

# Getting to the Fat of the Matter

Segment 3

## Purpose

To determine which foods contain fat

## Background

Fats are oily substances found in some foods, such as nuts, oils, butter, and some meats. Other foods, such as most fruits and vegetables, do not have any fat. Fat is an essential component to a healthy diet. Fat helps the body grow and develop normally. Fats help give the body energy and the ability to absorb some vitamins. Little children especially need fats to help their brains and nervous systems develop properly.

Although fats are a source of energy (calories), the body stores excess fat that may cause health problems. There are three types of fats: unsaturated fats, saturated fats, and trans fats.

Unsaturated fats are found in foods that come from plants and fish. These fats tend to be beneficial to a healthy heart. Foods with unsaturated fats include olive oil, peanut oil, canola oil, tuna, and salmon. Saturated fats are fats found in animal products. Diets too high in saturated fats can raise blood cholesterol levels and increase the risk of heart disease. Some examples of foods with saturated fats are butter, cheese, beef, and milk (except skim milk). Trans fats are fats that can raise cholesterol and increase the risk of heart disease if eaten in large quantities. Trans fats are fats that are listed in the food ingredient list as hydrogenated or partially hydrogenated. Margarine is an example of a trans fat.

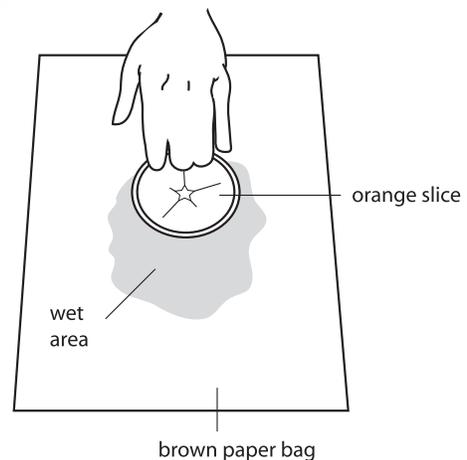
Fats, sugars, and salt (sodium) are represented on the new food guide pyramid with a small yellow band. The United States Department of Agriculture (USDA) recommends that we limit the amounts of fats, sugars, and salt we consume. The USDA also suggests that the majority of the fats in our diet should come from fish, nuts, and vegetable oils rather than from solid fats such as butter or margarine.

When fats are present in food, they leave a greasy streak behind on a piece of paper. When the paper is held up to the light after it has been heated, the light will shine through the paper.

## Procedure

1. Choose a food sample and a square piece of brown paper bag.
2. Using a pen, write the name of the food on the paper bag.
3. Rub the food sample on the piece of paper bag and allow the paper to dry.
4. Hold the paper bag up to the light.
5. Observe and record your observations in your science journal.
6. Repeat steps 1–5 using the remaining food samples.
7. Place the paper bag squares onto a baking sheet and set it in direct sunlight.
8. Allow the baking sheet to sit in sunlight for approximately 15–20 minutes as you monitor the paper bags.
9. Check the paper bags for grease spots and record your observations.

**Materials**  
various food samples  
brown paper bags  
cut into small square  
pieces  
baking sheet  
science journal  
pen



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## Discussion

1. Which foods left a mark on the paper after they were dried? Which did not?
2. Why did some foods leave a mark on the paper while other foods did not?
3. Classify the food samples according to the food groups found on the new food guide pyramid. Which food groups had samples that tested positive for fats?
4. What color on the new food pyramid represents fats? Why is this band so small?

## Extensions

1. Repeat the experiment with other types of foods from each part of the food guide pyramid. Is there a difference between the fat content of the different categories of the food guide pyramid?
2. Research how a diet too high in saturated fats can be harmful to your health. Create a poster to show the health risks associated with fats and ways to reduce the amount of saturated fat in your diet.