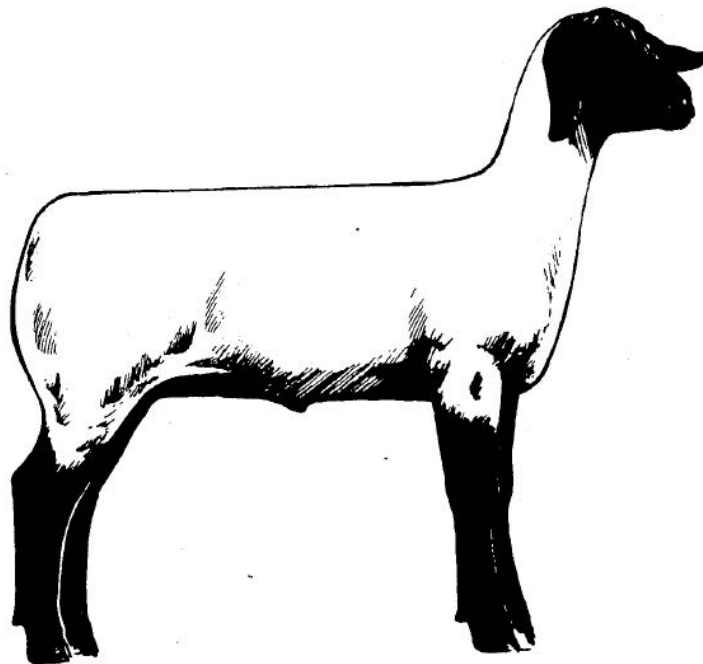


Osceola County 4-H Market Lamb

SKILL-A-THON REFERENCE BOOK
&
JUNIOR SKILL-A-THON ACTIVITIES

2024-2025



UF | IFAS Extension
UNIVERSITY of FLORIDA



	BEEF CATTLE	SWINE	SHEEP
INTACT MALE	BULL	BOAR	RAM
MALE CASTRATED PRIOR TO DEVELOPMENT OF SECONDARY SEXUAL CHARACTERISTICS	STEER	BARROW	WETHER
MALE CASTRATED AFTER DEVELOPMENT OF SECONDARY SEXUAL CHARACTERISTICS	STAG	STAG	STAG
FEMALE THAT HAS PRODUCED PROGENY	COW	SOW	EWE
YOUNG FEMALE WITH NO PROGENY	HEIFER	GILT	EWE
VERY YOUNG PROGENY	CALF	PIG	LAMB

LAMB SKILL-A-THON

Introduction

This manual is provided as a *study guide* for the Skill-a-thon competition and should be used as an additional aid to ongoing educational programs. Sections are labeled **Junior, Intermediate & Senior, & Senior or Bonus** to help exhibitors and educators identify which materials are required for their age level. The topic for this year's Skill-a-thon is **cuts of meat and by-products**.

Topics for the Knowledge and Skills Stations may include the following:

Juniors (age 8-10 as of September 1, 2024)

Body parts
Breeds
Structure
Lamb By-Products
Wholesale Cuts of Meat
Retail Cuts of Meat

Intermediates (age 11-13 as of September 1, 2024)

All of the above

Seniors (age 14 and over as of September 1, 2024)

All of the above plus....
Parts of a Feed Label

Bonus

Knots

The contest will be held on **January 29, 2025, from 2:00 p.m. until 6:00 p.m. at the Osceola County Extension Office.**

The contest will be held on January 29, 2025, from 2:00 p.m. until 6:00 p.m. at the Oscela County Extension Office.

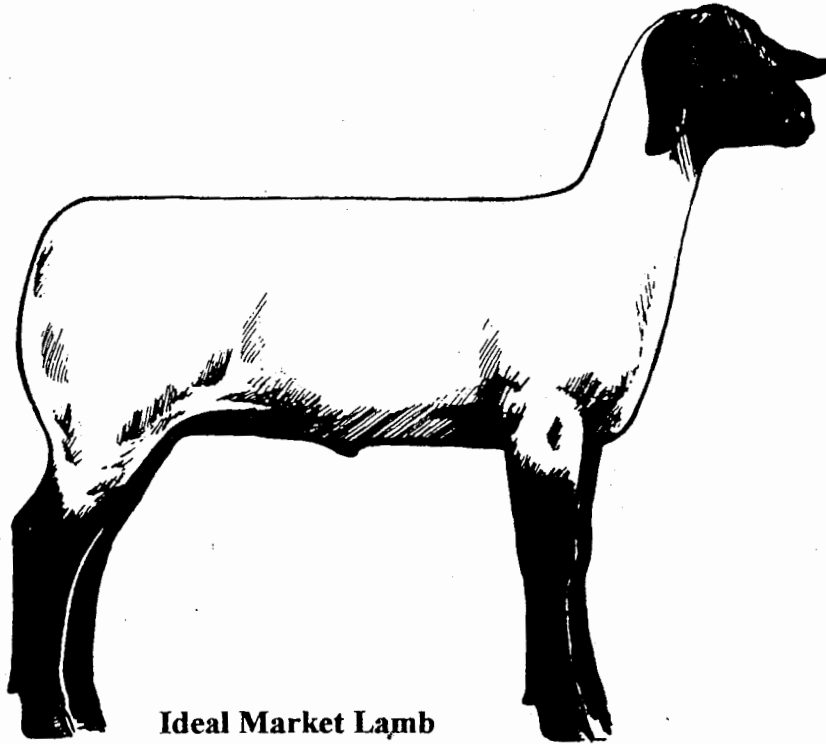
KVLS Skill-a-thon Rules for 2024-2025

1. All market exhibitors must take the Skill-a-thon in their project area for the animal that they are showing in order to participate in the market programs, i.e. steer exhibitors must take the Steer Skill-a-thon. Any exhibitor who does not meet the required grade average on their report card or who does not have a report card must score 70% on the Skill-a-thon to participate in the Market Animal Program.
2. All exhibitors must take the Skill-a-thon for the first time on their own, then a reader can be requested the second time, if a passing grade is not achieved.
3. Awards will be given on the score of the first Skill-a-thon taken. Top awards are only given for passing scores (70% or above).
4. Only those exhibitors who do not make a 3.25 grade point requirement are required to take and make a passing score of 70% or above in order to participate in the market animal program.
5. Exhibitors must stay in the testing room once they have signed up to take the Skill-a-thon.
6. Exhibitors showing a second animal must stay in the testing room to take the second animal Skill-a-thon.
7. No parents or other adults not on the Committee are allowed in the Skill-a-thon room.
8. No exhibitors are allowed to have cell phones while in the Skill-a-thon room.
9. No time limit will be imposed on the exhibitors.
10. Skill-a-thon handbooks will be given at the start of the project.

KVLS Awards

There will be a Junior (8-10), Intermediate (11-13), Senior (14 - graduate from High School) division for the contest. Within each division, 1st, 2nd and 3rd place will receive rosette ribbons and a monetary award.

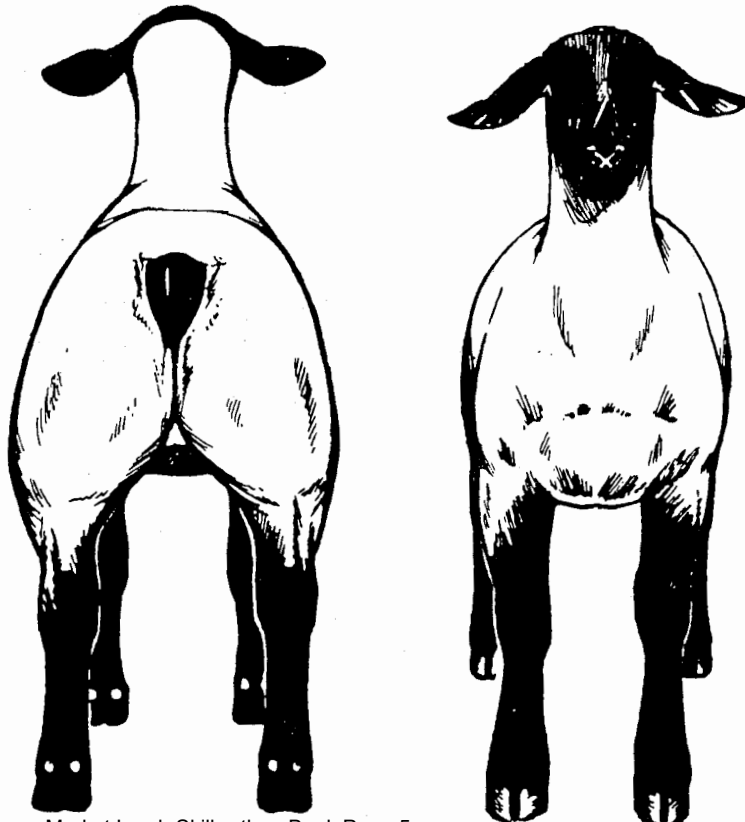
The Ideal Market Lamb



Ideal Market Lamb

- *110-130 pounds
- *has a fat thickness of .10-.20 inches
- *has a dressing percent of 50 percent
- *yields a 55 to 65 pound carcass
- *has a rib eye area of 2.5 to 2.7 inches

Ideal Lamb Views



Evaluation of Market Lambs

Consider these points when judging market lambs: A market lamb's function is for meat production. Therefore, muscling and finish are the two main factors used to evaluate market animals.

Conformation

- An ideal market lamb is one that combines weight and frame, straightness of lines and natural muscling and trimness. The ideal market lamb has adequate frame, is long bodied and is clean and trim throughout the front end and the middle. Look for a strong, level topline. The ideal market lamb should be especially long through the loin and rump (hindsaddle). Lambs should be level in the rump and stand on a sound, structurally correct set of feet and legs.

Finish

- Correct finish is important to determine the cutability (retail value) of a lamb. Finish is the amount of external fat on a lamb. To determine the amount of finish, handle the lamb over the backbone and ribs. Excessive prominence of the backbone and ribs shows a lack of finish. Too much finish is present when you cannot feel the backbone or ribs by normal handling methods. Correct finish is .10-.20 inches of back fat. Desirable traits in regard to finish include:
 - Smooth and uniform fat cover over ribs
 - No excessive fullness in breast
 - A uniform fat cover of .10 - .20 inches
 - Finish or condition is evaluated in the following:
 - Sternum
 - Lower forerib
 - Upper rear rib
 - Over backbone and loin
 - Flank
 - Twist

Muscling

- The ideal market lamb should exhibit extra muscling through its top, hindsaddle and leg. These are the areas from which the high-priced cuts come. Traits are found in a heavy muscled market lamb include:
 - Muscle expression in the forearm
 - Natural width down the top
 - Width, length and depth of loin
 - Width and length of rump
 - Fullness and meatiness through the leg

Handling Market Lambs

- Each lamb should be handled in the same manner. Start at the same point with your fingers extended and together. Check for the amount of finish using the balls of your fingers along the backbone, ribs and flank. Next determine the amount of muscle:
 - Measure the length of the loin from the last rib to the hip bone.
 - The width of the loin
 - The depth and thickness of the loin
 - The width and length of the rump from the hip bone to the dock
 - The length of the hindsaddle (the hindsaddle includes the loin and rump)
 - Determine the amount of muscling in the rear leg by grasping the middle of the leg firmly and slowly sliding your hands down
 - Check the amount of muscling in the forearm.

Expected Carcass Merit

- More than 60 percent of the lamb's value comes from the leg, rump and loin, which are only about 25 percent of the lamb's live weight. The leg, rump and loin make up the hindsaddle. The hindsaddle, because of its value, should be heavily muscled and have the minimum of fat. The muscle is what makes the carcass more valuable.

Structural Correctness

- While it is not emphasized as greatly as it is with breeding sheep, structural correctness is an important selection criteria when evaluating market animals. Look for lambs that are:
 - Standing squarely on front and rear legs
 - Strong and straight in their pasterns
 - Heavier boned

COMMON LIVESTOCK TERMS

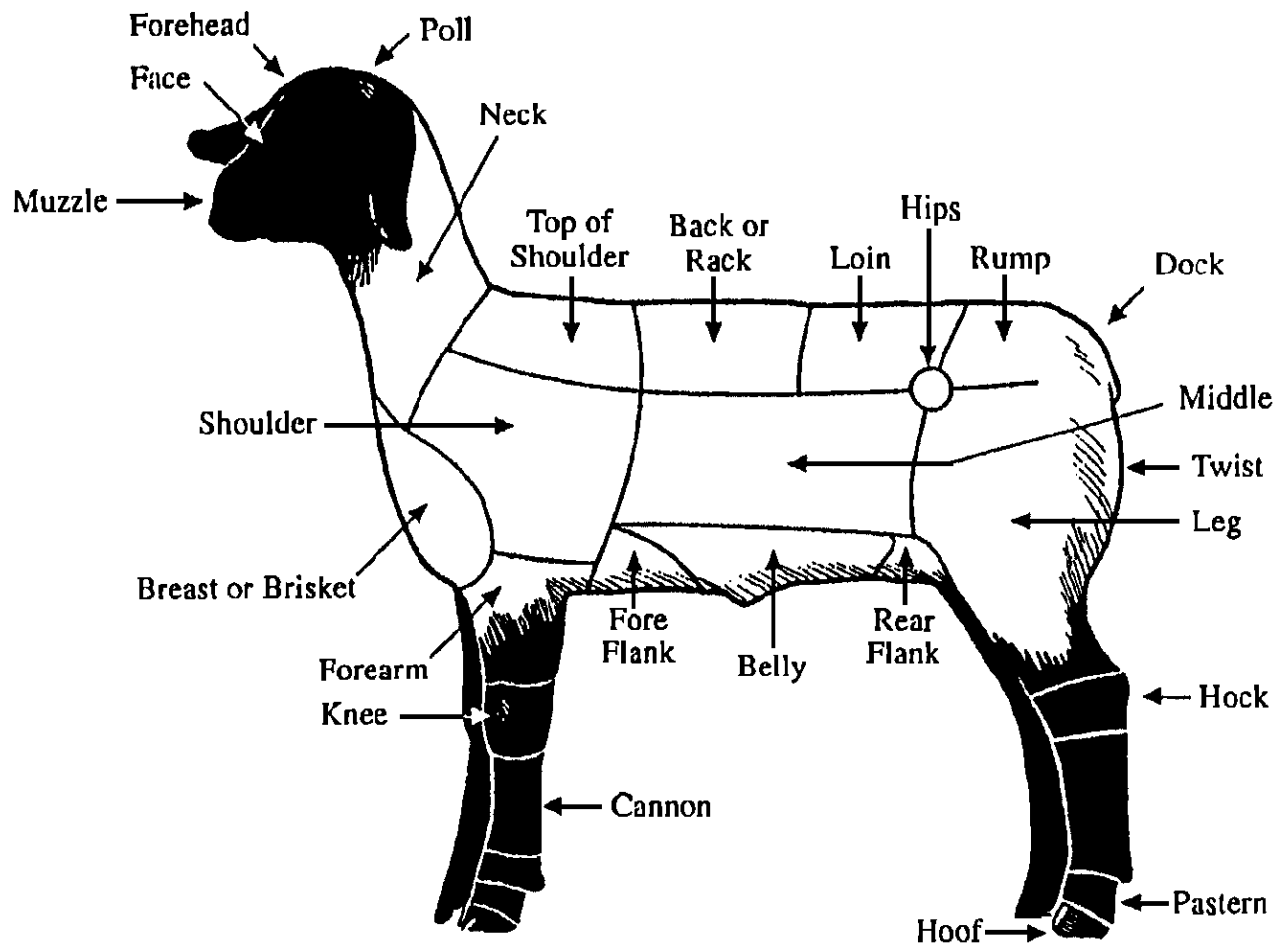
RAM:	Intact male of Sheep
CARCASS:	The dressed body of a slaughtered meat animal, offal having been removed
FINISH:	Refers to the amount of external fat covering on an animal.
MARBLING:	Refers to flecks of fat distributed within the muscle.
MILKING ABILITY:	Refers to the amount of milk an animal can produce
STAG	Male castrated after developing secondary sexual characteristics.
CUTABILITY:	Yield of closely trimmed retail cuts from major wholesale cuts
PALATABILITY:	Agreeable to taste, tasty
POLLED:	Naturally hornless
PARASITES:	Organisms living on other organisms, doing harm.
EWE:	A female sheep
ANIMAL WELFARE:	Refers to proper care and management of animals
RUMINANT:	An animal which has a four compartment stomach
FABRICATION:	Process of cutting lamb carcasses into wholesale cuts
SUB-Q:	Subcutaneous injections (under the skin)

BASIC LIVESTOCK TERMS

1. Condition, Finish or Covering – All are used to denote fat. The terms “finish” and “covering” are used to describe fat on market animals, while “condition” is used when describing breeding stock.
2. Growthiness – The characteristics of having size and weight at a certain age.
3. Balance or Symmetry – A proper proportion and blending of parts of the animal. Balance or symmetry is evaluated from a side view.
4. Ruggedness, Stoutness – The quality of being heavy or large boned. This is usually determined by the size of the cannon bone (from the knee to the ankle).
5. Quality – A general term that combines smoothness and refinement. Refinement of hair coat, freedom of wrinkles in hogs and freedom of roughness, patchiness in cattle indicates quality.
6. Scale – The size of the animal as determined by skeletal structure, independent of weight. The height, length and width of the animal.
7. Style – The general eye-appeal or attractiveness of the animal (includes balance, structural correctness and quality).
8. Broodiness – Female breeding stock term that means she has a favorable combination of characteristics to be a good mother. Depth, capacity, prominence of teats and/or mammary system, stoutness and correctness of vulva.
9. Breed Character – Characteristics that separate breeding stock of one breed from other breeds, primarily by differences of the head: shape, length, dish of face, width of muzzle, shape of poll and ears, color markings and wool covering in sheep.
10. Trimness - Freedom from fat or finish.
11. Meatiness/Muscling – Having a high proportion of muscle in the areas of the high-priced cuts. This is shown primarily by the relative width, length and fullness of the quarter, leg or ham, and by the thickness and fullness through the rib, rack or loin.
12. Type – A combination of characteristics that make an animal useful for a specific purpose. Determined by the general shape and form of an animal. Desirable types are constantly changing.
13. Tight Framed - The ability of the animal to hold itself together. Indicated by a strong top (back), tightness of shoulder and squareness of feet and leg placements.
14. Structural Soundness – The desirability or correctness of the skeletal structure, with major emphasis on straightness of top and proper feet and leg structure.
15. Femininity – Characteristics that distinguish the female from the male. Indicated by refinement of the head, neck and shoulders.
16. Masculinity – Characteristics that distinguish the male from the female. Indicated by boldness or massiveness of head and chest, thickness of the neck and development of the forequarters.

Sheep Body Parts

It is important for livestock producers to share a common language. Using the correct names for various body parts is one way to be certain your message is understood. Study the pictures with the names of the body parts labeled so that you can communicate with other producers using correct terms.



Breeds



Finnsheep- This small to medium-sized fine-boned breed is open faced and produces medium grade, good staple length wool. Reaching sexual maturity early ewes have strong maternal instincts and are very prolific-producing 2 to 4 lambs each lambing.



Shropshire- Originating in England, this medium-sized, dark-faced, polled breed has wool on its head and face. It is prolific, matures early, milk well, and is heavily muscled. Lambs are hardy, fast-growing and produce lean, well-muscled carcasses.



Suffolk- This polled breed with black head and legs has the most number of purebred registrations in the U.S. It is known for its meatiness and high carcass quality. Lambs grow rapidly and produce high cutability carcasses.



Southdown- The oldest breed from England, this sheep is small to medium in size and known for producing meaty carcasses. It is polled, with a gray to mouse brown face and wool on its legs. Fleece from this breed are of medium-wool.



Cheviot- This breed, highly adaptable to a variety of climates, was developed in Scotland. These small-sized, white-faced sheep with bare heads and legs are moderately, prolific, easy lambers, good milkers, and possess excellent lamb vigor.



Dorset- Originating in Southern England, these sheep can be polled, scurred, or horned and are known for breeding out of season, being heavy milkers and producing more than one lamb crop per year. Hardy lambs yield heavy-muscled carcasses.



Corriedale- White-faced breed developed in New Zealand from Lincoln and Leicester x Merino crosses. These medium-sized sheep are prolific, good mothers that produce good market lambs and yield heavy, medium-wool fleeces with good staple length,



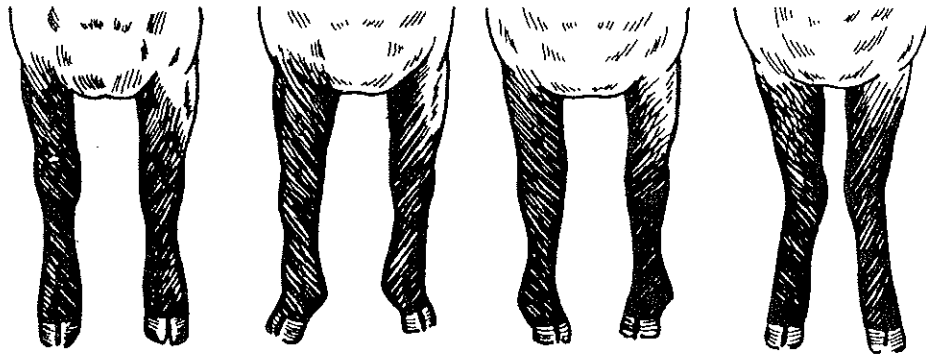
Columbia- Developed in the United States from Lincoln ram x Rambouillet ewe cross and known for its size, wool-producing ability, and productivity under range conditions. This breed is large, white-faced, polled and has wool on the legs.



Rambouillet- Developed in France, this long-lived rugged breed will breed out of season and has wool that is fine in fiber diameter. These sheep are large, white faced, with wool on the head and legs, and can be polled or horned.

STRUCTURAL DIFFERENCES FRONT & REAR VIEW ACTIVITY

Front View



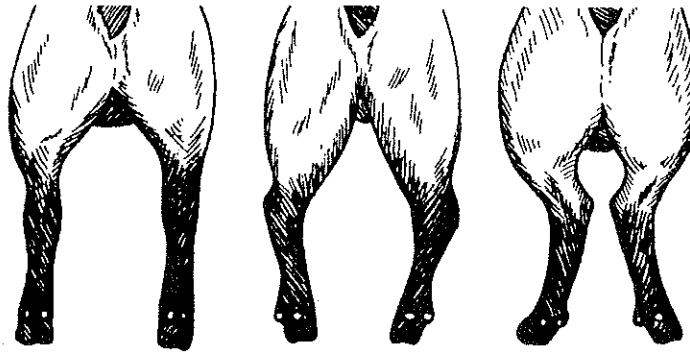
CORRECT

Splay-Footed

Pigeon-Toed

Knock-Kneed

Rear View



CORRECT

Bowlegged

Cow-Hocked

STRUCTURAL DIFFERENCES SIDE VIEWS ACTIVITY

Side View Front Legs



CORRECT



Calf-Kneed



Weak Pasterns



Buck-Kneed

Side View Rear Legs



CORRECT



Sickle-Hocked



Post-Legged

STRUCTURAL DIFFERENCES DESCRIPTIONS

Buck-kneed	When the calf is "over at the knees" or buck-kneed, full extension of the knee cannot occur when observed from the side. This is usually seen in cattle that are also too straight in their shoulder.
Calf-kneed	This is the other extreme, where the calf stands "back at the knees" when viewed from the side.
Weak Pastern	Having an angle greater than 45 degrees in the pastern/h hoof alignment, putting too much pressure on the joint.
Postlegged	The hock has too little angle or set. The calf is too straight through the joint, resulting in very stiff, constricting movement because of the lack of flexibility. More cattle become unsound because of being postlegged than sickle hocked.
Sickle-hocked	When viewing the rear legs from the side, the hock has too much angle or set, causing the steer to stand too far underneath itself. Often these calves also will droop excessively from hooks to pins.
Bowlegged	When viewed from the front or rear, the knees set too far out.
Knock-kneed	When viewed from the front, the knees are close together.
Toed-out (splayfooted)	The feet toe out away from each other. This problem is often seen in extremely light-muscled, narrow-chested cattle, where the legs are naturally set too close together.
Toed-in (pigeon-toed)	Toes turn in towards each other.
Cow-hocked	When viewing the rear legs from the rear, the hocks are turned in or placed too close together.

Animal By-Products

Everything but the baaa! Animal by-products are anything of economic value other than the carcass that comes from animals during harvest and processing. They are classified as edible or inedible for humans. There may be some disagreement about what is edible but we can all agree that there are many uses for what is left after the carcass is rolled into the cooler. In developing countries by-products may become jewelry, religious implements, tools, fuel, construction material, fly swatters, or musical instruments. In developed countries, advances in technology have created many products from non-animal sources (synthetics) which compete with animal by-products, thus reducing their value. Still, byproducts represent multibillion dollar industries in the United States and other developed countries. An added benefit of changing inedible parts of carcasses into useful products is that the decaying materials don't pile up and cause environmental problems.

Hide and Wool

Lanolin
Luggage
Yarns
Art brushes
Clothing
Sport equipment
Tennis balls
Foot wear
Insulation
Felt
Carpet
Ointment base
Fabrics
Baseballs
Upholstery
Carpet
Textiles

Intestines

Sausage casings
Instrument strings
Surgical sutures
Tennis racket strings

Fat and Fatty Acids

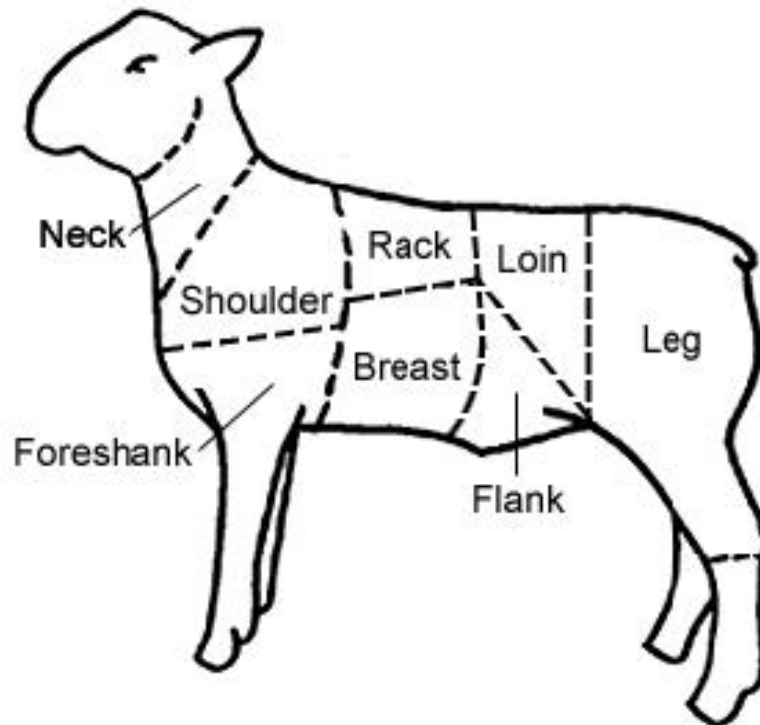
Explosives
Solvents
Chewing gums
Paints

Manure

Fertilizer

Wholesale Cuts of Lamb












Fabrication of carcasses is the cutting of the carcass into wholesale and retail cuts for distribution to various markets. The size of the carcass and the preferences of the customer will determine how it is fabricated. For lamb carcasses, wholesale cuts come from standard cutting methods developed to: a) Separate fat from lean portions b) Separate tough from tender sections c) Separate thick from thin sections d) Separate valuable from less valuable cuts e) Separate retail cuts by cutting across the grain.



Primal Cuts

Of the wholesale cuts, those that are lean, tender, thick, and valuable and that contain a large proportion of their muscles running in the same direction are called primal cuts. The **primal lamb cuts are shoulder, rack, loin and leg.**

(Copied with permission from NCBA, "The Guide to Identifying Meat Cuts")

Shoulder Arm Cuts	 Arm Bone		
Shoulder Blade Cuts (Cross Section of Blade Bone)	 Blade Bone (near neck)	 Blade Bone (center cuts)	 Blade Bone (near ribs)
Rib Cuts	 Back Bone and Rib Bone		
Short Loin Cuts	 Back Bone (T-shape) T-Bone		
Hip (Sirloin) Cuts (Cross Sections of Hip Bone)	 Pin Bone (near short loin)	 Flat Bone (center cuts)	 Wedge Bone (near round)
Leg or Round Cuts	 Leg or Round Bone		
Breast or Brisket Cuts	 Breast and Rib Bones		

Lamb Retail Identification Cuts

Breast



Ribs (Denver Style)

Junior, Intermediate, Seniors

UF IFAS Extension
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Leg



American Style



Center Slice



Frenched Style



Leg Roast (Bnls)



Sirloin Chop



Sirloin Half

Loin



Loin Chop



Loin Roast

Cookery Method



Dry



Dry/Moist



Moist

Rib



Rib Chop



Rib Chop (Frenched)



Rib Roast



Rib Roast (Frenched)

Shoulder



Arm Chop



Blade Chop



Square Cut (Whole)

Various



Shank

Variety Meat Retail Identification Cuts

Heart/ Kidney



Beef Heart



Pork Heart



Lamb Heart



Beef Kidney



Pork Kidney



Lamb Kidney

Liver/ Oxtail



Beef Liver



Pork Liver



Lamb Liver



Oxtail

Tongue/ Tripe



Beef Tongue



Pork Tongue



Lamb Tongue



Tripe

Feed Label Information

A commercial law requires each bag or bulk load to be accompanied by a label showing several key items:

- Net weight
- Product name and brand name
- Drug additives
- Guaranteed analysis of the feed – crude protein, crude fat and crude fiber must be guaranteed on all feeds except straight mineral or vitamin supplements, molasses or drug compounds.
- Minimum percentage of crude protein, percentage of equivalent protein from non-protein nitrogen, if any. The amount of crude or total protein in a feed is guaranteed. Crude protein is determined by multiplying the nitrogen content of a feed by the factor 6.25.
- When non-protein nitrogen (NPN) is applied to feedstuffs, a statement “for ruminants only” must appear underneath the name of the feed. Additionally, it must also have a guarantee for crude protein which has been supplied from non-protein nitrogen.
- Minimum crude fat content – Fat has an energy value approximately 2.25 times the value of carbohydrate feedstuffs.
- Maximum crude fiber content – Crude fiber is a measure of the indigestible or non-useful portion of a feed. Feeds having low fiber values tend to be higher in digestible energy or total digestible nutrients than those feeds having high fiber values.
- Minerals – feeds containing 6.5 percent or more minerals must show a guarantee of: calcium – minimum and maximum; phosphorous- minimum; salt – minimum and maximum
- Vitamins, only if guaranteed
- Common and usual name of each ingredient or the collective term for each grouping of feed ingredients
- Directions for use and cautionary statements
- Name and principle mailing address of the manufacturer

50 lbs net weight

Brand Name Show Feed
(for ruminants only)

Medicated

Feed for 28 days as an aid in the maintenance of weight gains in the presence of respiratory diseases, such as shipping fever.

Caution: Use only as directed.
Discontinue use 14 days prior to slaughter.

Active Drug Ingredients:
Chlortetracycline 7.6 grams/ton

Guaranteed Analysis

CRUDE PROTEIN, not less than 12%

This includes not more than 1.00% equivalent crude protein from non-protein nitrogen.

CRUDE FAT, not less than 2.0%

CRUDE FIBER, not less than 19%

Ingredients: Grain products, roughage products, plant protein products, processed grain by-products, forage products, molasses products, calcium carbonate, salt, vitamin E supplement, vitamin A supplement, ferrous sulfate, potassium iodide, manganese oxide copper chloride, cobalt glucoheptonate, vitamin D3 supplement, sodium selenite.

RUMINANT MEAT AND BONE MEAL FREE

FEEDING DIRECTIONS: Feed at the rate of 12 pounds per head per day.

MANUFACTURED BY:
The Best Feed Company
P. O. Box 00000
Small Town, USA

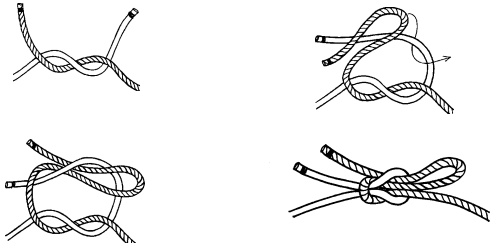
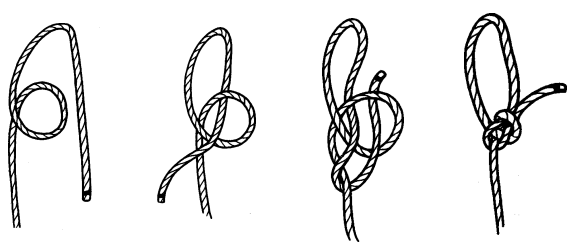
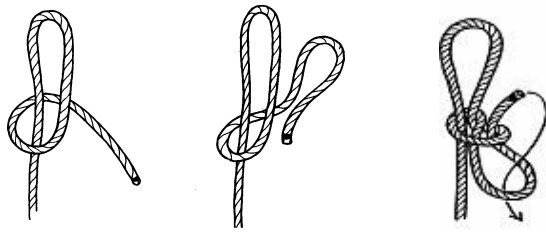
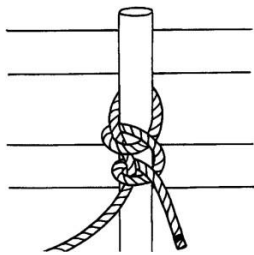
Knots for Livestock Handling

There are many circumstances in cattle handling that will require you to tie knots. Take the time to learn to tie several types of knots and hitches so that you will have the right knot for the right circumstance. Practice often so that it becomes second nature. In an emergency situation, you do not want to have to think about which knot to choose and how to tie it.

Knots join ropes together, attach ropes to a post or rail, or attach ropes to an animal.

Hitches are used to attach a rope to a post or rail - only thing securing the rope to post is the pressure of one rope coil wrapping upon the others.

Splices are used to permanently join ropes to one another - individual strands from each rope are interwoven with strands from the other.

	
<p>Reefer's Knot (<i>Quick-Release Square Knot</i>) A good non-slip knot for tying ends of rope together and can easily be released. An advantage is that it can be tied under tension - an important feature for a knot used to restrain livestock.</p>	<p>Bowline Knot A non-slip knot used to form a loop that will not tighten or draw down when placed around an animal's body or a post.</p>
	
<p>Quick-Release Knot The standard way to tie an animal to a post. A variation of a slipknot that can be released very quickly, even when under tension. This knot should never be tied around the neck or body of an animal.</p>	<p>Double Half Hitch A quick and easy knot which acts like a slipknot and is a convenient way to tie up the end of a rope.</p>

Activities

It is recommended that you complete the six activities provided in this Skill-a-thon book to help prepare you for the Skill-a-thon. **The activities are very similar to what to expect during the Skill-a-thon and can be used for practice.**

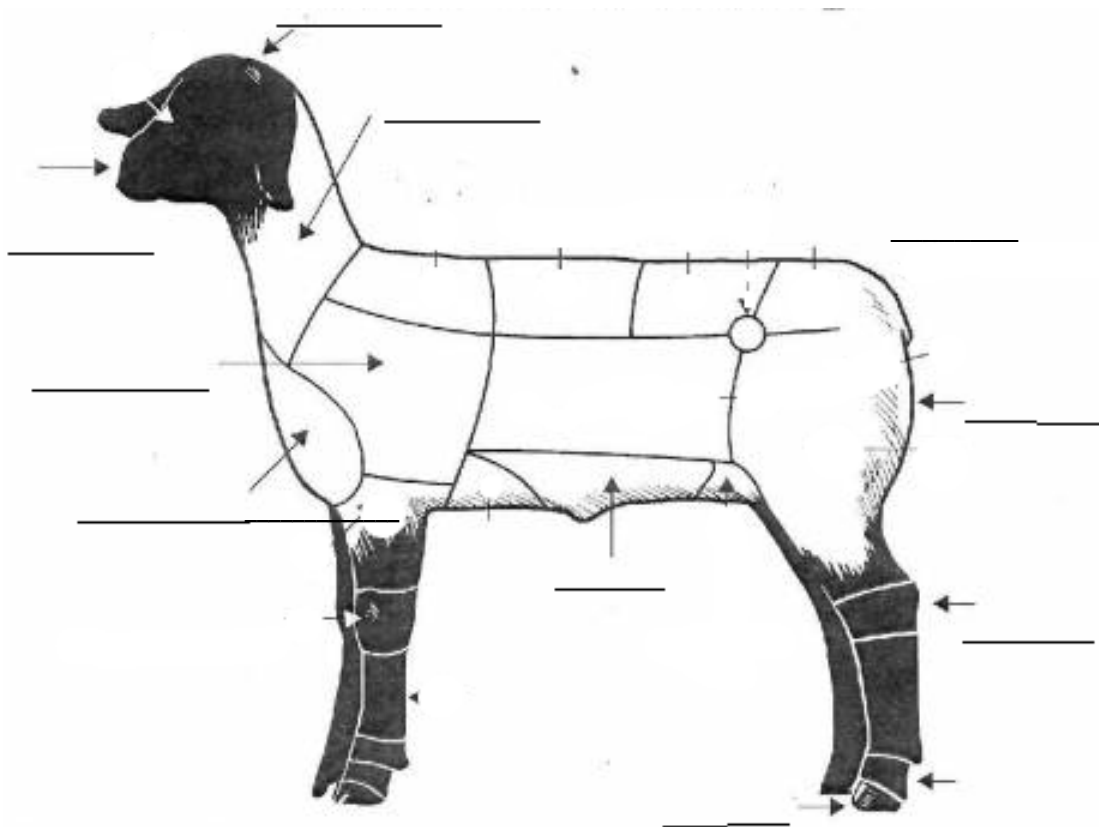
4-H Members Only: After you have completed an activity you should record it in your record book using the table on the 4-H Project Book/ Activities page or you can attach the activity pages you have completed in the record book. Before turning into 4-H in May have your leader sign the Activity Page showing they have seen your six (6) completed activities.

JUNIOR LAMB BODY PARTS

ACTIVITY #1

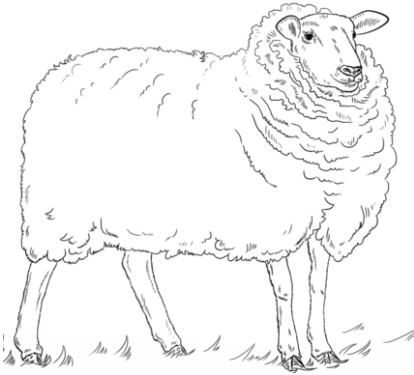
Write in the name below that corresponds to the correct part of the animal.

Poll	Hock
Muzzle	Neck
Shoulder	Belly
Brisket	Leg
Dock	Knee



JUNIOR SHEEP BREEDS ACTIVITY #2

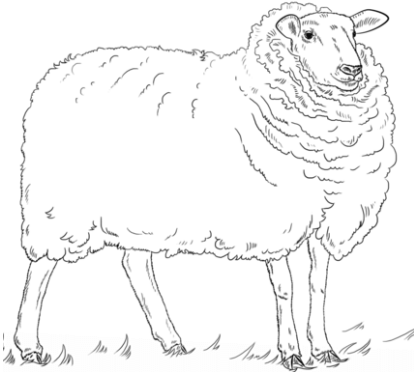
Use the breed pictures in the skill-a-thon book to color in each animal.
List two interesting facts about each breed.



Breed: Shropshire

*

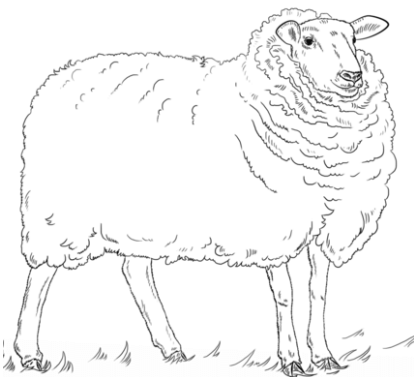
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Breed: Dorset

*

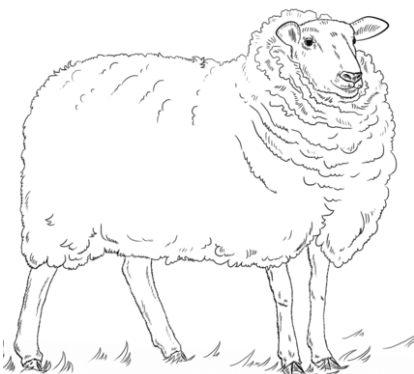
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Breed: Southdown

*

*



Breed: Suffolk

*

*

STRUCTURAL DIFFERENCES SIDE VIEW ACTIVITY #3

Fill in the blank with the correct LEG STRUCTURE

CORRECT

BUCK-KNEED

WEAK PASTERNS

SICKLE-HOCKED

POST-LEGGED

CALF-KNEED

CORRECT

Side View Front Legs



Side View Rear Legs



STRUCTURAL DIFFERENCES FRONT & REAR VIEW ACTIVITY #3

Fill in the blank with the correct LEG STRUCTURE

CORRECT

KNOCK-KNEED

BOWLEGGED

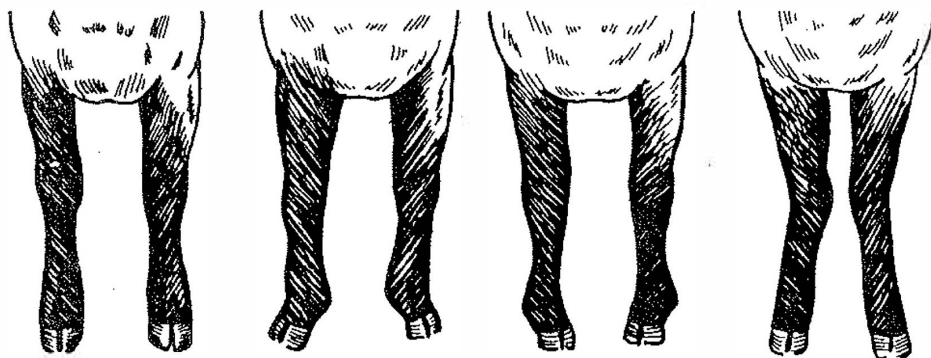
COW-HOCKED

SPLAY-FOOTED

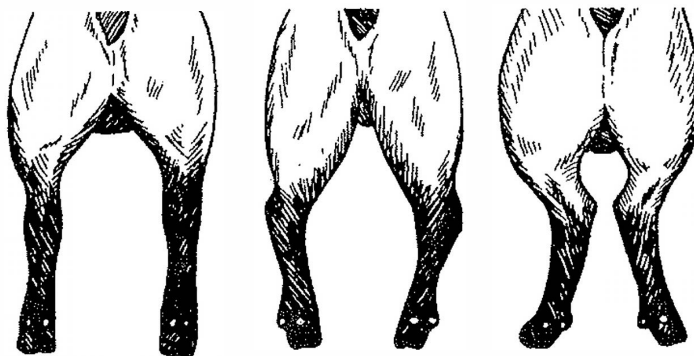
PIGEON-TOED

CORRECT

Front View



Rear View



JUNIOR MARKET LAMB ANIMAL BY-PRODUCT ACTIVITY #4

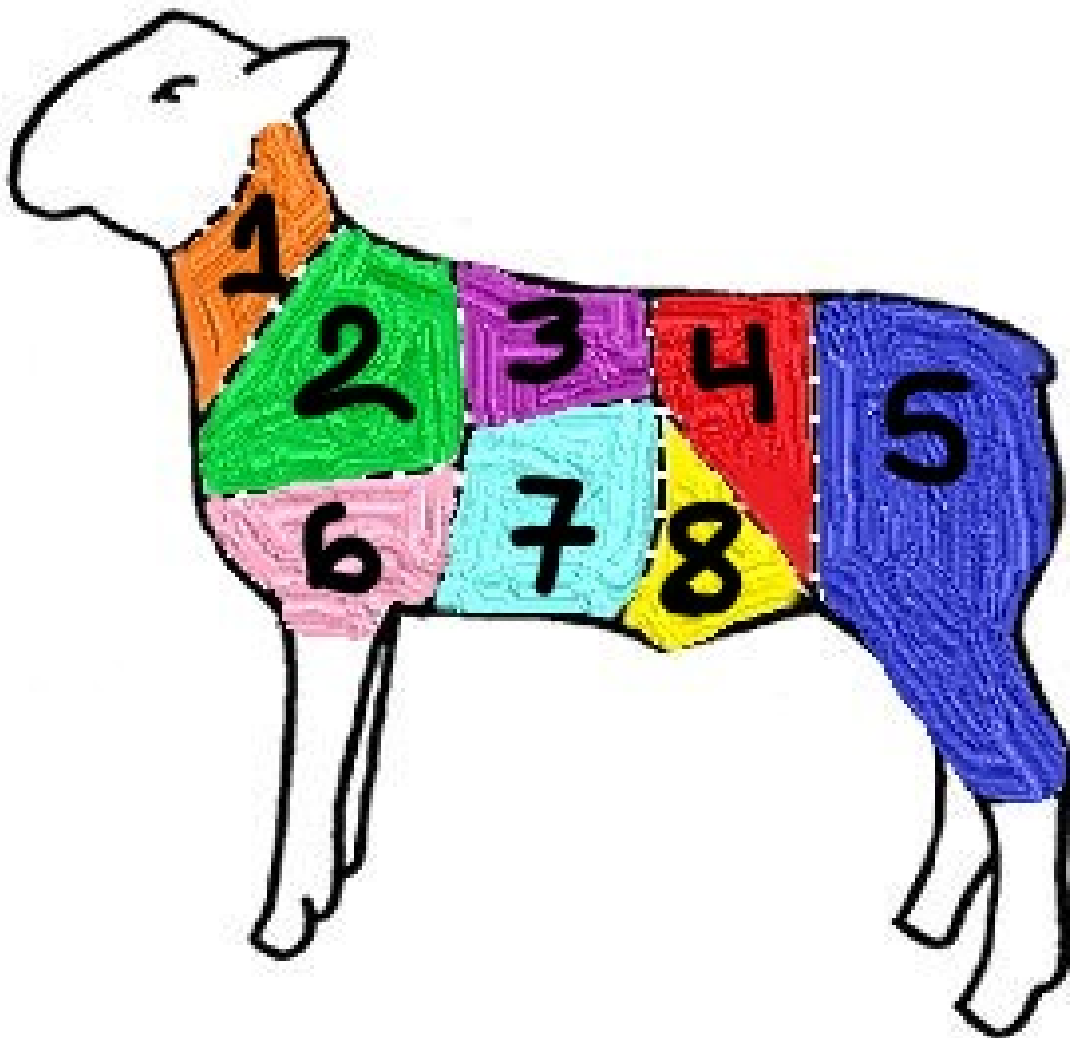
Circle the items below that are lamb by-products.



JUNIOR MARKET LAMB
WHOLESALE CUTS – ACTIVITY #5

Enter the correct number by the corresponding cut of meat

_____ Leg
_____ Loin
_____ Shoulder
_____ Rack



Junior Retail Cuts of Lamb Activity #6

Write the retail cut in the blank.



Retail cut: _____



Retail cut: _____



Retail cut: _____



Retail cut: _____