES
1. Identify characteristics of major breeds of beef cattle.

2. Identify considerations in selecting beef cattle breeds.

3. Match breeds and characteristics to a market. (Assignment Sheet 1)

4. Identify the parts of a beef animal.

5. Choose correct responses about indicators of muscling.

6. Choose correct responses about indicators of finish.

7. Identify types of defective front and hind legs.
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**FOCUS ASSIGNMENT**

1. Have students read the Texas Agricultural Extension Service publication *Genetic Strategies for Beef Cow Herds*. It is available online at http://animalscience-extension.tamu.edu/rain/academics/genetics/L5341-genstrategies.pdf.

2. Have students write a brief summary of the publication indicating the key points in the article.

**GENERAL INSTRUCTIONS**

**Assignment Sheets**

- **R** Review the directions and any specific guidelines.

- **R** Make certain that any needed materials from the Instructor’s Manual are available.

- **R** Have the students complete the Assignment Sheet. Evaluate each student’s performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.

- **R** Complete each student’s Profile of Training Mastery.

- **O** Have the students volunteer to read aloud the directions and any special guidelines.
Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

**Job Sheets**

- Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.
- Review and explain all general guidelines, safety cautions, and warnings.
- Make sure that all tools, equipment, and supplies are available.
- Demonstrate each of the procedures outlined in the Job Sheet.
- Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.
- Have the students complete the Job Sheet. Evaluate each student’s performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.
- Complete each student’s Profile of Training Mastery.
- Return the completed Job Sheets to the students so that they may use them for later reference if needed.
- Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

**LAP Sheets**

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

- Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.
- If you want the students to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the students. Be sure to provide any needed resources.
OBJECTIVE 1
Identify characteristics of major breeds of beef cattle.

- Refer students to Oklahoma State University Livestock Breeds online at [www.ansi.okstate.edu/breeds/cattle](http://www.ansi.okstate.edu/breeds/cattle).

- Refer students to breed associations for more specific information on a particular breed. Breed association websites are given in the suggested resources. The website [www.mycattle.com](http://www.mycattle.com) also gives links to some breed associations.

- Compare association regulations regarding such items as artificial insemination, award programs, sire evaluation, required reporting, etc.

- Refer students to the *Beef Production Glossary* from the University of Missouri-Columbia at [http://muextension.Missouri.edu/xplor/agguides/ansci/g02030.htm](http://muextension.Missouri.edu/xplor/agguides/ansci/g02030.htm) for additional terms related to beef cattle.

- Have students research the origin of different breeds of cattle. For example, some breeds, such as Angus, Hereford, and Shorthorn, originated in Great Britain. Also research how ranches, such as the King Ranch in Texas, influenced breeds of cattle.

- Have students research breeds not included in this objective such as Texas Longhorn or Red Poll.

- Refer students to online sites applicable to beef production for further information related to this unit. Some examples are:
  
  - Beef Improvement Federation
    [www.beefimprovement.org](http://www.beefimprovement.org)
  
  - Beef.Org
    [www.beef.org](http://www.beef.org)
  
  - National Cattlemen’s Beef Association
    [www.beef.org](http://www.beef.org)
  
  - Oklahoma State University Department of Animal Science
    [www.ansi.okstate.edu](http://www.ansi.okstate.edu)
  
  - Stephenville Research and Extension Center, The Texas A&M University System
    [http://stephenville.tamu.edu](http://stephenville.tamu.edu)
OBJECTIVE 2
Identify considerations in selecting beef cattle breeds.

- Invite a cattle producer to talk to the class about the reasons he or she chose a certain breed.
- Have students select a breed that they would like to have for a beef production operation. Have students write a brief paper discussing why they chose the breed. Refer to breed associations for information.
- Discuss what breeds are popular in your specific area and why.

OBJECTIVE 3
Match breeds and characteristics to a market. (Assignment Sheet 1)

- See the general instructions for all Assignment Sheets. (Basic skills for Assignment Sheet 1: critical thinking, research)

OBJECTIVE 4
Identify the parts of a beef animal.

- Have students practice naming parts of the animal on live animals.

OBJECTIVE 5
Choose correct responses about indicators of muscling.

- Remind students that muscle is the part of the beef animal that is eaten. The more muscling an animal has, the more meat there is to eat.
- Use pictures found in breed magazines to help students identify indicators of muscling.

OBJECTIVE 6
Choose correct responses about indicators of finish.

- Tell students that the amount of marbling determines the quality grade of the animal. An animal has to have a .4 inch finish over the ribs in order to grade “choice.”
- Tell students that the optimum composition of a slaughter animal is 65 percent muscle, 23 percent fat, and 12 percent bone.
- Tell students that a carcass of 600 to 900 pounds (live weight 1,000 to 1,350 pounds) brings the highest market price.
OBJECTIVE 7
Identify types of defective front and hind legs.

O Explain to students the importance of animals having good, sound, correct feet and legs.

O Have students use breed magazines to collect pictures of animals that have defective legs.

OBJECTIVE 8
Identify desirable characteristics of a cow.

O Talk about such terms as deep bodied, large bones, wide chest, and strong topline. Provide students with ample examples and illustrations so that they may develop a basis for comparison.

OBJECTIVE 9
List desirable characteristics of a bull.

O Talk about such terms as long body, clean flank, and muscular forearm. Provide students with ample examples and illustrations so that they may develop a basis for comparison.

OBJECTIVE 10
Label wholesale cuts of beef.

O Review with students the optimum carcass value of 65 percent muscle, 23 percent fat, and 12 percent bone.

O Explain to students the difference between wholesale and retail cuts.

O Have students visit the meat department of a grocery store and observe retail cuts of beef.

OBJECTIVE 11
Choose correct responses about USDA quality grade standards for slaughter cattle.

O Review the USDA classes of slaughter and feeder cattle.

O Refer students to the publication United States Standards for Grades of Slaughter Cattle available online at www.ams.usda.gov/lsg/stand/st-pubs.htm#Official.

O Have students watch the video Livestock Grading: Slaughter Cattle.
OBJECTIVE 12
Choose correct responses about USDA yield grade standards for slaughter cattle.

R Refer students to the publication *United States Standards for Grades of Slaughter Cattle* available online at [www.ams.usda.gov/lsg/stand/st-pubs.htm#Official](http://www.ams.usda.gov/lsg/stand/st-pubs.htm#Official).

R Show the video *Livestock Grading: Slaughter Cattle*.

OBJECTIVE 13
Identify the effect of yield grade factors on yield grade.

R Refer students to the publication *United States Standards for Grades of Slaughter Cattle* available online at [www.ams.usda.gov/lsg/stand/st-pubs.htm#Official](http://www.ams.usda.gov/lsg/stand/st-pubs.htm#Official).

R Have students watch the video *Livestock Grading: Slaughter Cattle*.

OBJECTIVE 14
Choose correct responses about the primary desired traits for the ideal market steer.

R Have students watch the video *Livestock Judging: Market Steer Evaluation*.

R Discuss the characteristics of an ideal market steer with students.

OBJECTIVE 15
Evaluate a class of slaughter cattle. (*Assignment Sheet 2*)

R See the general instructions for all Assignment Sheets. (Basic skills for Assignment Sheet 2: critical thinking, employability)
OBJECTIVE 16
Choose correct responses about criteria used for grading feeder cattle.

R Refer students to the publication United States Standards for Grades of Feeder Cattle available online at www.ams.usda.gov/lsq/stand/st-pubs.htm#Official.

R Have students watch the video Livestock Grading: Feeder Cattle.

O Have students read the publication Feeder Cattle Production and Marketing available online from Oklahoma State University Cooperative Extension Service at www.ansi.okstate.edu/extern.

O Have students search online sites for information and current prices about feeder cattle.

OBJECTIVE 17
Distinguish among USDA frame size standards for feeder cattle.

R Review information on determining frame size for cattle. Information on frame size can be found in the Beef Improvement Federation’s publication Chapter 3 — Animal Evaluation. The website for the Beef Improvement Federations is www.beefimprovement.org.

R Frame Score and Weight of Cattle available online from Texas Agricultural Extension Service at http://animalscience-extension.tamu.edu.

R Frame Scores and Feeder Cattle Grades available online from University of Nevada Cooperative Extension at www.unce.unt.edu/publications/sccpubs/CLT15.pdf.

R Beef Cattle Frame Scores available online from North Dakota State University Extension Service at www.ag.ndsu.edu/pubs.

R Refer to the publication United States Standards for Grades of Feeder Cattle available online at www.ams.usda.gov/lsq/stand/st-pubs.htm#Official.

R Have students watch the video Livestock Grading: Feeder Cattle.

O Have students observe cattle from several various locations (ranches, feedlots, etc.) and determine their frame size. If students cannot observe actual cattle, have them refer to pictures in breed association and livestock magazines.
OBJECTIVE 18
Distinguish among USDA thickness standards for feeder cattle.

R Refer students to the publication United States Standards for Grades of Feeder Cattle available online at www.ams.usda.gov/lsg/stand/st-pubs.htm#Official.

R Have students watch the video Livestock Grading: Feeder Cattle.

O Have students observe cattle from various locations (ranches, feedlots, etc.) and determine their thickness. If students cannot observe actual cattle, have them refer to pictures in breed association and livestock magazines.

OBJECTIVE 19
Evaluate a class of feeder cattle. (Assignment Sheet 3)

R See the general instructions for all Assignment Sheets. (Basic skills for Assignment Sheet 3: critical thinking, employability)

OBJECTIVE 20
Distinguish among common performance data used to calculate EPDs.


O Refer students to the Oklahoma State University Department of Animal Sciences, Animal Sciences Extension website at www.ansi.okstate.edu/exten/beef for EPD information. Publications include:

- F-3159 Expected Progeny Difference: Part 1, Background on Breeding Value Estimation
- F-3160 Expected Progeny Difference: Part 2, Growth Trait EPD’s
- F-3161 Expected Progeny Difference: Part 3, Maternal Trait EPD’s
- F-3162 Expected Progeny Difference: Part 4, Use of EPD’s
OBJECTIVE 21
Interpret an EPD. (Assignment Sheet 4)

See the general instructions for all Assignment Sheets. (Basic skills for Assignment Sheet 4: science, critical thinking, employability)

OBJECTIVE 22
Choose correct responses about the primary desired traits when evaluating beef cattle for production.

Have students look at breed association magazines and online sites for information about beef cattle production. Find out what specific traits the different breeds promote in their cattle.

Invite a cattle producer to talk to the class about desired traits when evaluating beef cattle for production. Another topic that a producer might discuss related to this objective is evaluating replacement bulls.

OBJECTIVE 23
Distinguish between genotype and phenotype.

Review information on basic genetics such as homozygous alleles, heterozygous alleles, and dominant/recessive traits. Discuss why having a basic understanding of genetics is important in cattle production.

OBJECTIVE 24
Select correct responses about choosing replacement animals.

Have students watch the video Breeding Heifer Evaluation.

Refer students to the Oklahoma State University Cow-Calf Corner online at www.ansi.okstate.edu/extern/cc-corner for publications related to replacement heifers. Publications include: How Many Heifers to Keep?, Development of Replacement Beef Heifers, Culling Based on Disposition Helps the Entire Beef Industry, and “Preg” Check and Cull Replacement Heifers Early.

Refer students to the Kansas State University Research and Extension website at www.oznet.ksu.edu/library for publications related to replacement heifers. Publications include: Selection and Development of Replacement Heifers, Proper Heifer Development, and Heifer Development and Management.
Invite a cattle producer to talk with the class about ways that he or she determines replacement heifers.

**OBJECTIVE 25**
Respond to keep/cull scenarios. (Assignment Sheet 5)

- See the general instructions for all Assignment Sheets. (Basic skills for Assignment Sheet 5: critical thinking, employability)

**OBJECTIVE 26**
Research industry and consumer trends in livestock production. (Assignment Sheet 6)

- See the general instructions for all Assignment Sheets. (Basic skills for Assignment Sheet 6: writing, research)

**REQUIRED RESOURCES**
The items marked with an asterisk (*) are included in the Instructor’s Manual.

**Publications**
- *Genetic Strategies for Beef Cow Herds*. The publication is available online at [http://animalscience-extension.tamu.edu/beef/genetics-selection.html](http://animalscience-extension.tamu.edu/beef/genetics-selection.html).

**Videos**
The following videos (VHS) are available from the Oklahoma Department of Career and Technology Education, Stillwater, OK. For ordering information call 800-522-5810.
- *Livestock Judging: Breeding Heifers VideoActive*, AG 7191
- *Practice Feeder Cattle Evaluation*, AG 7314
- *Practice Slaughter Cattle Evaluation*, AG 7316
OPTIONAL RESOURCES
Online Resources

✓ NOTE: Web site addresses were accurate and all content on referenced web sites was appropriate during development and production of this product. However, web sites sometimes change; the CIMC takes no responsibility for a site’s content. The inclusion of a web site does not constitute an endorsement of that site’s other pages, products, or owners. You are encouraged to verify all web sites prior to use.

General Beef Production

- Beef Improvement Federation
  www.beefimprovement.org

- Beef.Org
  www.beef.org

- National Cattlemen’s Beef Association
  www.beef.org

- Oklahoma State University Department of Animal Science
  www.ansi.okstate.edu

- Stephenville Research and Extension Center, The Texas A&M University System
  http://stephenville.tamu.edu

- Kansas State University Research and Extension
  www.oznet.ksu.edu/library

EPD’s

- Beef Improvement
  www.beefimprovement.org


- Oklahoma State University Department of Animal Sciences, Animal Sciences Extension www.ansi.okstate.edu/exten/beef

  Publications include:
  - F-3159 Expected Progeny Difference: Part 1, Background on Breeding Value Estimation
  - F-3160 Expected Progeny Difference: Part 2, Growth Trait EPD’s
  - F-3161 Expected Progeny Difference: Part 3, Maternal Trait EPD’s
F-3162 Expected Progeny Difference: Part 4, Use of EPD's

Replacement Heifers

- Oklahoma State University Cow-Calf Corner
  www.ansi.okstate.edu/exten/cc-corner
  Publications include: How Many Heifers to Keep?, Development of Replacement Beef Heifers, Culling Based on Disposition Helps the Entire Beef Industry, and “Preg” Check and Cull Replacement Heifers Early.

- Kansas State University Research and Extension
  www.oznet.ksu.edu/library
  Publications include: Selection and Development of Replacement Heifers, Proper Heifer Development, and Heifer Development and Management.

Breed Information

- American Angus Association
  www.angus.org

- American Brahman Breeders Association
  www.brahman.org

- American Chianina Association
  www.chicattle.org

- American Gelbvieh Association
  www.gelbvieh.org

- American Hereford Association
  www.hereford.org

- American Maine-Anjou Association
  www.maine-anjou.org

- American Shorthorn Association
  www.shorthorn.org

- American Simmental Association
  www.simmental.org

- Beefmaster Breeders United
  www.beefmasters.org
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Instructor's Manual
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- CharolaisUSA
  www.charolaisusa.com

- International Brangus Breeders Association
  www.int-brangus.org

- My Cattle
  www.mycattle.com

- North American Limousin Foundation
  www.nalf.org

- Oklahoma State University Breeds of Livestock
  www.ansi.okstate.edu/breeds/cattle

- Red Angus Association of America
  www.redangus1.org

- Santa Gertrudis Breeders International
  www.santagertrudis.com

Publications


Videos

The following videos (VHS) are available from the Oklahoma Department of Career and Technology Education, Stillwater, OK. For ordering information call 800-522-5810.

- *Fundamental Livestock Judging*, AG 7189
- *Grading*, AG 7241
- *Grading*, AG 7242
- *Livestock Judging: Breeding Heifers VideoActive*, AG 7191
- *Livestock Judging: Market Steer Evaluation VideoActive*, AG 7190
- *Market Cattle Evaluation*, AG 7251
Introduction to Career Development Events: Animal Science

UNIT REFERENCES

Publications


Introduction to Career Development Events: Animal Science

Beef Cattle

ASSIGNMENT SHEETS

(Answers deleted from this free sample to prevent student access)
**WRITTEN TEST**
(Answers deleted from this free sample to prevent student access)
Check the blank as you complete each step.

1. **TAKE**
   ____
   the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor’s recommendations.

2. **READ**
   ____
   the introduction, unit objective, and specific objectives.

3. **DO**
   ____
   the focus assignments.

4. **STOP**
   ____
   and have your instructor evaluate your work from the focus assignments. After your work has been evaluated, follow your instructor’s recommendations.

5. **STUDY**
   ____
   the Information Sheet, objective 1.

**OPTIONAL: REFER**
____
to Oklahoma State University Livestock Breeds online at www.ansi.okstate.edu/breeds/cattle.

**OPTIONAL: REFER**
____
to breed associations for more specific information on a particular breed. Breed association web sites are given in the suggested resources. The website www.mycattle.com also gives links to some breed associations.

**OPTIONAL: COMPARE**
____
association regulations regarding such items as artificial insemination, award programs, sire evaluation, required reporting, etc.

**OPTIONAL: REFER**
____
to the Beef Production Glossary from the University of Missouri-Columbia at http://muextension.Missouri.edu/xplor/agguides/ansci/g02030.htm or the Beef Improvement Federation’s Beef Performance Glossary at www.beefimprovement.org/BIFFactglos-sary.html for additional terms related to beef cattle.

**OPTIONAL: RESEARCH**
____
the origin of different breeds of cattle. For example, some breeds, such as Angus, Hereford, and Shorthorn, originated in Great Britain. Also research how ranches, such as the King Ranch in Texas, influenced breeds of cattle.


**OPTIONAL: RESEARCH**
breeds not included in this objective such as Texas Longhorn or Red Poll.

**OPTIONAL: REFER**
to online sites applicable to beef production for further information related to this unit. Some examples are:

- Beef Improvement Federation  
  [http://www.beefimprovement.org](http://www.beefimprovement.org)

- Beef.Org  
  [http://www.beef.org](http://www.beef.org)

- National Cattlemen's Beef Association  
  [http://www.beef.org](http://www.beef.org)

- Oklahoma State University Department of Animal Science  
  [http://www.ansi.okstate.edu](http://www.ansi.okstate.edu)

- Stephenville Research and Extension Center, The Texas A&M University System  
  [http://stephenville.tamu.edu](http://stephenville.tamu.edu)

**6. STUDY**
the Information Sheet, objective 2.

**OPTIONAL: INTERVIEW**
a cattle producer about the reasons he or she chose a certain breed.

**OPTIONAL: SELECT**
a breed that you would like to have for a beef production operation. Write a brief paper discussing why you chose the breed. Refer to breed associations for information.

**OPTIONAL: READ**
*Cattle Types and Breeds: Characteristics and Uses.* Available online at Texas A&M at [http://stephenville.tamu.edu/~shammack/L5206.pdf](http://stephenville.tamu.edu/~shammack/L5206.pdf).

**7. DO**
Assignment Sheet 1.

**8. STOP**
and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor’s recommendations.

**9. STUDY**
the Information Sheet, objective 4.

**10. STUDY**
the Information Sheet, objective 5.

**OPTIONAL: LOOK**
at pictures found in breed magazines to help you identify indicators of muscling.
11. STUDY
the Information Sheet, objective 6.

12. STUDY
the Information Sheet, objective 7.

OPTIONAL: USE
breed magazines to collect pictures of animals that have defective legs.

13. STUDY
the Information Sheet, objectives 8 and 9.

14. STUDY
the Information Sheet, objective 10.

OPTIONAL: VISIT
the meat department of a grocery store and observe retail cuts of beef.

15. STUDY
the Information Sheet, objective 11.

16. REVIEW
the USDA classes of slaughter and feeder cattle.

16. REFER
to the publication United States Standards for Grades of Slaughter Cattle available online at www.ams.usda.gov/lsg/stand/st-pubs.htm#Official.

18. WATCH
the video Livestock Grading: Slaughter Cattle.

19. STUDY
the Information Sheet, objectives 12 and 13.

20. REFER
to the publication United States Standards for Grades of Slaughter Cattle available online at www.ams.usda.gov/lsg/stand/st-pubs.htm#Official.

21. WATCH
the video Livestock Grading: Slaughter Cattle.

22. STUDY
the Information Sheet, objective 14.

23. WATCH
the video Livestock Judging: Market Steer Evaluation.

24. DO
Assignment Sheet 2.
25. **STOP**

and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.

26. **STUDY**

the Information Sheet, objective 16.

27. **REFER**

to the publication *United States Standards for Grades of Feeder Cattle* available online at [www.ams.usda.gov/lsg/stand/st-pubs.htm#Official](http://www.ams.usda.gov/lsg/stand/st-pubs.htm#Official).

28. **WATCH**

the video *Livestock Grading: Feeder Cattle*.

**OPTIONAL: READ**

the publication *Feeder Cattle Production and Marketing* available online from Oklahoma State University Cooperative Extension Service at [www.ansi.okstate.edu/exten](http://www.ansi.okstate.edu/exten).

**OPTIONAL: SEARCH**

online sites for information and current prices about feeder cattle, for example, [www.mycattle.com](http://www.mycattle.com) and [www.cattlefeeding.com](http://www.cattlefeeding.com).

29. **STUDY**

the Information Sheet, objective 17.

30. **REVIEW**

information on determining frame size for cattle. Information on frame size can be found in the Beef Improvement Federation's publication *Chapter 3 — Animal Evaluation*. The website for the Beef Improvement Federations is [www.beefimprovement.org](http://www.beefimprovement.org). Other resources for determining frame size include:

- *Frame Score and Weight of Cattle* available online from Texas Agricultural Extension Service at [http://animalscience-extension.tamu.edu](http://animalscience-extension.tamu.edu).

- *Frame Scores and Feeder Cattle Grades* available online from University of Nevada Cooperative Extension at [www.extension.unr.edu/Cattle/framescores.html](http://www.extension.unr.edu/Cattle/framescores.html).

- *Beef Cattle Frame Scores* available online from North Dakota State University.

31. **REFER**

to the publication *United States Standards for Grades of Feeder Cattle* available online at [www.ams.usda.gov/lsg/stand/st-pubs.htm#Official](http://www.ams.usda.gov/lsg/stand/st-pubs.htm#Official).

32. **WATCH**

the video *Livestock Grading: Feeder Cattle*. 
OPTIONAL: OBSERVE
cattle from several various locations (ranches, feedlots, etc.) and determine their
frame size. If you cannot observe actual cattle, refer to pictures in breed association
and livestock magazines.

33. STUDY
the Information Sheet, objective 18.

34. REFER
to the publication United States Standards for Grades of Feeder Cattle available
online at www.ams.usda.gov/lsg/stand/st-pubs.htm#Official.

35. WATCH
the video Livestock Grading: Feeder Cattle.

OPTIONAL: OBSERVE
cattle from several various locations (ranches, feedlots, etc.) and determine their
thickness. If you cannot observe actual cattle refer to pictures in breed association
and livestock magazines.

36. DO
Assignment Sheet 3.

37. STOP
and have your instructor evaluate your work from the Assignment Sheet. After your
work has been evaluated, follow your instructor’s recommendations.

38. STUDY
the Information Sheet, objective 20.

OPTIONAL: REFER
to the website EPD International, Inc. at www.epdinternational.com for publications
and information on EPDs. Publications include The Genetic Evaluation Concept and
How are EPD Accuracies Determined?

OPTIONAL: REFER
to the Beef Improvement website at www.beefimprovement.org for information re-
lated to EPDs. Publications include: Understanding Performance Pedigrees, Utilizing
Performance Information in Beef Judging Events, and Chapter 5 of the BIF Guide-
lines National Cattle Evaluation.

OPTIONAL: REFER
to the Oklahoma State University Department of Animal Sciences, Animal Sciences
Extension website at www.ansi.okstate.edu/exten/beef for EPD information. Publica-
tions include:

- F-3159 Expected Progeny Difference: Part 1, Background on Breeding Value
  Estimation
- F-3160 Expected Progeny Difference: Part 2, Growth Trait EPD’s
39. **DO**
   Assignment Sheet 4.

40. **STOP**
   and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor’s recommendations.

41. **STUDY**
   the Information Sheet, objective 22.

**OPTIONAL: LOOK**
   at breed association magazines and online sites for information about beef cattle production. Find out what specific traits the different breeds promote in their cattle.

**OPTIONAL: INTERVIEW**
   a cattle producer about desired traits when evaluating beef cattle for production.

42. **STUDY**
   the Information Sheet, objective 23.

**OPTIONAL: REVIEW**
   information on basic genetics such as homozygous alleles, heterozygous alleles, and dominant/recessive traits.

43. **STUDY**
   the Information Sheet, objective 24.

44. **WATCH**
   the video *Breeding Heifer Evaluation*.

**OPTIONAL: REFER**
   to the Oklahoma State University Cow-Calf Corner online at [www.ansi.okstate.edu/exten/cc-corner](http://www.ansi.okstate.edu/exten/cc-corner) for publications related to replacement heifers. Publications include: How Many Heifers to Keep?, Development of Replacement Beef Heifers, Culling Based on Disposition Helps the Entire Beef Industry, and “Preg” Check and Cull Replacement Heifers Early.

**OPTIONAL: REFER**
   to the Kansas State University Research and Extension website at [www.oznet.ksu.edu/library](http://www.oznet.ksu.edu/library) for publications related to replacement heifers. Publications include: Selection and Development of Replacement Heifers, Proper Heifer Development, and Heifer Development and Management.

**OPTIONAL: INTERVIEW**
   a cattle producer about ways that he or she determines replacement heifers.
45. **DO**  
   Assignment Sheet 5.

46. **STOP**  
   and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor’s recommendations.

47. **DO**  
   Assignment Sheet 6.

48. **STOP**  
   and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor’s recommendations.

49. **TAKE**  
   the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor’s recommendations.
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INSTRUCTIONS
Write the letter of the answer in each blank provided.

OBJECTIVE 1
Identify characteristics of major breeds of beef cattle.

(Test deleted from this free sample to prevent student access)