



# The Proven Protein



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# The Proven Protein

## OVERVIEW

One of the most reminiscent moments of summertime is the smell of food cooking outside on the grill. The thought of a summertime meal is likely to make you excited as you crave the satisfactory taste of steaks, hamburgers and hotdogs galore.

Odds are that you've heard of MyPlate, a guideline provided by the USDA for maintaining a healthy diet. MyPlate suggests that your diet should consist of approximately 30% grains, 40% vegetables, 10% fruits, and 20 % protein. One of the easiest ways to satisfy your protein requirements is to consume a healthy serving of meat!

Meat derived from livestock is packed with amino acids, which help to keep your muscles strong. Protein is found in virtually all parts of your body. Many cuts of beef, lamb, chevon, pork, and poultry come packed with the nine essential amino acids suggested for a healthy diet. This makes meat a great source of complete protein!

**Protein** - vital molecules that are needed to provide strength to all parts of your body; helps to build strong muscles, bones, skin, and blood

**Complete protein** - Protein that has all 9 essential amino acids

**Meat** - food that comes from mammals

**Marbling** - intramuscular flecks of fat that give a steak it's juicy flavor

**Seam fat** - long stretch of stringy, tough white or yellowish fat in a steak

**Exterior fat** - fat found along the outside of the steak

**Intramuscular**- pertaining to something within, or inside, the muscle

**Quality Grade**- refers to to classification of meat regarding the amount of marbling found in the muscle; the four primary Quality grades are Prime, Choice, Select and Standard



# MEATS I.D.

## EXPLANATION

Knowing where your meat comes from is very important, too. Even though your parent or guardian might purchase your food from the grocery store or a local market, your food had to be cultivated and grown before you could actually eat it. Do you know how to choose the best cut of meat for an incredible taste?

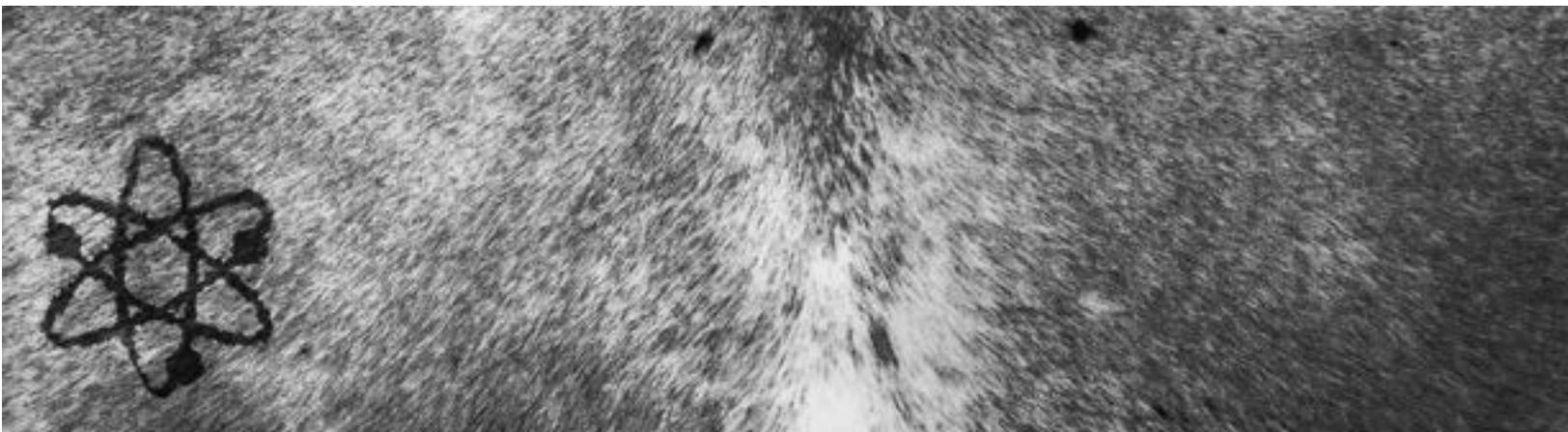
Eating meat is an easy way to meet your body's daily protein needs. When consuming meat, the pink or red color of the cut of meat is where you get your protein from. There are also three types of fat found in beef, pork, lamb and chevon that can make or break your steak, chop or roast!

Marbling is the most important part of a steak. It gives the steak lots of flavor, makes it juicy, and prevents the steak from drying out in the cooking process. Looking at the surface of a steak, marbling is the intramuscular flecks of fat speckled across the cut. Marbling is a good indicator of the quality of a cut of meat.

Seam fat is the long stretch of tough, stringy white or yellowish fat in a steak. It makes your steak hard to eat and chewy. When selecting your cuts of meat, you probably don't want a lot of extra fat.

Exterior fat is the fat found along the outside of the steak. You want a small amount of exterior fat on your steaks because the excess fat has no nutritional gain.

As you review these different cuts of meat, look for the marbling, seam fat, and exterior fat found on the cut of meat. Do you recognize any of these cuts? Have you ever eaten one of these steaks? Be sure to let us know on Microsoft Forms and Flipgrid!



# MEATS I.D. Part 1



**Filet Mignon**



**T-Bone**

# MEATS I.D. Part 2



**New York Strip**



**Ribeye**

# ACTIVITY

## SUGGESTED MATERIALS

Red, yellow, white, and blue colored moldable clay

Plastic knife (if desired)

Paper or plastic plate



## STEPS

Step 1- Create the letter T out of your blue moldable clay. Make your T about half an inch thick and place it onto your plate. The T-bone steak gets its name from the T-shaped vertebra bone in the center of the cut. A T-bone steak is a retail cut of meat, meaning that it is a small cut. It comes from the primal part of the animal called the loin. All meat that comes from the loin region of the animal is tender, tasty and thus the most valuable. A T-bone steak is a type of beef cut, so its wholesale name is beef.

Step 2- Next, use your red moldable clay to create a heart, about half an inch thick and half the height of your T. Once your moldable clay looks like a heart, use your fingers or a plastic knife to cut the heart in half, vertically. Place one of the halves on the right side of your T-bone with the wide brim of the heart on the top. Gently press in the edges until the T-bone and the red moldable clay are touching. The red moldable clay, in this instance, represents the meat in the right side of the cut. This particular muscle is the same cut that makes filet mignon, the most tender cut of meat.

Step 3- Now it's time to make the other half of your steak's meat. Make a rectangle that's half an inch thick and the same length as your T-bone. Place your rectangle on the left side of your T-bone and gently press the rectangle until the red and blue moldable clay touches. Bevel the bottom left edge and taper the right edge into the T-bone. This represents the longissimus dorsi muscle- the same thing as a New York Strip! This is another popular steak that you can find at many restaurants, praised for its tenderness and affordability.

Step 4- What's the most important part of a steak? If you said marbling, that's correct! Pinch off small pieces of white moldable clay and scatter them across both parts of the meat in your steak. Even dispersal of marbling means that your steak will be tender throughout! The more marbling, the tastier your steak will be.



4-H STEM



# ACTIVITY



## STEPS

Step 5- Using your yellow moldable clay, roll out a long, skinny chord, about an inch to an inch and a half long. Place this on the inside of the left side of your meat, in the very top part of the cut. This represents the chewy, tough seam fat.

Step 6- With yellow playdoh, roll out another long chord the same length as your large rectangle. This will represent your exterior fat. Make your chord's width between  $\frac{1}{4}$  inch and  $\frac{3}{4}$  inch. In meat judging, we don't want our steaks to be excessively fat, but they need just enough exterior fat to lock in all the tasty juices released while they're being cooked.

Step 7- Does your steak look tasty? A meal fit for a cowboy? Be sure to show us your T-bone on Flipgrid. Keep your T-bone project handy for our Zoom call on Friday, July 24, as we will be conducting a meat judging discussion over our T-bone creations.

**During the journey your food takes from farm to fork, safety precautions and good practices are enforced by the USDA to make sure that your food is a safe and healthy nutrition source. Your food is safely grown by producers around the world who make feeding you high quality food a priority everyday. Whether you purchase locally grown food, purchase it at a commercial grocery, or even grow your own, getting the right nutrition from healthy food sources and a variety of food groups is very important.**

## Resources and Additional Information

**Meats Judging:** [Texas A&M 4-H Meat Judging Online Training](#), [Texas A&M USDA Quality and Yield Grades](#), and [Virginia Tech Extension](#)

**MyPlate, Food During Crisis, and Food Nutrition Information Center:** [USDA Choose MyPlate](#), [USDA Food and Nutrition](#)

**Safe Handling Procedures:** [USDA Refrigeration and Food Safety](#)

