



Chapter 6

Meat, Poultry & Fish

Meat, poultry, fish, eggs and beans are all part of the protein foods group. Meat comes from animals, such as cows (beef), pigs (pork), lambs, rabbits, deer (venison) and goats. Chickens, turkeys, ducks, geese and other birds we eat are all called poultry. Catfish, flounder, salmon, crabs and shrimp are all fish. Meat, poultry and fish are full of protein along with other vitamins and minerals.

Enjoy meeting meat!

Hands-On Lessons:

Hamburger Hints **62**

Lean and Fat 63

Try this at Home: Pizza Casserole Please 65

Hot Diggity Dog **66**

Healthier Hotdog 67

Try this at Home: Hot Diggity Dog Soup 69

Something is Fishy **70**

Fish in the Kitchen 71

Oh My! Omega 73

Try this at Home: Super Salmon Patty 74

Proficiency Questions **75**

Hamburger Hints

Did you know not all hamburger meat or ground beef has the same amount of fat?

Hamburgers, sloppy Joes, beef tacos and lots of other foods are usually made with ground beef. **Ground beef** comes from cows, but not all ground beefs are the same. Some are 70% lean and 30% fat. Others are 95% lean and only 5% fat. **Lean** just means without fat. The percent lean plus percent fat always adds up to 100%. The best way to find the percent fat and percent lean is to read the food label.

Knowing the percent fat is important when cooking. As meat is cooked, the fat will melt. The fat changes from a solid to a liquid. The liquid fat is called grease. Normally, the grease is drained off as **waste**. Meats with more fat will have more waste. Choosing meats with less fat leads to less waste and is healthier. Higher fat meats are high in **saturated fat** or “bad” fat. Eating too much saturated fat is bad for your heart. Choosing lower fat meats can help keep your heart healthy.

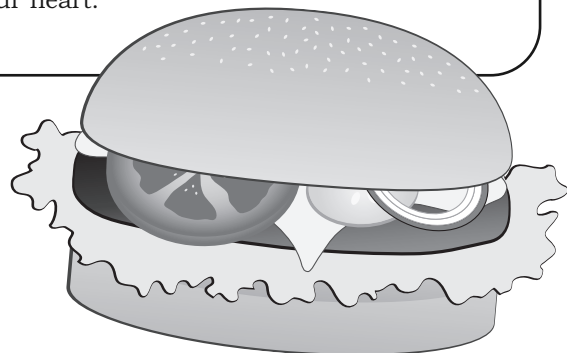
Stay healthy by remembering your food safety too. Wash your hands before cooking and after touching raw meat. Don't forget to sing “Happy Birthday to You” as you wash. Finally, be sure to cook hamburger to 160 degrees Fahrenheit.

DOODLE BUGS

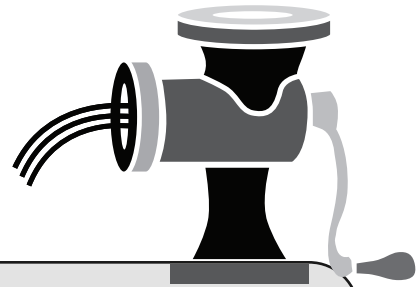
In the reading, underline the meaning of lean.

When you add the percent lean and percent fat you get _____%

Put an X on top of the kind of fat that is bad for your heart.



SCIENTIFIC INQUIRY:
Lean and Fat



Your class will need:

- | | |
|-------------------------|-------------------------------|
| Food scale | Thermometer |
| 4 paper plates | 2 small liquid measuring cups |
| 2 frying pans | 24 plates |
| Double burner hot plate | 1 pound 70% lean ground beef |
| 1-2 spatulas | 1 pound 90% lean ground beef |

1. Weigh the 70% lean ground beef. Weigh the 90% lean ground beef. Write the weights in ounces in the Ground Beef Facts table below.
2. Place the 70% lean ground beef in one frying pan and the 90% lean ground beef in the other frying pan. Heat ground beef over medium-high heat on the double burner.
3. Notice how much the meat shrinks and how much fat or grease is left in the pan. Some extra water may come out of the meat too. Be sure to use your meat thermometer to check if the meat is done.
4. The teacher will carefully pour the waste (mostly fat) from each pan into two separate measuring cups. Measure the volume of the waste in each measuring cup and record in the Ground Beef Facts table below.
5. Use the food scale to measure the weight of each kind of beef again. Record the weight in the Ground Beef Facts table.

Ground Beef Facts

Type of Ground Beef	Weight Before Cooking (ounces)	Weight After Cooking (ounces)	Volume of Waste (cups)
70% lean beef			
90% lean beef			

SCIENTIFIC INQUIRY:
Lean and Fat (continued)

What is the difference in weight of the 70% lean beef before and after cooking?

What is the difference in weight of the 90% lean beef before and after cooking?

Which kind of meat had the most waste?

If you paid \$3.00 for each kind of meat (about 16 ounces), then how much would 1 ounce cost before and after cooking? You may use a calculator to help you solve this problem. Write your answers in the table below.

Cost of Meat Per Ounce

Type of Ground Beef	Before Cooking Cost (1 ounce)	After Cooking Cost (1 ounce)
70% lean beef		
90% lean beef		

SCIENTIFIC INQUIRY: **Pizza Casserole Please**



You will need:

DINNER NIGHT PREP: 15 minutes

1 pound ground hamburger meat	8-ounce can mushrooms (or 3/4 cup sliced fresh mushrooms)
1 onion, chopped	
1 green pepper, chopped	1 1/2 cups mozzarella cheese (low moisture part-skim)
4 cups egg noodles (regular or whole-wheat)	24 slices of pepperoni
2 cups pizza sauce	Help from an adult

Brown meat and freeze for quick use in casseroles, chili and spaghetti!

AHEAD OF TIME:

1. Brown hamburger meat, onions and pepper in a sauce pan.
2. Drain off all the fat by browning thoroughly, running under water and blotting with a paper towel.
3. Freeze cooked meat in small zip top baggies for quick use in ground meat dishes like casseroles, chili, spaghetti and tacos.

1. Cook noodles according to package directions.
2. Mix pizza sauce, browned meat and mushrooms in a pan, warm.
3. Drain extra water off the noodles.
4. Place a layer of noodles in a 2-quart casserole dish. Add a layer of the sauce mixture. Continue layering noodles and sauce mixture.
5. Top with mozzarella cheese and pepperoni.
6. Bake at 350 degrees Fahrenheit for 30 minutes.

SERVING SIZE: 1 cup

Fun Fact

Don't let packaging fool you into thinking other ground meats, such as ground turkey, are always healthier than ground beef. If the ground turkey is 85% lean and the ground beef is 95% lean, the ground beef will be a healthier choice. Read the percent fat and lean on food labels to find healthier choices!

Hot Diggity Dog

Did you know not all hotdogs are the same?

Hotdogs are one of the most popular summer time foods. In fact, they are the most popular snack sold at baseball games. Most Americans eat about 60 hotdogs a year. That is a lot of hotdogs!

Not all hotdogs are alike. Some are 100% beef, while others are a blend of different meats. Your hotdog may be made with **beef**, **pork**, **turkey** and/or **chicken**. Some brands even add bread crumbs, flour or oatmeal. The ingredients and extra spices are all mixed together and squeezed into a skin or casing. After casings are filled, they are cooked in boiling water and then packaged to sell.

Hotdogs can be a tasty meal or snack, but most are high in calories, fat and sodium. Turkey or chicken hotdogs may sound healthier and sometimes are lower in fat. However, be sure to look at the food label. Some turkey and chicken hotdogs might have just as much fat as beef and pork hotdogs. Today, you will learn how to choose a healthier hotdog.

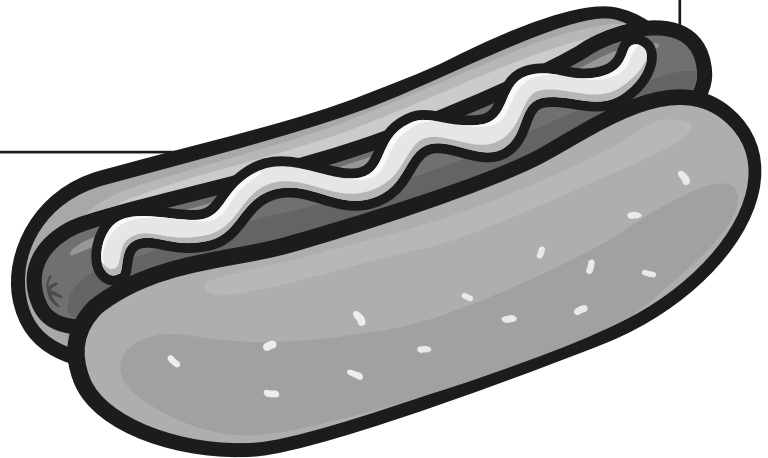
DOODLE BUGS

In the reading, circle the number of hotdogs most Americans eat each year.

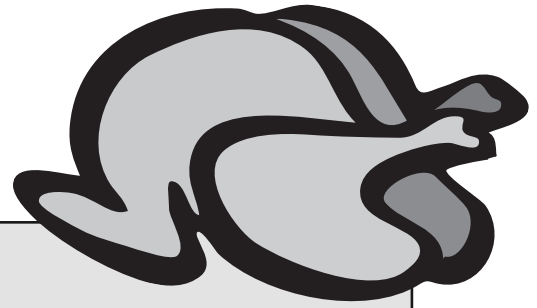
Underline the kinds of meat that may be used in hotdogs.

Draw an X beside why hotdogs aren't the best snack.

What is your favorite kind of hotdog?



SCIENTIFIC INQUIRY: Healthier Hotdogs



Your class will need:

- | | |
|---|----------------------------------|
| 2 large pots | Cost for each package of hotdogs |
| Double burner hot plate | Water |
| Tongs | 1 package regular hotdogs |
| 24 plates | 1 package turkey hotdogs |
| 12-24 copies of food labels for each kind of hotdog | |

1. Fill two pots about 3/4 full of water. Place the pots on the burners and bring the water to a boil.
2. Add regular hotdogs to one pot and turkey hotdogs to the second pot. Boil for about 3 to 5 minutes.
3. Look at the Nutrition Facts labels and fill out the Hotdog Facts table.

Hotdog Facts

Type of Hotdog	Serving Size (grams)	Calories	Total Fat (grams)	Saturated Fat (grams)	Sodium (mg)
Regular hotdog					
Turkey hotdog					

Which hotdog is healthier? (Clue: it should have less fat and sodium.)

SCIENTIFIC INQUIRY:
Healthier Hotdogs (continued)



Cost of One Hotdog

Type of Hotdog	Number of Hotdogs in One Package	Cost of One Package of Hotdogs	Cost of One Hotdog
Regular hotdog			
Turkey hotdog			

Which was more expensive for one hotdog? (Circle one.)

Turkey Hotdog

Regular Hotdog

How many packages of turkey hotdogs would you need to buy to serve everyone in the class one turkey hotdog?

Tasting Time:

Which hotdog tasted the best? (Circle one.)

Turkey Hotdog

Regular Hotdog

TRY THIS AT HOME:
Hot Diggity Dog Soup



You will need:

PREP TIME: 10 minutes

- | | |
|---|---------------------------------|
| 6 low-fat turkey dogs, sliced | 2 cups water |
| 1 tablespoon canola oil | 2 cups low-sodium chicken broth |
| 1 onion, chopped | 2 tablespoons parsley |
| 1 cup celery, chopped | Help from an adult |
| 2 cups carrots, chopped | |
| 15-ounce can cannelloni bean or white beans (don't drain) | |
| 15-ounce can kidney beans (don't drain) | |

Spice up your hotdog's life!

1. In a large stock pan, sauté the hot dogs in canola oil until browned.
2. Add onions, celery and carrots and sauté for 5-8 minutes.
3. Add cannelloni beans, kidney beans, water, chicken broth and parsley. (To reduce the sodium, drain beans and replace bean liquid with water)
4. Bring to a boil. Then reduce heat and simmer for 1 hour.

SERVING SIZE: 1 cup

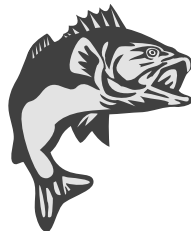
Fun Fact

When selecting and preparing meat, be sure to make choices that are lean, low-fat or fat-free. Use low-fat beef or low-fat turkey dogs for this recipe! One hot dog is equal to 1 or 2 ounces from the protein foods group and 1/2 cup of beans is equal to about 1 ounce. Remember you need about 5 ounces from the protein foods group every day.

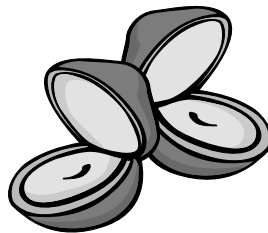
Something is Fishy

Did you know there are different types of fish?

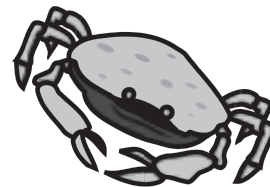
Worldwide people eat more than 1000 different kinds of fish. Fish live in streams, rivers, ponds, lakes and oceans. You can divide fish into two groups called finfish and shellfish. **Finfish** have bony skeletons and include fish like catfish, flounder and salmon. **Shellfish** have soft bodies inside a shell or exoskeleton. Shellfish are divided into two more groups. The first group is called **mollusks**. They have one body section covered by a shell. Clams and scallops are mollusks. **Crustaceans** are the second group of shellfish. They have many body parts surrounded by a hard outer covering called an exoskeleton. Crabs, lobster and shrimp are crustaceans.



Finfish



Shellfish (mollusk)



Shellfish (crustacean)

There are lots of reasons to eat fish. Fish are a good source of protein and healthy fats called **omega-3 fatty acids**. Studies by scientists show that omega-3 fatty acids are good for the heart. Fatty fish like salmon, sardines and herring are high in omega-3 fatty acids. In today's lesson, you will learn how to select fish that are high in omega-3 fatty acids.

DOODLE BUGS

In the reading, circle the two main groups of fish.

Draw a box around examples of shellfish.

Underline the sentence that lists fish that are high in omega-3 fatty acids.

Predict (guess) how many times a week you should eat fish: _____

SCIENTIFIC INQUIRY: **Fish in the Kitchen**

Your class will need:

Mixing bowl	Salmon pouches (6-7 ounces)
1 set dry measuring cups	Light cream cheese
Spoon	Chunky salsa
Fork	Chopped celery, cucumbers or carrots
1-2 table knives	Whole grain crackers
24 plates	

Your recipe for Salmon Spread will only serve 12 students. Let's double and triple the recipe to make sure everyone can try the salmon spread.

Double and Triple Recipes

Single Recipe (1x)	Double Recipe (2x)	Triple Recipe (3x)
Salmon: 1 pouch		
Cream cheese: 4 ounces		
Chunky salsa: 1/4 cup		
Vegetables: 3/4 cup		
25 crackers		

Which recipe will you use? (Circle one.) Single Double Triple



SCIENTIFIC INQUIRY:

Fish in the Kitchen (continued)

1. Pour the salmon into the mixing bowl. Add the cream cheese.
2. Measure the salsa and chopped vegetables. Add to the mixing bowl.
3. Stir the mixture with the fork.
4. Use a table knife to put salmon spread on crackers.
5. Give each student a plate. Then serve two crackers to each student.

Circle your answer:

- | | | |
|---|-----|----|
| Have you ever eaten salmon before? | Yes | No |
| Did you like the salmon spread? | Yes | No |
| Do you think the salmon spread is healthy? | Yes | No |

WHILE YOU WAIT:

Oh My! Omega

Fish are known as heart-healthy foods because of their omega-3 fatty acids. Omega-3 fatty acids are so good for you that experts say you should eat fish two times each week. Try to choose baked or grilled fish more often than fried fish. Find out which kinds of fish are high in Omega-3 fatty acids by reading the table below. Then answer the following questions.

Type of Fish	Average Milligrams of Omega-3 Fatty Acids (in a 3-ounce serving)
Catfish	200
Crabs	450
Flounder	470
Herring	1,770
Lobster	70
Salmon (farmed, wild)	1,830
Shrimp	280
Tuna (canned light)	240

1. Draw a star beside the fish that has the most omega-3 fatty acids.
2. Draw an X beside the fish that has the least omega-3 fatty acids.
3. Kate ate 3 ounces of salmon on Monday and 3 ounces of tuna on Wednesday. How many milligrams of Omega-3 fatty acids did Kate eat?

TRY THIS AT HOME:

Super Salmon Patty

You will need:

- 1 egg
- 2 pouches (6-7 ounces) skinless, boneless salmon (drained and chunked)
- 1/2 cup flour
- 1 1/2 teaspoons minced onions (optional)
- 1-2 tablespoons canola oil (or other cooking oil)

PREP TIME: 5 minutes

Help from an adult

Make fish fun!

1. Break the egg into a large bowl.
2. Add the salmon, flour and minced onion. Stir.
3. Divide the mixture into four parts. Press each part into a patty shape. (Since the mixture contains raw eggs, be sure to wash your hands before and after touching the mixture.)
4. An adult will heat the oil in a large frying pan over medium-high heat.
5. An adult will place the patties in the pan and cook the patties until golden brown (about 3 minutes on each side).

SERVING SIZE: 1 patty

Fun Fact

Fish is a good low-fat source of protein, iron, zinc and of course omega-3 fatty acids. Not only does it give your body good fat, but it is usually lower in saturated fat than beef, pork and poultry. Choose grilled or baked fish more often than higher fat fish sticks and fried fish.



Proficiency Questions

Circle the best answer:

- 1. Your ground meat is 70% lean. What percent fat is the ground meat?**
 - a. 0% fat
 - b. 20% fat
 - c. 30% fat
 - d. 70% fat
- 2. Which ground beef is healthier (has less fat)?**
 - a. 70% lean
 - b. 85% lean
 - c. 90% lean
 - d. 95% lean
- 3. Which statement about hot dogs is true?**
 - a. most hotdogs are high in calcium
 - b. most hotdogs are high in vitamin C
 - c. most hotdogs are high in fiber
 - d. most hotdogs are high in calories and fat
- 4. You have 20 people in your class. There are 8 hotdogs in one package. How many packages of hotdogs will you need to buy to serve everyone one hotdog?**
 - a. one package
 - b. two packages
 - c. three packages
 - d. twenty packages
- 5. What type of fish is salmon?**
 - a. shellfish
 - b. mollusk
 - c. finfish
 - d. crustacean
- 6. Fish are good sources of what type of healthy fat?**
 - a. saturated fat
 - b. omega-3 fatty acids
 - c. trans fat
 - d. none of the above