

Taste It or Toss It

Target Audience:

Adults

Topic Areas:

Keeping Germs Out Of My Food

The participants will:

- Discard all foods that have an off odor, mold, slime, changed color and/or foamy or milky liquids on them and cans that are bulging, leaking and/or have dented side or top seams.
- Check expiration dates and/or monitor shelf life to know whether foods are safe to eat. Use a recommended storage time table to decide if refrigerated or frozen food is safe to eat and eat leftovers within 2 days, unless they have been frozen.

Check out: *Home Storage of Foods: Refrigerator and Freezer Storage* at:

<http://njaes.rutgers.edu/pubs/publication.asp?pid=E340> and *Home Storage of Foods Part II: Shelf Storage* at:

<http://njaes.rutgers.edu/pubs/publication.asp?pid=FS274>

- Place foods in the refrigerator within 2 hours of cooking or taking them out of the refrigerator. Note: Place foods in the refrigerator within 1 hour when temperature is greater than 90°F. Keep cold foods and refrigerators between 32°F and 40°F

Taste It or Toss It

Lesson Creators:

Kelly M. Ryan, Amanda Sintes, Andrea S. Smith, Judy Klavens-Giunta, Debra Palmer Keenan

Funding For The Development Of This Lesson Was Provided By:

Fiscal Years 1999 and 2005 New Jersey Food Stamp Nutrition Education Program.
Fiscal years 2007, 2011, 2013, 2014 Supplemental Nutrition Assistance Program Education

Purpose:

The purpose of this lesson is to teach participants when food is safe to eat and when it should be thrown away.

What The Nutrition Educator Needs To Know So That Participants' Questions Can Be Answered:

Foodborne Illness

Even though our food supply is one of the safest in the world, the food you eat can sometimes make you sick. If you practice safe food storage you can keep from getting food poisoning which is also called foodborne illness

Food poisoning can cause:

- nausea
- vomiting
- headache
- fever
- bad stomach pain
- diarrhea
- and even death

The people who are most at risk for food poisoning are children, the elderly and those who get sick very easily.¹ The Center for Disease Prevention and Control (CDC) estimates that every year in the United States, 1 in 6 or about 48 million Americans gets sick from food poisoning. Food poisoning causes 128,000,000 people to be put in the hospital and 3,000 people to die.² Many people have food poisoning and do not realize it. They think that they just have an upset stomach.

Bacteria grow very, very fast between temperatures of 40°F and 140° F. When food is stored or stands out for long periods of time the temperature of the food can easily get between 40°F and 140° F and bacteria can grow very quickly.³ Since bad bacteria cause most cases of food poisoning you want to be sure not to let your food get to a temperature where bad bacteria can grow^{1,4} When foods get old and they do sometimes, bacteria can also grow in them especially if they reach a temperature above 40° and have not been reheated. No food lasts forever. Foods like fruits, vegetables, milk, yogurt, cheese, eggs, meat, poultry and fish spoil more easily than other foods, especially if they are not stored or handled the right way.⁴

Once a food has gone bad, you should not eat it. You should throw it away. You do not want to waste food so you want to do everything you can to keep it fresh for as long as you can. Storing food the right way can help your food last longer, can save you money and keep you from getting sick.

8 Signs that it is Time to Toss It.

Knowing when it is time to trash your food can be hard to tell. Sometimes it is easy to tell that your food needs to be thrown away since it smells bad or it looks different. But, even foods that look and smell fine may be full of bacteria. Learn the signs that food needs to be tossed to keep you and your family safe.

Sign 1

It is time to trash your food if it smells bad. Fresh fish, for example, should not smell. Fish that smells bad or “fishy” should be tossed.⁵

Sign 2

If you see slime, fuzz or a milky or foamy liquid on your food, it is most likely mold. Mold is a living thing that grows on foods like bread, fruits, vegetables, jams, jellies and canned foods when they age.⁶ Molds can be different colors, like green, blue or white. If you eat mold it can make you very sick.⁶ You may only see mold growing on the outside of a food, but mold growth goes deeper than your eyes can see.

Most moldy foods should be thrown away. Foods like hard cheeses and salami can be saved if you cut the mold out. Firm fruits and vegetables, like peppers, carrots and apples can also be saved.⁶ Cut away a large part around the mold on the fruit to make sure that the mold growing below the surface of the food is removed as well⁶

If foods and leftovers have been out of the refrigerator for longer than 2 hours, toss them out! If it is more than 90°F outside, foods will only last 1 hour out of the refrigerator.³ You want to keep food in the bacteria growth zone between 40° and 140° for as short a time as possible. The food may not look or smell bad, but it may be full of bacteria that can lead to food poisoning. For example, if you cooked hamburgers at a picnic and they had been out of the fridge for 2 hours before you cooked them, they should be eaten as soon as possible after cooking. If they hang around too long they will not be safe to eat.

Sign 4

Foods that were left to thaw on the counter should always be tossed because they have been between 40° and 140° for too long and bacteria could be growing in them. There are 3 safe ways to thaw your foods:⁷

- Place the food you wish to thaw in a bowl or pan on the bottom shelf of your refrigerator. This keeps the juices from dripping onto other foods.
- Thaw foods in your microwave on a low or defrost setting.
- Thaw frozen meat, poultry or fish in a bowl of cold water. Change the water every 30 minutes until the food is thawed. Cook the food right away.

Sign 5

Canned foods are great because they last much longer than fresh foods. Acidic canned foods like tomatoes, grapefruit and pineapple will last 12-18 months in the cupboard. Other canned foods like meats, fish and vegetables will last about 2-5 years when stored in a cool, clean, dry place.⁸ Do not store food under the kitchen sink or in direct sunlight.

Watch out for crushed or dented cans. The food inside these cans is safe to eat as long as the cans do not explode, bulge out or leak. If the can is sticky, there could be a leak. If this happens, or if the food inside is moldy, bubbling, has changed color or smells funny, do not taste it—just toss it! Canned foods should not be placed in the freezer. They can swell when frozen and might present health problems. If they accidentally become frozen they have to be thawed in the fridge at a temperature below 40°. If they are thawed at a higher temperature they should be discarded. Never refreeze a thawed can.⁸

Sign 6

To keep your foods good for the longest time, they should be covered and kept in a refrigerator at 40°F or a freezer at 0°F.⁹ You can buy a thermometer that is made for use in a fridge or freezer. Use this thermometer to check the temperature of your refrigerator and freezer.

Even when food is stored in the refrigerator or freezer at the right temperature, it still does not stay fresh forever. Different foods will last different lengths of time in the refrigerator or freezer before they spoil. We said before that many foods may look and smell fine, but bacteria could still be living inside of them. When there are no clear signs that a food has spoiled, the date on the package can help.

Checking the date on foods is a good guide to help you know when to toss it. Foods with an expiration date that has past should always get tossed unless they are kept frozen in a freezer that is 40°F or below.¹⁰ Some of the different types of dates found on products are:

¹⁰

- **Use-by:** the last date you should use a product.
- **Best if used by (or before):** how long a product is at its best flavor or quality.

- **Expiration:** the last day the product should be eaten.

Sign 7

Since it is hard to tell when to give a food the toss if:

- there are no clear signs that it has spoiled;
- there is no expiration date on the package; or
- it has been in the refrigerator or freezer for a long time.

A chart or table that recommends storage times can help. The table below shows you how long some foods keep in the refrigerator and freezer. Keeping a table like this in your kitchen can help you decide when it is time to give foods in your refrigerator and freezer the toss. The storage times start from the day that you buy the food.

Recommended Storage Times¹¹		
Food	Refrigerator (less than 40°F)	Freezer (0°F)
Dairy		
Milk	1 week	1 month
Cottage cheese and ricotta	1 week	Do not freeze
Yogurt	1-2 weeks	1-2 months
Eggs		
Fresh, in shell	4-5 weeks	Do not freeze
Hard cooked	1 week	Do not freeze well
Egg substitute, opened	3 days	Do not freeze
Egg substitute, unopened	10 days	1 year
Fresh Poultry		
Whole chicken or turkey	1-2 days	1 year
Pieces	1-2 days	9 months
Giblets	1-2 days	3-4 months
Cooked Poultry		
Fried chicken	3-4 days	4 months
Cooked poultry dishes	3-4 days	4-6 months
Pieces	3-4 days	4 months
Pieces, covered with broth or gravy	3-4 days	6 months
Chicken nuggets, patties	3-4 days	1-3 months
Fresh Meat		
Steaks	3-5 days	6-12 months
Chops	3-5 days	4-6 months
Roasts	3-5 days	4-12 months

Variety meats- tongue, brain, kidneys, liver, heart	1-2 days	3-4 months
Cooked Meat		
Cooked meat and meat dishes	3-4 days	2-3 months
Gravy and meat broth	1-2 days	2-3 months
Bacon and Sausage		
Bacon	1 week	1 month
Sausage, raw from pork, beef or turkey	1-2 days	1-2 months
Precooked sausage links or patties	1 week	1-2 months
Sausage – Summer labeled “keep refrigerated”	unopened 3 months opened 3 weeks	1-2 months
unopened	3 months	1-2 months
Ham and Corned Beef		
Corned beef	5-7 days	1 month
Ham, fully cooked- whole	7 days	1-2 months
Hot Dogs		
Opened package	1 week	1-2 months
Unopened package	2 weeks	1-2 months
Lunch meats		
Opened package	3-5 days	1-2 months
Unopened package	2 weeks	1-2 months
Fresh Fish		
Lean fish like cod or flounder	3 days	6-8 months
Fatty fish like salmon	3 days	2-3 months
Vegetables		
Beans, shell - lima, fava, soy	2 -3 days in pod & 1-2 days shelled	12 months
Carrots	2 weeks	12 months
Greens – spinach, collards, Swiss chard, kale, mustard, etc.	1-2 days	12 months
Iceberg lettuce	3-5 days	Do not freeze
Jicama	2-3 weeks, uncut	12 months
Tomatoes	2-3 days	12 months
Other		
Vegetable or meat stew	3-4 days	2-3 months

Mayonnaise	2 months	Do not freeze
Frozen dinners and casseroles		3-4 months
Leftovers		
Cooked meat and meat casseroles	3-4 days	2-3 months
Gravy and meat broth	1-2 days	2-3 months
Cooked poultry or fish	3-4 days	4-6 months

You can get a chart with a lot more foods from the Rutgers Cooperative Extension publication site: *Home Storage of Foods: Refrigerator and Freezer Storage* at: <http://njaes.rutgers.edu/pubs/publication.asp?pid=E340> and *Home Storage of Foods Part II: Shelf Storage* at: <http://njaes.rutgers.edu/pubs/publication.asp?pid=FS274>

Raw fruits and some raw vegetables like potatoes and onions can be stored at room temperature. But, once they ripen they will mold and rot quickly. Store ripe fruit in the crisper draw of the refrigerator or freeze it.^{6,12}

Sign 8

If your power goes out, it may be hard to tell which foods need to be tossed. Follow these steps to keep your foods safe to eat.

Keep the refrigerator and freezer doors closed as much as you can. If you do the food inside of the refrigerator should stay safe for about 4 hours. A full freezer will keep food safely cold for about 48 hours. A half full freezer will keep food safely cold for about 24 hours.¹³

Meat, poultry, fish and eggs should be checked with a food thermometer if possible to make sure that they are at or below 40°F. Throw away any foods above this temperature.¹³ If you know that the power is going to be out for a long time, pack milk, other dairy products, meat, fish and eggs in a cooler with ice to avoid spoiling. Foods may be safely refrozen once the power comes back on if they still have ice crystals on them. Throw out any items that have touched raw meat juices and any foods that look moldy, slimy or smell bad.¹³

You can find a handout with a table that tells you what food you can taste and what food you need to give the toss if your fridge or freezer stops working. This handout is called *Help! My Refrigerator or Freezer Stopped Working. Is My Food Safe?* Go to the Rutgers Cooperative Extension publication site at: <http://njaes.rutgers.edu/pubs/publication.asp?pid=FS1178>.

Keeping Your Food Safe

To keep foods in your refrigerator and freezer safe for the longest time:¹⁴

- Try to clean your refrigerator each week. Take all the food out and clean the refrigerator with hot, soapy water. Keep a trash bag near you in case you need to throw out any spoiled foods.

- Do not overfill! When there is too much food in the refrigerator or freezer, the cold air cannot move around. This will cause your food to spoil quicker.

To keep your leftovers safe:^{15,16}

- freeze them if you do not plan to eat them in 3 to 4 days.
- store them in shallow, air-tight containers. A large container can take a long time to cool to the right temperature, and the food may spoil.
- write the date of the day that you made the food on a piece of tape and stick it on the container.
- put them in a place in the refrigerator or freezer where you can see them so you do not forget to eat them soon.

Never taste any food that you think might be spoiled. When in doubt about a food's safety, throw it out!

References:

1. "Causes of Food Poisoning," Food Safety.gov, 2014. At: <http://www.foodsafety.gov/poisoning/causes/>. Retrieved October 2014.
2. "Estimates of Foodborne Illness in the United States," Center for Disease Control (CDC), January 2014. At: <http://www.cdc.gov/foodborneburden/index.html>. Retrieved October 2014
3. "Danger Zone" (40 °F - 140 °F), USDA Food and Safety Inspection Service (FSIS), 2013. at: http://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/safe-food-handling/danger-zone-40-f-140-f/ct_index. Retrieved October 2014.
4. "Foodborne Illness, Foodborne Disease, (sometimes called "Food Poisoning")." CDC, 2014. At: <http://www.cdc.gov/foodsafety/facts.html>. Retrieved October 2014
5. "Fresh and Frozen Seafood: Selecting and Serving it Safely," Food Facts from the US Food and Drug Administration (FDA) 2014. At: <http://www.fda.gov/Food/ResourcesForYou/Consumers/ucm077331.htm>. Retrieved October 2014.
6. "Molds On Food: Are They Dangerous?" USDA FSIS, 2013. At: http://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/safe-food-handling/molds-on-food-are-they-dangerous_ct_index. Retrieved October 2104.

7. "The Big Thaw — Safe Defrosting Methods for Consumers." USDA FSIS, 2013. At: http://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/safe-food-handling/the-big-thaw-safe-defrosting-methods-for-consumers/CT_Index. Retrieved October 2014
8. " Shelf-Stable Food Safety," USDA FSIS, 2014. At: http://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/safe-food-handling/shelf-stable-food-safety/ct_index. Retrieved October 2014.
9. "Basics for Handling Food Safely" USDA FSIS, 2013. At: <http://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/safe-food-handling/basics-for-handling-food-safely>. Retrieved October 2014
10. "Food Product Dating." USDA FSIS, 2013. At: <http://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/food-labeling/food-product-dating/food-product-dating>. Retrieved October 2014
11. "Food Storage Chart." US FDA, 2014. At: <http://www.fda.gov/downloads/Food/ResourcesForYou/HealthEducators/UCM109315.pdf>. Retrieved October 2014
12. "Storing Fresh Fruits and Vegetables for Best Flavor "Source: UC Davis Postharvest Technology from Produce for Better Health-Fruits and Veggies More Matters, 2012. At: http://www.fruitsandveggiesmorematters.org/wp-content/uploads/UserFiles/File/pdf/why/Storing_Fruits_Veggies_FINAL.pdf. Retrieved October 2014
13. "Keeping food safe when the power goes out" 2012. Food Safety.gov at: <http://www.foodsafety.gov/blog/poweroutage.html>. Retrieved October 2014
14. "Refrigerator Thermometers: Cold Facts about Food Safety." US FDA, 2014. At: <http://www.fda.gov/food/foodborneillnesscontaminants/buystoresafefood/ucm253954.htm>. Retrieved October 2014
15. Haines, Tina. USDA Food and Poultry Hotline, November 2012. "The Good, The Bad, The Reheated: Cooking and Handling Leftovers." At: http://www.foodsafety.gov/blog/holiday_leftovers.html. Retrieved October 2014
16. Diane Van, Food Safety Education Staff Deputy Director, USDA Food Safety and Inspection Service, November 21, 2011. "Turkey FUNdamentals: Leftovers." At: http://www.foodsafety.gov/blog/turkey_leftovers.html

For Additional Reading:

“Are You Storing Food Safely?” US Food and Drug Administration (FDA), July 2014,
At: <http://www.fda.gov/forconsumers/consumerupdates/ucm093704.htm>.

“How Temperatures Affect Food.” USDA Food Safety and Inspection Service (FSIS) 2013. At: http://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/safe-food-handling/how-temperatures-affect-food/ct_index!ut/p/a1/jVHvT8IwEP1r2BdS2jk1aNKYBaOIChL8MfZlKey2NRntbG8C_vV2oIkYVNqkubu-1957R2Ma0ViJN5kLjFqJ

Minch, Daryl L., “Home Storage of Foods: Refrigerator and Freezer Storage,” Rutgers Cooperative Research and Extension Fact Sheet FS340, Rutgers University, 2012.
<http://njaes.rutgers.edu/pubs/publication.asp?pid=E340>

Minch, Daryl L., “Home Storage of Foods, Part II: Shelf Storage” Rutgers Cooperative Research and Extension Fact Sheet FS274, Rutgers University, 2012.
<http://njaes.rutgers.edu/pubs/publication.asp?pid=FS274>

Minch, Daryl L., “Help! My Refrigerator or Freezer Stopped Working. Is My Food Safe?” Rutgers Cooperative Extension Fact Sheet FS1178, Rutgers University, 2012

Taste It or Toss It

Main Themes:

Nutrition & Diet

Cooking & Food Storage

Shopping

Budgeting

Safety & Sanitation

Materials Needed:

Activity 1

Chalk or markers and posterboard if blackboard is not available

Taste it or Toss it Answer Key—found at the end of the lesson

Taste It or Toss It cards—found at the end of the lesson—1 per participant—copy front to back and laminate, if you wish to reuse them

Handout:

Food Storage Times Table—found at the end of the lesson—1 per participant—copy front to back

Or you can hand out or supply the links to the Rutgers Cooperative Extension Handouts:

- *Home Storage of Foods: Refrigerator and Freezer Storage* at:
<http://njaes.rutgers.edu/pubs/publication.asp?pid=E340>
- *Home Storage of Foods Part II: Shelf Storage* at:
<http://njaes.rutgers.edu/pubs/publication.asp?pid=FS274>
- *Refrigerator or Freezer Stopped Working. Is My Food Safe?* at the Rutgers Cooperative Extension publication site:
<http://njaes.rutgers.edu/pubs/publication.asp?pid=FS1178>.

Activity 2

Poster board—1 per group

Markers

Small pieces of paper with the numbers 1-4 on them

Hat or small box

Activity 3 (optional)

2 small balloons

2 food thermometers

3 500 mL (milliliter) beakers—see below

500 mL room temperature water (70°F)—you should be able to get water this temperature from a sink or water fountain at the site

250 mL warm water (110°F to 120°F)—you should be able to get water this temperature from a sink at the site if you let the hot water run for a little while

250 mL ice water (below 40°F)—see below

2 flasks or small clear bottles with small openings—like those used in the “Fat-Out” lesson

Note: You may use other glass or plastic containers to do this experiment but they should be a similar size. If you are going to use other containers you must try the experiment in the office before you try it at your site.

¼ cup sugar

¼ ounce package dry yeast

Spoon

Masking tape

Marker

Preparation Needed Prior To Lesson:

Activity 3 (optional)

1. Fill up a bottle with water and place it in the freezer the night before the lesson. Take it out of the freezer a few hours before the class to thaw. Check the temperature with the thermometer to make sure that it is 40°F or below.
2. Blow up the 2 balloons with air to stretch them and then deflate them.
3. Rip off 3 pieces of masking tape. Using a marker, write “mixing beaker” on 1 piece of tape, “ice water” on 1 piece of tape and “warm water” on the last piece. Place 1 on each of the 3 beakers.

Time The Activity Is Expected To Take:

Before You Begin: 2-5 minutes

Activity 1: 15 - 20 minutes

Activity 2: 15 - 20 minutes

Activity 3: 15 - 20 minutes

Next Week’s Goals: 5 minutes

Taste It or Toss It

Lesson Plan:

Before You Begin: (2 - 5 minutes)

1. Ask the participants if they worked on their goals from the last lesson. Ask them which goals they worked on and how or what they did to work on them. Try to get people to tell the class what they did. If they did not work on their goals, ask them to work on them before the next class.
2. Tell the participants what the objectives are for today's lesson.
3. Fill the mixing beaker with 500 mL of room temperature water. Use the food thermometer to make sure that the water is about 70°F. Fill the ice water beaker about half way with the bottle of water you had in the freezer. Use the food thermometer to make sure that the water is 40°F or below. Fill the third beaker about half way with warm water. You should be able to get water this temperature from the faucet if you let the hot water run for a little while. Use the food thermometer to make sure that the water is between 110°F and 120°F.
4. Set up all of the supplies for the experiment in Activity 1 in the front of the room. You will want to get started as soon as possible so that the temperature of the water stays at the correct range.

Activity 1: Taste It or Toss It (15 - 20 minutes)

1. Ask the class if they can tell that a food has gone bad just by looking at it or smelling it. If so, ask how they can tell.

Answers may vary. If participants do not mention these, be sure to tell them that you can tell that a food has gone bad if it:

- *smells bad;*
- *is slimy;*
- *has changed color;*
- *is leaking or bubbling out of a dented can;*
- *has a milky, foamy or fuzzy growth on it. This is known as mold.*

2. Ask the participants if they think that it is easy to know that a food has gone bad.

Wait for them to answer and then:

Tell the class that sometimes a food goes bad and does not smell or look bad or have any other signs that it has gone bad.

3. Ask them if they can think of any ways to tell if a food has gone bad if there are no obvious signs like a bad odor or a change in color.

Answers will vary

Ask the class if anyone has ever looked at the expiration date on the package of a food. Checking the date on foods is a good way to see when experts recommend that you throw them away. Expired foods should always get tossed unless they are kept frozen in a freezer that is 0°F or below.

3. Pass out a **Food Storage Times Table** handout to each participant. Tell the class that this is another way to tell if a food has gone bad. Show the class how to read the table. The right column tells you how long foods are safe to eat when they are kept in a 0°F freezer. The middle column tells you how long foods are safe to eat when kept in a refrigerator that is below 40°F. Tell the class that the storage times start from the day that you buy the food. Also tell them that refrigerator temperature should always be below 40°F to keep food from spoiling. Tell them they can get an inexpensive thermometer made to go into the refrigerator so they will know what the temperature is.
4. Tell the **class that you are going** to play a game. Pass out a Taste/Toss card to each participant.
5. Read the description of the first food on the **Taste it or Toss it Answer Key** found at the end of the lesson. Tell the class that if they would eat the food, they should hold up the side of the card that says taste. If they think the food is unsafe to eat and they would throw it out, they should hold up the side of the card that says toss. Encourage them to use their storage charts as cheat sheets.
6. Once everyone has raised their taste/toss card, ask a few participants why they think the food can be tasted or why it needs to be tossed. Tell the class the correct answer, which is listed below the name of the food on the **Taste it or Toss it Answer Key**. Repeat this for each food.
7. Ask the participants if they were surprised by any of the answers. Ask them if they felt that the Recommended Storage Times handout was helpful. Ask them if they would be willing to use it at home when they need to decide whether to taste or toss their foods.
8. Tell the participants that if they are ever in doubt about how old a food is or if the food is safe to eat then it is best to throw it away to be safe.

Activity 2: Fight FBI! (15 - 20 minutes)

1. Split the class into 4 groups. Tell each group to pretend that they work for a health agency that wants to teach people about food safety and when it is time to throw their foods away.
2. Fold up the papers with the numbers on them and place them in the hat or box. Ask each group to draw a number from the hat or box. Assign them the food below that matches the number they pick.
 - 1- foods that have been in the refrigerator since the power went out 4 days ago
 - 2- leftovers that have been out of the refrigerator for longer than 2 hours
 - 3- leftovers that have been in the refrigerator for 10 days
 - 4- meat that was left on the counter to thaw overnight
3. Pass out a piece of poster board and markers to each group.
4. Tell the groups to think about the foods that they were assigned. Give the groups 10-15 minutes to design a poster that would convince other people to toss, not taste, the foods.
5. Ask each group to have 1 person present their poster to the class.

Activity 3: FBI Experiment (20 - 25 minutes)

This activity was adapted from the Partnership for Food Safety Education's "Yeast Balloon Blow-up," www.fightbac.org.

1. Tell the class that you are going to be doing an FBI experiment. For the purpose of today's lesson, FBI stands for foodborne illness. Ask the class if they remember what we said causes FBI.

If no one answers remind the class that harmful bacteria are to blame for most cases of FBI. Just like us, foods age. When food ages, bacteria may grow. Bacteria may also grow when foods are not stored or handled the right way.

2. Show the class the package of yeast. Tell them to pretend that the yeast is harmful bacteria in the experiment they are about to see. Although yeast is not harmful, it grows the same way that bacteria do.
3. Pour the sugar into the water in the mixing beaker and stir it with the spoon until it dissolves. Add the yeast to the sugar water. Stir **gently** to dissolve it. Do not over-stir.

4. Pour half of the sugar, yeast and water mixture into each flask. Carefully stretch the balloon openings to fit over the openings of the flasks.
5. Place 1 flask in the warm water beaker and 1 in the cold water beaker. Make sure that there is just enough water in the beakers to cover the yeast mixture in the flask. Dump some water out if needed.
6. Wait about 5 minutes. While you are waiting, ask the class if they or someone they know has ever had FBI. Ask them what symptoms they had.

Answers will vary. FBI may cause nausea, vomiting, headache, fever, bad stomach pain, diarrhea and sometimes death.

7. Remind the class that no food lasts forever, but perishable foods, foods that spoil more easily than others will spoil faster if they are not stored the right way. Ask the class if they can think of some foods that spoil more easily than others.

Fruit, vegetables, milk, yogurt, meat, poultry, eggs, cheese and fish are examples of perishable foods.

8. After 5 minutes has passed, ask the class to look at the bacteria in the warm water and the bacteria in the ice water. If the balloon in the warm water blew up, ask the class the questions below. *Note: If the experiment does not work, go through the questions below and share the answers with the class to explain what should have happened.*

- What happened to the bacteria in the ice water?
The bacteria (yeast) did not grow and the balloon stayed the same size or close to the same size.
- The temperature of the ice water is 40°F. Experts recommend that you keep foods that spoil easily in a refrigerator at that temperature or lower. Why?
Keeping those foods in a refrigerator at 40°F or less will slow down how fast the bacteria grow. Remember that bacteria grow really fast above 40°F and 140°F So keeping them at 40°F or less will keep your foods safe to eat for longer.
- What happened to the bacteria in the warm water?
The bacteria (yeast) grew, which caused the balloon to blow up.
- What does this mean for foods that are left out of the refrigerator for a long time?
When foods and leftovers are not kept cold, bacteria may grow in them and cause FBI if eaten. The longer food is kept out of the refrigerator or freezer, the more bacteria that will grow.

9. Ask the class how long they think foods are safe out of the refrigerator.

Answers will vary. Tell the class that foods should not be left out of the refrigerator or freezer for longer than 2 hours. If the temperature outside is greater than 90°F, the food should be placed in the refrigerator or freezer within 1 hour.

10. Ask the class what they think they should do with a food that was left out of the refrigerator or freezer for longer than 2 hours or longer than 1 hour on a 90°F or hotter day.

Do not taste it, just toss it! The food may not look bad, but it may be infected with bacteria and could lead to FBI if eaten.

11. Now that they have seen how fast bacteria can grow in food that is left out of the refrigerator or freezer, ask the class if they would be willing to put foods away in the refrigerator or freezer within 2 hours or within 1 hour if it is 90°F or more outside.

Next Week's Goals: (5 minutes)

1. Ask the participants to name 1 thing that they learned in today's class that they will use. Make sure that each learning objective is mentioned, and if not, be sure to re-state that objective. Remind them to work on meeting their new goals they set today before the next class. Let them know that they will be asked what changes they made at the next class.
2. Invite comments, suggestions, or questions.
3. Thank the participants for coming and tell them what the next lesson will be about.

For The Teacher: What Makes This Lesson Behaviorally Focused?

- Activity 1 is behaviorally focused. Participants are asked if they would taste or toss certain foods. They are also asked if they would be willing to use a recommended storage times table in their homes so that they know when to throw foods away.
- Activity 2 is behaviorally focused. The participants use what they have learned to teach others why it is important to throw away spoiled foods.
- Activity 1 is behaviorally focused. Participants are asked if they would be willing to put foods away in the refrigerator or freezer within 2 hours or within 1 hour if it is 90°F or more outside.



NJ SNAP-Ed
NJ Supplemental Nutrition Assistance Program-Education
USDA, Food and Nutrition Service



This material was funded by USDA's Supplemental Nutrition Assistance Program (SNAP). To apply for SNAP, call or go to your local SNAP office. In NJ apply online at: www.NJHelps.org; or to learn more go to www.fns.usda.gov/fsp. USDA is an equal opportunity provider and employer.

To Apply for SNAP visit www.njsnap.org

Cooperating Agencies: Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and County Boards of Chosen Freeholders. Rutgers Cooperative Extension, a unit of the Rutgers New Jersey Agricultural Experiment Station, is an equal opportunity program provider and employer.

RUTGERS
New Jersey Agricultural Experiment Station

For the Teacher:
Taste it or Toss it Answer Key

1. Milk that is 3 weeks old, chunky and has a thin film on top

Toss! Since the milk looks different, you should know right away to give it the toss. The chart tells us that milk will last 5-7 days in a 40°F refrigerator. You could also look at the expiration date on the milk carton.

2. Baby carrots kept in the refrigerator that are 1 week old, firm and orange

Taste! Carrots will last 2 weeks in the refrigerator.

3. A mango with a green fuzzy substance all over the outside

Toss! You may have been able to save the mango from the toss if the mold was not all over the outside of the fruit. If it is just in 1 small spot, you can cut the mold out. You may only see mold growing on the outside of the food, but mold growth goes deeper than your eyes can see. Cut away a large part around the mold to make sure that the mold growing below the surface of the food is removed as well.

4. 5-week-old cheese slices that have blue mold growing on them

Toss If it was hard cheese and you could cut the mold off you can taste it But this will not work for sliced cheese. .

5. Turkey lunch meat slices that were opened a week ago and have a strange smell

Toss! Any food that has a bad smell should not be eaten. An open package of lunch meat will last 3-5 days in the refrigerator.

6. Leftover fried chicken that has been in the refrigerator for 2 weeks

Toss! Leftovers in the refrigerator should be eaten within 3-4 days.

7. Canned refried beans that have little white spots on them

Toss! The little white spots may be mold. Mold can make you sick if eaten.

8. Frozen meat was in the freezer when the power went out for 1 hour but looks and smells fine

Taste! A full freezer will keep food safely cold for about 48 hours. A half full freezer will keep food safely cold for about 24 hours. If the power was going to be out for a long time, it would be best to pack the meat in a cooler with ice.

9. Salmon that is 4 days old, has a “fishy” smell and is very slimy

Toss! Fish that smells bad or “fishy” should not be eaten.

10. Tomatoes that are 3 days old, bright red in color and firm

Taste! Tomatoes will last 2-3 days if kept in the refrigerator. Since they are 3 days old and have no signs of spoilage, they are safe to eat.

11. Lettuce you bought a day ago that has turned brown and slimy

Toss! Any food that has changed color and/or is slimy should not be eaten, no matter how old it is.

12. A can of soup that has been in your cupboard for 6 months

Taste! Most canned foods will last about 2-5 years when stored in a cool, clean, dry place like the cupboard. Acidic canned foods, like foods like tomatoes, grapefruit and pineapple will last 12-18 months.

13. Frozen raw chicken that was left on the counter to defrost for 4 hours

Toss! Foods should never be thawed on the counter. There are 3 safe ways to thaw foods:

- Place the food you wish to thaw in a bowl or pan on the bottom shelf of your refrigerator. This keeps the juices from dripping onto other foods.
- Thaw foods in your microwave on a low or defrost setting.
- Thaw frozen meat, poultry or fish in a bowl of cold water. Change the water every 30 minutes until the food is thawed. Cook the food right away.

14. Unopened can of fruit punch that has been stored in your cupboard for 2 weeks

Taste! Most canned foods will last about 2-5 years when stored in a cool, clean, dry place like the cupboard.

15. Unopened orange juice that has been kept in the refrigerator for 3 days

Taste! You can check the expiration date on the carton if you are unsure of how long the juice has been in the refrigerator.

16. Rice and beans that have been in the refrigerator for an unknown period of time that smell fine

Toss! If you do not remember how long your leftovers have been in the refrigerator, they have probably been there for longer than 3-4 days. To avoid this, write the date that you made the food on a piece of tape and stick it to the container.

Storage Times

Recommended Storage Times		
Food	Refrigerator (less than 40°F)	Freezer (0°F)
Dairy		
Milk	1 week	1 month
Cottage cheese and ricotta	1 week	Do not freeze
Yogurt	1-2 weeks	1-2 months
Eggs		
Fresh, in shell	4-5 weeks	Do not freeze
Hard cooked	1 week	Do not freeze well
Egg substitute, opened	3 days	Do not freeze
Egg substitute, unopened	10 days	1 year
Fresh Poultry		
Whole chicken or turkey	1-2 days	1 year
Pieces	1-2 days	9 months
Giblets	1-2 days	3-4 months
Cooked Poultry		
Fried chicken	3-4 days	4 months
Cooked poultry dishes	3-4 days	4-6 months
Pieces	3-4 days	4 months
Pieces, covered with broth or gravy	3-4 days	6 months
Chicken nuggets, patties	3-4 days	1-3 months
Fresh Meat		
Steaks	3-5 days	6-12 months
Chops	3-5 days	4-6 months
Roasts	3-5 days	4-12 months
Variety meats- tongue, brain, kidneys, liver, heart	1-2 days	3-4 months
Cooked Meat		
Cooked meat and meat dishes	3-4 days	2-3 months
Gravy and meat broth	1-2 days	2-3 months
Bacon and Sausage		
Bacon	1 week	1 month

Sausage, raw from pork, beef or turkey	1-2 days	1-2 months
Precoked sausage links or patties	1 week	1-2 months
Sausage – Summer labeled “keep refrigerated”	unopened 3 months opened 3 weeks	1-2 months
Ham and Corned Beef		
Corned beef	5-7 days	1 month
Ham, fully cooked- whole	7 days	1-2 months
Hot Dogs		
Opened package	1 week	1-2 months
Unopened package	2 weeks	1-2 months
Lunch meats		
Opened package	3-5 days	1-2 months
Unopened package	2 weeks	1-2 months
Fresh Fish		
Lean fish like cod or flounder	3 days	6-8 months
Fatty fish like salmon	3 days	2-3 months
Vegetables		
Beans, shell - lima, fava, soy	2 -3 days in pod & 1-2 days shelled	12 months
Carrots	2 weeks	12 months
Greens – spinach, collards, Swiss chard, kale, mustard, etc.	1-2 days	12 months
Iceberg lettuce	3-5 days	Do not freeze
Jicama	2-3 weeks, uncut	12 months
Tomatoes	2-3 days	12 months
Other		
Vegetable or meat stew	3-4 days	2-3 months
Mayonnaise	2 months	Do not freeze
Frozen dinners and casseroles		3-4 months
Leftovers		
Cooked meat and meat casseroles	3-4 days	2-3 months
Gravy and meat broth	1-2 days	2-3 months
Cooked poultry or fish	3-4 days	4-6 months

5/29/15



NJ SNAP-Ed
 NJ Supplemental Nutrition Assistance Program-Education
 USDA, Food and Nutrition Service



This material was funded by USDA's Supplemental Nutrition Assistance Program (SNAP). To apply for SNAP, call or go to your local SNAP office. In NJ apply online at: www.NJHelps.org; or to learn more go to www.fns.usda.gov/fsp. USDA is an equal opportunity provider and employer.

To Apply for SNAP visit www.njsnap.org

Cooperating Agencies: Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and County Boards of Chosen Freeholders. Rutgers Cooperative Extension, a unit of the Rutgers New Jersey Agricultural Experiment Station, is an equal opportunity program provider and employer.

RUTGERS
 New Jersey Agricultural Experiment Station

Taste

Toss