



# HOW SAFE ARE OUR FOODS?

**GRADE LEVEL:** 4-5

**SUBJECT:** Health

**NATIONAL STANDARD(S):**  
(4-5) HE: 6.4

**THEME:** Food Safety

**FOOD AND FIBER TOPIC:** V-D,E

## LEARNER OBJECTIVES

The student will explain why the U.S. has an abundant supply of safe food and will recognize safe handling of food at home is the consumer's responsibility.

## VOCABULARY

***anti-bacterial***—Any substance that has the ability to destroy the growth of bacteria.

***bacteria***—Tiny microorganisms which sometimes produce disease.

***consumers*** –People who buy food products.

***food poisoning***—Any sudden painful, intestinal disorder caused by some harmful bacteria that may be found in food products that have not been properly handled, stored or prepared.

***herbicide***—Chemicals used to kill plants.

***organically grown***—Grown with fertilizers and mulches consisting only of animal or vegetable matter with no use of chemical fertilizers or pesticides.

***pesticide***—Any chemical used to kill pests (insecticides for insects, herbicides for weeds, rodenticides for rodents, nematicides for nematodes).

***Salmonella***—Bacteria associated with food poisoning, usually found in raw eggs and poultry products.

## BACKGROUND

Students in the U.S. see televised reports of starving children from third world or less technologically advanced countries. Often, students don't appreciate the abundant supply of safe food available in the U.S. and other developed countries. Americans, in general, sometimes take for granted the well-stocked supermarkets in our country.

A priority of the U.S. government is to provide a plentiful, safe food supply for its people. Government programs help regulate everything from how a farmer applies pesticides or herbicides to the quality of meats.

Thanks to the American agricultural industry, U.S. consumers have many choices. They can buy raw food ingredients or prepared foods such as microwaveable dinners. In many areas, consumers can choose between fruits and vegetables that have been treated to prevent insect damage or organically-grown products. Because of our agricultural productivity and governmental policies, the U.S. has the safest, most abundant food supply in the world.

Consumers, the people who buy the food products, have responsibilities once they purchase the food and take it home. Food must be transported, stored, and correctly prepared to stay wholesome and nutritious.

It is very important to keep food safe and to take precautions to prevent the spreading of germs and bacteria and to reduce the incidence of food spoilage. Thoroughly and properly washing hands after using the restroom and before handling food can help prevent the spread of potentially harmful germs and bacteria. Properly thawing foods in the refrigerator and keeping hot foods hot and cold foods cold will reduce the incidence of spoilage and food related sickness.

Good cooking practices can also help keep food safe. Doing things such as always eating fully cooked hamburgers may prevent food sickness such as the deadly *E.coli.*. Properly and thoroughly cooking chicken can reduce the incidence of the food sickness *Salmonella*. Cooking chicken in the microwave should be avoided as it may not cook the chicken evenly and as a result undercooked chicken may be consumed which may cause food poisoning.

## **STEP-BY-STEP INSTRUCTIONS**

### **Make it safe activity/discussion.**

Discuss with students why it is important to keep food safe and what might happen if they eat spoiled or contaminated food. Discuss the “Bad” practices listed below and ask students to think of ways to correct the **Unsafe** practices and turn them into **Safe** practices.

### **Unsafe Practices:**

1. Not washing your hands after using the restroom.
2. Not washing your hands before working with food.
3. Consuming foods after the date on the package.
4. Thawing foods on the counter top or in the sink.
5. Not putting food back in the refrigerator as soon as possible.
6. Using the same cutting board or knives to cut meat and vegetables.
7. Eating hamburgers that are pink in the middle.
8. Cooking chicken in the microwave or eating undercooked chicken.
9. Using canned foods that have dents or bulges in them.
10. Not rinsing fresh fruits and vegetables.
11. Storing foods next to cleaning products or chemicals.

### **Some potential responses for Safe Practices:**

1. Thoroughly wash your hands with soap and water after using the restroom.
2. Thoroughly wash your hands with soap and water before working with food.
3. Do not consume foods after the date on the package, it may be spoiled.
4. Thaw food in the refrigerator not on the counter top or in the sink where room temperature can accelerate spoilage.
5. Put food back into refrigerator as soon as possible. Keep cold foods and hot foods hot, to reduce incidence of spoilage.
6. Always wash cutting boards and knives with hot soapy water or an anti-bacterial agent to eliminate the growth and spreading of bacteria.
7. Always eat hamburgers that have been completely cooked to be sure that all harmful bacteria (such as *E.coli*) have been killed so incidence of food poisoning is eliminated.
8. Never cook chicken in a microwave, because microwaves may cook food unevenly and as a result, the chicken may not be completely cooked. Always eat chicken that is fully cooked to be sure that all harmful bacteria (such as *Salmonella*) have been killed so incidence of food poisoning is eliminated

9. Never use a can with a dent or bulge in it, dents and bulges may be signs of spoilage.
10. Always rinse fresh fruits and vegetables before eating to remove insect and pesticide residues.
11. Never store foods with cleaning products or chemicals which might leak or spill on the food causing the food to be harmful or poisonous.

## RELATED ACTIVITIES

1. Ask students to think about the market where their family usually purchases food. Is it larger than the classroom? Have students think about all the different food choices in their supermarket. How many different foods are available?
2. Discuss:  
**Corn** frozen canned kernels; canned cream-style; frozen, refrigerated and vacuum-sealed in casseroles and salads, etc.  
**Bread** white, whole wheat, pita, French, hamburger and hot dog buns, hard rolls, etc.  
**Milk** whole, two percent, skim, buttermilk, chocolate milk, whipping cream, etc.
3. Make lists on the chalkboard of the many different ways some foods are available. Why do we have such an abundant supply of food in the U.S.? How are these foods kept safe?
4. Lead the discussion of food abundance and ways which foods are packaged and stored.

## RESOURCES

### *Student Books*

- Berger, M. (1995). *Germs Make Me Sick!*, Harper Collins.
- Brown, Laura Krasny & Marc. (1990). *Dinosaurs Alive and Well: A Guide to Good Health*. Little.
- Nardo, D. (1991). *Germs, Mysterious Microorganisms*. Lucent.
- Parker, S. (1996). *Professor Protein's Fitness, Health, Hygiene, and Relaxation Tonic*, Millbrook.

### *Teacher Resources*

- The American Dietetic Association, 216 West Jackson Boulevard, Chicago, Illinois 60606-6995. 312/899-0040, FAX: 312/899-1979
- Consumer Information Center, Department WWW, Pueblo, Colorado 81009 or Call 719-948-4000 (Monday - Friday, 9 a.m. - 4:30 p.m. Eastern time). Among printed materials available are free booklets and publications regarding food safety.
- Operation RISK--A Food Safety Education Program for Use With Kids. For ordering or other information contact: Pat Hammerschmidt. Family Strengths/Home Economics, Michigan State University, 103 Human Ecology, East Lansing, MI 48824-1030. Phone: 517-355-6586 or Fax: 517-353-6343

### *Related Internet Websites*

San Francisco Children's Science Exploration Museum. Search their site on keyword "bacteria" to bring up several articles and activities from their self-published magazine. <http://www.exploratorium.edu>

The National Food Safety Database. Food Risks: Perception vs. Reality.  
<http://www.exploratorium.edu>

Play It Safe: Goals for Food Safety: Workbooks, activities and lesson plans available from this website. <http://www.foodsafety.org/db/db047.htm>

Food and Nutrition Information Center. The official Ag. Network Information Center that provides extensive information on foods and nutrition.  
<http://www.nal.usda.gov/fnic/>

## **EVALUATION**

Did students gain an understanding of safe food practices? Were students able to recognize the safe practices and the unsafe practices?

## **ACKNOWLEDGMENT**

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