

Thawing & Cooking Safety



Lesson Overview

Time: 10-20 Minutes

Learning Objectives:

In this lesson, participants will:

- Identify safe thawing methods for poultry
- Demonstrate the proper use of a cooking thermometer on poultry and poultry products.

Tennessee Department of Education Academic Standards

- Health Education Standards 3-5: 1.1; 1.2; 1.4; 2.1; 2.3; 9.1; 9.3; 9.4
- Science Education Standards 5: 0507.Inq.1, 0507.Inq.2, 0507.Inq.4

Contents:

- **Video:** Short, educational video outlining key points from this lesson
- **Handout & Activity Page:** Overview of key points and puzzle activity
- **Video Guide:** Fill-in-the-blank and short answer worksheet to supplement educational video
- **Check For Understanding Review:** Review of key points (Use if not using video & video guide)

Materials:

- Printed Handout & Activity Page for each participant
- Printed Video Guide for each participant (if using video)
- Printed Check For Understanding Review for each participant (If not using video)
- Visual

Subject Matter Outline

What Does Cooking and Thawing Have to Do with Poultry and Egg Safety?

When cooking poultry and poultry products, it is very important to follow food safety precautions to prevent sickness from foodborne illnesses. This includes proper defrosting and thermometer use to ensure food stays out of the danger zone and is cooked to completion.

Vocabulary

- **Danger Zone:** Between 40°F and 140°F; where bacteria grows best
- **Doneness:** The degree of how completely cooked a dish is
- **Food Thermometer:** Special thermometer used to measure the temperature of food
- **Calibrate:** To adjust

Subject Matter Outline

Thawing

- The Refrigerator:
 - The safest way to thaw or defrost frozen poultry is in the refrigerator.
 - This allows for a safe and slow thawing process.
 - Place in a pan on the bottom shelf of the refrigerator to prevent juices from dripping on other refrigerated items and foods.
 - Plan Ahead! It will usually take a whole day (or longer for whole chicken and turkeys) for foods to thaw in the refrigerator.
 - When food is left on the counter or in the sink to thaw, it enters the danger zone (between 40-140 °F) where bacteria can quickly grow.
- Cold Water
 - Using cold water is a much faster way to thaw foods; however, some precautions will need to be taken in order to do it safely.
 - Place the frozen poultry in a leak proof bag and submerge completely in cold tap water.
 - Replace the tap water every 30 minutes until it is thawed.
- The Microwave
 - A microwave is a very quick way to defrost foods and most microwaves have a “defrost” setting.
 - The microwave will also begin to cook the item it is defrosting, therefore foods thawed in this way need to be cooked immediately to prevent bacterial growth.

Temperature Matters: Using Thermometers

- Doneness: Completely cooked.
- Calibrate: Make sure the thermometer is reading the correct temperatures. Make sure to read the directions that come with the thermometer to calibrate correctly. You can check for the accuracy of the thermometer by boiling a pot of water. The temperature should read 212°F.
- Whole Poultry: Insert the thermometer into the inner thigh area near the breast but not touching the bone.
- Ground Poultry: Place the stem into the thickest part of the poultry dish. The thermometer may be inserted sideways into patties.
- Casseroles containing poultry: The thermometer should be inserted into the thickest portion.

Subject Matter Outline

Safe Cooking & Reminders: Just a few safety reminders to remember when cooking to help prevent cross contamination.

- You should always begin meal preparation with a clean environment & utensils. This includes counter tops & surfaces, cutting boards, knives, dishes and plates, etc. *For more information on cleaning your kitchen, refer to Lesson 2: Clean It! Make It Safe!*
- You should wash your hands often when preparing and handling poultry. Especially wash your hands before you begin preparation, after touching raw poultry, and after you finish cooking. *For more information on hand washing, refer to Lesson 1: Wash Your Hands: Leave No Germ Behind.*
- To prevent cross contamination do not reuse any plate, bowl, cutting board, surface, or utensil that has touched raw poultry on cooked poultry. *For information on cross contamination refer to Lesson 2: Clean It! Make It Safe!*

Teaching Guide

Interest Approach:

- Preparing a nice meal for someone can be quite rewarding. Suppose you wanted to cook a nice dinner for a friend who was coming into town, but to use the kitchen you had to answer three questions:
 - “What do you know about cooking food and being safe?”
 - “What do you think you know about cooking food and being safe?”
 - “What do you need to know about cooking food and being safe? *Give students time to think and write their responses. Then ask them to share.*
- **Explain** “When cooking poultry and poultry products, it is very important that we follow food safety precautions to prevent us from becoming sick from foodborne illnesses. This includes thawing correctly and using cooking thermometers to make sure we are keeping our food out of the danger zone as well as cooked to completion.”
- **Introduce** this lesson’s vocabulary, found in the *Subject Matter Outline*, and encourage students to look for them during the remainder of the lesson.

Objective 1. Identify safe thawing methods for poultry

- **Discussion** Ask “What are some ways that you might thaw or defrost a chicken or other meat?” You can also ask “What are some ways that we “shouldn’t” defrost or thaw food?” Refer back to the vocabulary definition if needed.
- **Play Supplemental Video 4: Thawing and Cooking Safety** and **complete** the *Video Guide*.
- Using a Visual, **present** the information on thawing outlined in *the Subject Matter Outline*.
 - **Discussion** Ask students
 - “Are some of these suggestions things you already do, or your parents do at home?”
 - “Which, if any, of these suggestions surprises you, or is there something you have never thought of before?”

Teaching Guide

Objective 2. Demonstrate the proper use of a cooking thermometer on poultry and poultry products

- **Remember** or **Replay** *Supplemental Video 4: Thawing and Cooking Safety*. Ask students what was shared about the proper use of a cooking thermometer.
- **Discussion** Ask students, “when at home, how often do you (*or your parents with younger students*) use a thermometer to check for doneness of cooked food (especially poultry)? Why do you think it is important to use a thermometer to check the doneness of poultry?”
- **Lead** students through *Activity 1: Thermometer Demonstration*
- Using an engaging lecture style and the PowerPoints or a projection system, summarize major concepts associated with proper thermometer using the *Subject Matter Outline*.

Review:

- **Evaluate** by having students complete the *Check For Understanding* worksheet
- Give each student a copy of the *Thawing & Cooking Safety* Handout to take home.

Activity & Video Guide	
Outline	Key Points
<p><u>Supplemental Video 4: Thawing & Cooking Safety</u></p> <ul style="list-style-type: none"> • Give each student a copy of the “Thawing & Cooking Safety” Video Guide. • Play the “Thawing & Cooking Safety” Video (About 2 minutes in length) and give students enough time to fill in the Video Guide. • Pause the video on the “Review” screen. • Discussion “What are some ways the video shows are not good to thaw poultry? What are the BEST ways to thaw poultry?” • Discussion “How does the video suggest we measure the doneness of poultry?” <p><u>Activity 1: Thermometer Demonstration</u></p> <ul style="list-style-type: none"> • Calibrate thermometers. Make sure to read the instructions that come with the thermometers in order to correctly calibrate them. • Test thermometers with a pot of boiling water. Heat a pot of boiling water and let the students take turn testing and reading their thermometers. The temperature should read about 212°F. • With uncooked chicken, demonstrate to the class how to insert a thermometer into the correct place. • Have the students take turns correctly placing and reading thermometers. 	<p>This video outlines and reviews steps for thawing and cooking poultry properly..</p> <p>A summary of key points is at the end of the video. Pause the video before you come to this part if you wish to see if the students can identify proper thawing and cooking techniques.</p> <p><u>Thermometer Demonstration:</u></p> <p>For this lab type of activity the student will learn:</p> <ul style="list-style-type: none"> • About calibrating and testing thermometers to make sure they are taking the accurate temperature. • How to correctly insert a thermometer into a chicken.

References

Educational Resources:

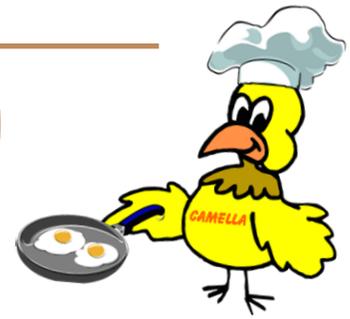
Academic Standards. (2016). <https://www.tn.gov/education/topic/academic-standards>

Educational Materials On Food Safety. <http://fightc-les.org/>

Fight Bac! - Partnership for Food Safety Education. (2016). <http://www.fightbac.org/>

Handout Puzzle Created By:

Discovery Education Puzzle Maker. (2016). http://www.discoveryeducation.com/free-puzzlemaker/index.cfm?campaign=flyout_teachers_puzzle



Thawing & Cooking Safety

How does thawing and cooking relate to Poultry and Egg Safety?

When cooking poultry and poultry products, it is very important that we follow food safety precautions to prevent us from becoming sick from foodborne illnesses. This includes defrosting correctly and using cooking thermometers to make sure food is being kept out of the danger zone as well as cooked to completion.

The following represent Thawing and Cooking safety. Find them in the Word Search!

- | | |
|---------------------|----------------------|
| <i>Calibrate</i> | <i>Casserole</i> |
| <i>Chicken</i> | <i>Chicken Patty</i> |
| <i>Cold Water</i> | <i>Cooking</i> |
| <i>Danger Zone</i> | <i>Defrosting</i> |
| <i>Doneness</i> | <i>Illness</i> |
| <i>Microwave</i> | <i>Poultry</i> |
| <i>Refrigerator</i> | <i>Safety</i> |
| <i>Sink</i> | <i>Temperature</i> |
| <i>Thawing</i> | <i>Thermometer</i> |
| <i>Turkey</i> | |

E O C P S Y Y G I E X C F C N
 N R K A I S N E N E O D N A E
 P I U E L I E O K L I S O S K
 R O A T K I Z N D R A Q C S C
 K B U O A R B W E F U H R E I
 M L O L E R A R E N I T E R H
 O C D G T T E T A C O V T O C
 V H N N E R Y P K T H D E L T
 Z A R R F W Y E M O E E M E H
 D G M Q E P N I P E E I O I A
 K S Y A E P C Z R Y T V M K W
 C R O T A R E G I R F E R N I
 Q N V T I L L N E S S Y E I N
 U B T E V A W O R C I M H S G
 L Y D E F R O S T I N G T U N

Poultry Thermometer Chart

Poultry Product	Temperature	Where To Insert
Whole Turkey or Chicken	165°F	Inner thigh area near the breast, but not touching the bone.
Poultry Parts (Breasts, Drumsticks)		Thickest Part
Chicken/Turkey Patty		Thickest Part, Sideways
Ground Poultry		Thickest Portion
Casseroles and Egg Dishes	160°F	Middle of the Dish

Thawing & Cooking Safety



Fill in the blanks as you watch the video.

- Begin _____ food immediately after defrosting in the microwave to prevent harmful bacteria growth.
- Keep hot foods _____ and cold foods _____.
- Cook all poultry products to at least _____ degrees Fahrenheit.
- The safest way to thaw food is in the _____.

Answer these questions about the video.

- Explain the process for thawing frozen poultry.

- Why is it not recommended that you leave your thawing poultry on a counter or under running water in the sink?



Thawing & Cooking Safety

Fill in the blanks as you watch the video:

- The preferred and safest way to thaw poultry is _____.
- True or False _____ If you thaw poultry with water, it should be warm water.
- The only way to know for sure that your poultry is cooked to completion is by _____.
- _____ is the degree of to which a dish is cooked.
- True or False _____ After thawing in the microwave, food must be cooked immediately.

Short Answer:

- What are three safe methods to thaw poultry?

- Describe where to take the internal temperature of each of the following:

- Whole Chicken: _____
- Turkey Breasts: _____
- Chicken Wings: _____
- Chicken Patty: _____
- Ground Turkey: _____
- Chicken Casserole: _____



Thawing & Cooking Safety

Fill in the blanks as you watch the video:

- The preferred and safest way to thaw poultry is in the refrigerator.
- True or False FALSE If you thaw poultry with water, it should be warm water.
- The only way to know for sure that your poultry is cooked to completion is by using a thermometer.
- Doneness is the degree of how completely cooked a dish is.
- True or False TRUE After thawing in the microwave, food must be cooked immediately.

Short Answer:

- What are three safe methods to thaw poultry?
 - In the refrigerator
 - Under cold water
 - In the microwave
- Describe how to take the internal temperature of each of the following:
 - Whole Chicken: Insert thermometer at inner thigh area near the breast, but not touching the bone; cook until chicken reaches 165 °F.
 - Turkey Breasts: Insert thermometer in the center of the thickest area, cook until turkey reaches 165 °F.
 - Chicken Wings: Insert thermometer in thickest area, but not touching the bone; cook until chicken reaches 165 °F.
 - Chicken Patty: Insert thermometer from the side of the patty until it reaches the center of the patty, cook to 165 °F.
 - Ground Turkey: Use a spatula to raise some turkey chunks off pan, insert thermometer in several pieces of turkey, cook until 165 °F.
 - Chicken Casserole: Cook until center of casserole reaches 160 °F. or until chicken pieces reach 165 °F.