

# Meat Magic

Using Science and Math to Learn Beef Quality Grades





Graphic from [feasteveryday.blogspot.com](http://feasteveryday.blogspot.com)





Graphic from [sydneymeats.com/au](http://sydneymeats.com/au)





Graphic from [www.tastearkansas.com](http://www.tastearkansas.com)



# Partner Discussion

My steak is (color) and (color).



Another name for the (color) part of my steak is \_\_\_\_\_.

My steak looks like \_\_\_\_\_.

My steak feels like \_\_\_\_\_.





Name \_\_\_\_\_

Color the meat and the marbling of the beef steak.

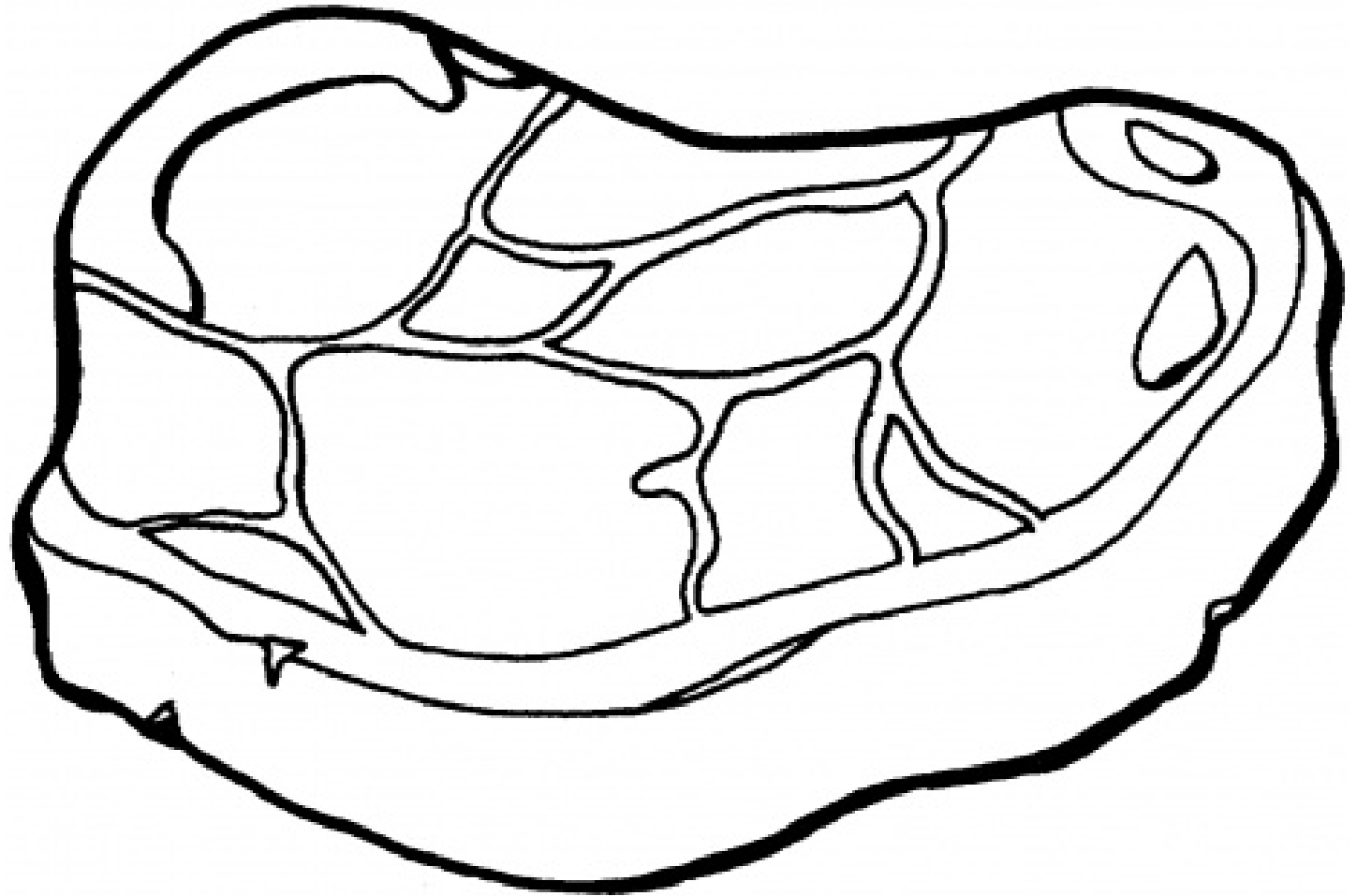
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is a collaborative school enrichment project of the Jefferson Lake, & Lane County 4-H Programs.

### Goals:

Students learn math and science through agriculture.

Students learn about their food and where it comes from.







Source: [www.meat.tamu.edu](http://www.meat.tamu.edu)





Graphic from [www.tastearkansas.com](http://www.tastearkansas.com)





Name \_\_\_\_\_

Count the marbling.

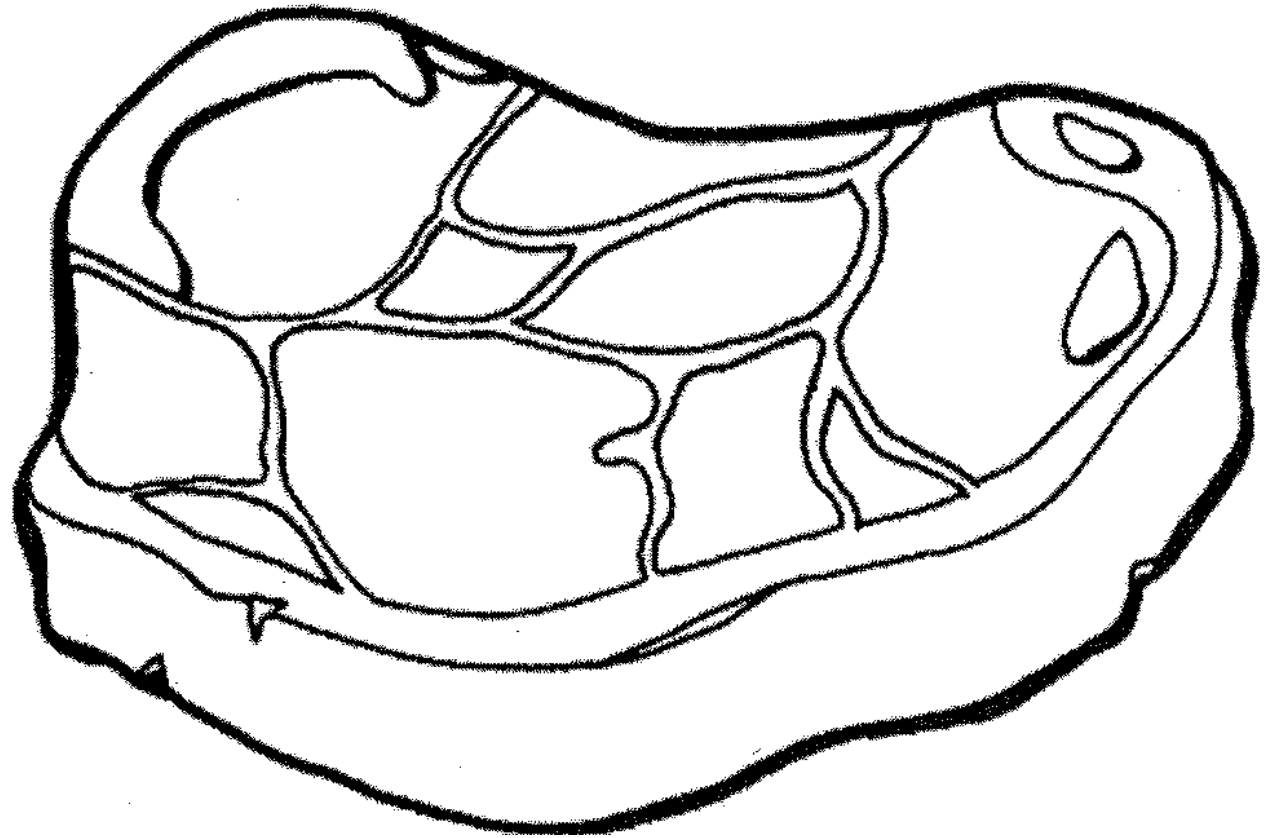
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Pieces of Marbling = \_\_\_\_\_

Beef Quality Grade = \_\_\_\_\_







Name \_\_\_\_\_

Count the marbling.

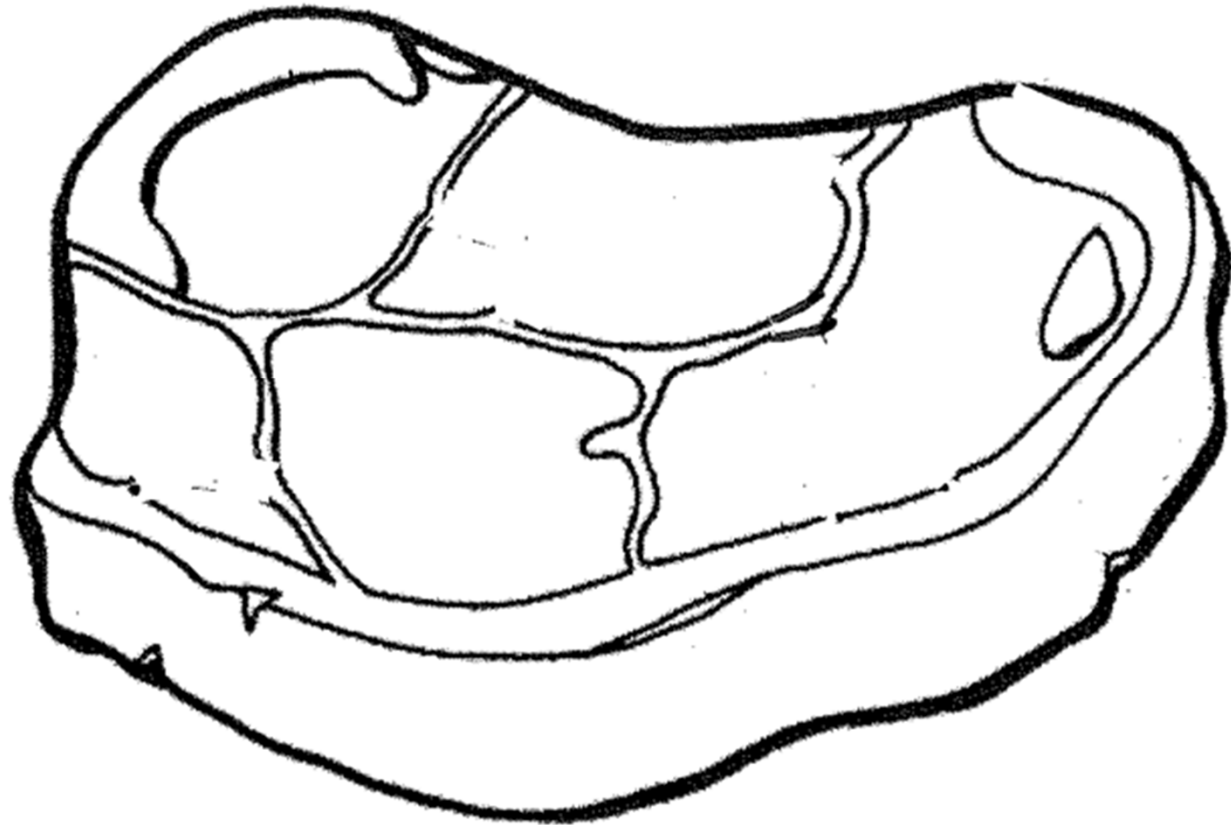
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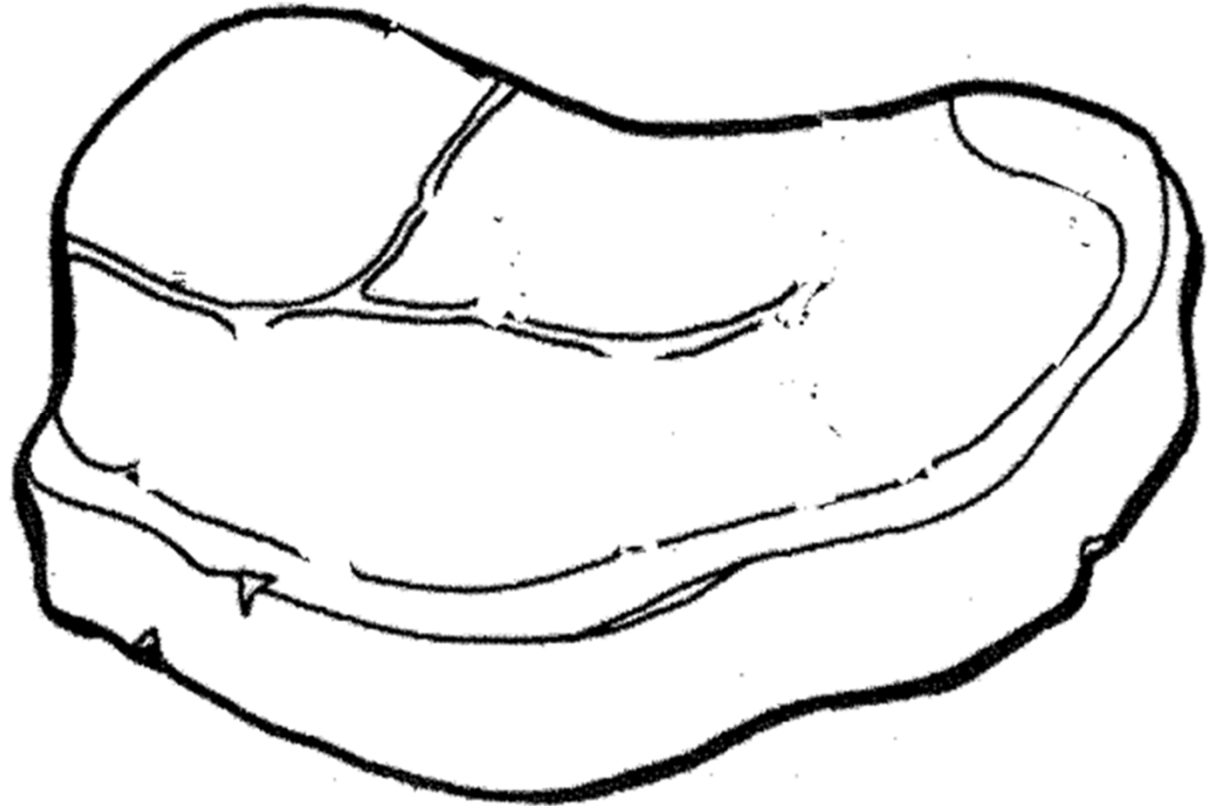
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Pieces of Marbling = \_\_\_\_\_

Beef Quality Grade = \_\_\_\_\_







Graphic from: <http://insights.loloo.com/steaks-101-learn-different-grades-of-beef/>



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Name \_\_\_\_\_

Identify the marbling quantity and quality grade for each steak.  
Marbling Quantity: Abundant (A), Moderate (M), or Slight (S)  
Quality Grade: Prime (P), Choice (C), or Select (S)

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	Marbling Quantity	Quality Grade
Steak #1		
Steak #2		
Steak #3		
Steak #4		
Steak #5		
Steak #6		



1



2





3



4





5



6





# Create A Cookie



# Curriculum Introduction





# Meat Magic

## Lesson 1 – Characteristics

**Grade:** Fourth

**Objective:**

Students will characteristics of a beef steak used to determine quality grade: meat color and marbling.

**Science Standard:**

4.1 Structure and Function: Living and non-living things can be classified by their characteristics and properties.

**Time:** 30 Minutes

**Materials:**

Cooked Steak Picture  
Raw Steaks  
Worksheet  
Meat & Marbling Coloring Page  
Crayons or Colored Pencils

**Oregon Agriculture in the Classroom Library**

**Resources:**

- Available for free check out from [aitc.oregonstate.edu](http://aitc.oregonstate.edu).
- Beef Cattle in the Story of Agriculture
- Cattle Kids: A Year on the Western Range
- Cow
- Cows – A True Book Series

Building Background

1. Cooked Steak Picture
2. If you are eating a very good steak, what word comes to mind?
3. Characteristics of a Delicious Steak: Tender, Juicy, Flavorful

Essential Question

If I am at the grocery store, trying to decide what to have for dinner, can I look at a steak and know whether it will taste tender, juicy, and flavorful?

Activity #1

1. Raw Steaks
2. Activity #1 Worksheet
3. Partners or small groups of students observe a raw beef steak, describe, and record what they see.
4. Each group shares results with the class.
5. Steak is composed of meat and fat.
6. Complete the chart on the board.

	<u>Meat</u>	<u>Fat</u>
Color	Red	White
Appearance (Looks Like)	Sinewy	Bubbly
Texture (Feels Like)	Firm	Squishy
AKA	Muscle	Marbling

Quality Grade

1. Two parts of a steak: meat and fat. Those parts are different colors, appearances, and textures. Does that tell us anything about how the steak will taste?
2. Actually, yes.
3. Meat Color. A good steak will be cherry red. Cherry red steaks come from a beef cow that was 9 to 30 months old. Cherry red steaks will be tender, one of the characteristics of a delicious steak.
4. White flecks in the steak are fat called marbling.
5. Marbling makes steaks juicy and flavorful, the other two characteristics of a delicious steak. The more marbling, the better the steak will taste.



Questions?