

4-H Cooking 201



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ACKNOWLEDGEMENTS

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All recipes in this book were tested by University of Illinois Extension Nutrition and Wellness Educators.

- Recipes were analyzed using The Food Processor SQL, Version 10.0.
- 2% milk was used unless another kind of milk was specified in the recipe.
- When a range was given for ingredient amount or number of servings, the largest number was used in the analysis.
- When options were listed for ingredients in a recipe, the first ingredient listed was analyzed.

Codes for Nutrition Facts: g = gram and mg = milligram.

For ordering information contact National 4-H Council Supply Service at: (301) 961-2934 or www.4-Hmall.org.



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A NOTE TO PROJECT HELPERS



The *4-H Cooking 201* project builds on the skills learned in the beginning level *4-H Cooking 101* project. The project expands the young person's skills and knowledge in food safety, food preparation, and nutrition. You have a very important role as the Project Helper. Many of the activities and recipes in this project require the help of an adult or older youth. Your responsibility is to guide, assist, and mentor the young person in the project, but it is also important to allow the youth to complete the activities and recipes. Cooking is an art as well as a science so the youth can learn from your experience and his/her practice.

The project book is organized into sections by the **MyPlate** Food Groups. At the beginning of each section, background information is provided to help the young person learn more about the science behind food preparation, the nutritional contribution of each food group, and some basic information about preparing foods in the food group. Recipes are included for each food group. The recipes help the young person learn and apply the background information included in each section. He or she may use some of these skills when preparing recipes from other food groups. For example, as part of exploring the Dairy Group, youth learn how to make a white sauce. This skill is also used in the Protein Foods Group to make Chicken Rice Casserole; in the Vegetable Group, several recipes use a white sauce as the base for the dish. This allows youth to practice and build skills in some basic food preparation techniques. It also helps to understand that food preparation skills can be used in many different ways. This builds confidence and expands the repertoire of foods he/she can prepare.

Learning by doing is the best way to learn food preparation skills. A young person will learn important life skills that will be used as he/she grows and becomes an independent, responsible adult. Instead of always telling the youth the right answer or the correct way to do something, ask the young person what he/she thinks and allow the youth to learn from trial and error. With support from you as a caring person, he/she will remember these lessons and the impact that you had on his/her life.

As you work with the young person on this beginning foods project, remember to focus on the positive. If the youth doesn't do things quite the way you would, compliment on what is done well rather than criticizing. If something doesn't turn out quite right, use it as a learning opportunity to find out what the youth might do differently next time. Your positive feedback and encouragement as the Project Helper is important to the youth.



PROJECT PLANNING BASICS

Welcome to *4-H Cooking 201*. This project builds on many of the skills you learned in the beginning level *4-H Cooking 101* project. The project is divided into sections based on **MyPlate** Food Groups. The skills and knowledge you learn and practice in one section may be applied in other sections. This will help you to expand your food preparation skills and techniques.

It may take you two or three years to complete the project. By the time you have completed the project, you will be preparing meals for your family and friends. You have over 50 different recipes to choose from and several learning activities to complete as part of the project.

It is important to have a Project Helper to guide you through the things you will learn in this project. Your helper can be a parent, grandparent, club leader, or another adult or older youth who has a lot of experience in food preparation and safety. Show the person your project book and ask if he/she would be willing to help you with the project. Ask your helper to complete the following information:

My Project Helper _____

Phone number _____ E-mail address _____

For each year of the *4-H Cooking 201* project you should:

- Prepare two to three dishes from **each** of the recipe sections: Fruit Group and Vegetable Group, Grains Group, Protein Foods Group, Dairy Group, and Desserts (10 to 15 dishes total).
- Demonstrate your knowledge on food and kitchen safety. Give two to three informal demonstrations on food or kitchen safety to your helper, leader, or club.
- Demonstrate your knowledge on Cooking “How To” Basics. Give three to five informal “How To” demonstrations to your helper, leader, or club.
- Complete at least one community service project such as, baking food for a charity bake sale.



WHAT Do You Know?

Welcome to *4-H Cooking 201*! In this project, you will build on many of the skills that you learned in the beginning level *4-H Cooking 101* project. It may take two or three years for you to complete all of the activities in Level 2.

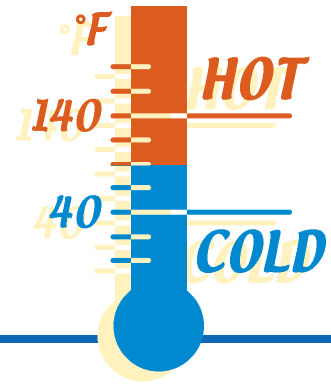
Following is a list of the skills you will learn in *4-H Cooking 201*. Before you start working on the project, read through the list of skills and rate yourself on how much you know now. Then at the end of each project year, rate what you know after completing the activities. Use the following rating scale:

Begin each statement with the phrase, "I know..." then circle 1 = not at all; 2 = a little; 3 = a lot

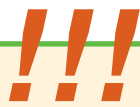
I know...	Before			After		
The cause of foodborne illness	1	2	3	1	2	3
How to prevent foodborne illness	1	2	3	1	2	3
How to use food thermometers	1	2	3	1	2	3
What to do in case of a kitchen fire	1	2	3	1	2	3
How to safely thaw frozen foods	1	2	3	1	2	3
How to purchase and safely store eggs	1	2	3	1	2	3
Different types of knives and what they are used for	1	2	3	1	2	3
How to use a knife to cut food in several different ways	1	2	3	1	2	3
Several ways to mix foods in a recipe	1	2	3	1	2	3
How to read and use a Nutrition Facts Label	1	2	3	1	2	3
Why eating fruits and vegetables is important to my health	1	2	3	1	2	3
How to roast and microwave vegetables	1	2	3	1	2	3
The difference between whole grains and refined grains	1	2	3	1	2	3
The different types of rice and how to prepare them	1	2	3	1	2	3
How to cook pasta to <i>al dente</i>	1	2	3	1	2	3
What leavening agents are and when to use them	1	2	3	1	2	3
How to test quick breads for doneness	1	2	3	1	2	3
How to judge quick breads and biscuits for quality	1	2	3	1	2	3
How to avoid cross-contamination in the kitchen	1	2	3	1	2	3
Five different ways to prepare eggs	1	2	3	1	2	3
How to test meat loaf or baked chicken for doneness	1	2	3	1	2	3
How to make a white sauce; thin, medium, and thick	1	2	3	1	2	3
How to make several different cream soups	1	2	3	1	2	3
How to plan and prepare a meal for my family	1	2	3	1	2	3
How to cook with an electric grill	1	2	3	1	2	3



FOOD SAFETY



In *4-H Cooking 101*, you learned some basic practices that cooks use to keep food safe to eat. In this project, you will begin to learn some of the science behind food safety. Use these food safety practices to keep you and your family free from foodborne illness.



Keep hot foods **hot**. Keep cold foods **cold**.



Germs grow quickly in foods that are left at room temperature.

- Wash your hands with warm water and soap for at least 20 seconds to destroy germs. Dry your hands with a clean towel.
- Food should be thoroughly cooked and kept hot before serving. After serving, put leftover food in the refrigerator as soon as possible to chill.
- Keep cold food, like salads, cold. Keep cold foods in the refrigerator until ready to serve and return to refrigerator as soon as possible after serving.
- Reheat leftovers until they reach an internal temperature of 165 degrees F. Use a food thermometer to check the temperature. (See section on Food Thermometers.)
- Throw away leftovers or other perishable foods that are out of the refrigerator longer than a total of two hours — or one hour if the room temperature is over 90 degrees F.
- Return milk, deli meat, eggs, yogurt, and leftovers to the refrigerator as soon as you finish using them.
- Do not place cooked foods on the same plate that held raw meat or poultry — unless the plate has been thoroughly washed. The juices from the raw meat carry germs that can contaminate the cooked food. This is an example of **cross-contamination**.
- Always wash your hands with soap and water before and after touching raw meat or poultry.
- Do not eat foods that contain raw eggs, such as homemade cookie dough. The eggs may contain bacteria that can make you sick.
- If there is a question about the safety of any food, follow the guideline — “When in doubt, throw it out!”

Science Behind Food Safety

Why should you put food back in the refrigerator as soon as possible? **Bacteria** need time and the right environment to grow and multiply. Your kitchen can provide the moisture and warmth bacteria need to grow. Most organisms that cause foodborne illness grow quickly in temperatures above 40 degrees F. Some bacteria can double their numbers every 20 minutes at temperatures above 40 degrees F. In a few hours, bacteria on food can multiply and cause anyone who eats the food to get sick. Many people who think they have the flu may actually have a foodborne illness. You can become sick from 20 minutes to 48 hours after eating food with some types of harmful bacteria.

Learn How to Fight Bacteria

- **Clean.** Wash hands and surfaces often.
- **Separate.** Separate raw meat, poultry, and egg products from cooked foods to avoid cross-contamination. **Cross-contamination** is the transfer of harmful bacteria to food from other foods, objects, or people.
- **Cook.** Thoroughly cook raw meat, poultry, and egg products. Use a food thermometer to ensure foods have reached a high enough temperature to destroy any harmful bacteria that might be present. (See section on Food Thermometers for more information.)
- **Chill.** Refrigerate food promptly.

Food Thermometers

Most cooks think they know when food is done just by looking at it. They trust their experience. While experience is helpful, it can sometimes be misleading. For example, many people assume that a hamburger is done when the inside is brown. In reality, hamburgers can turn brown before they have reached a temperature high enough to destroy bacteria that can cause foodborne illness. To prevent foodborne illness, use a food thermometer to test food for doneness.

Using a food thermometer is the only sure way to know if the food has reached a high enough temperature to destroy foodborne bacteria — then you know the food is “done.” There are several types of food thermometers you can use to test internal temperatures. Two of the most common ones are described here.

Oven-Safe Thermometers

This food thermometer remains in food while it is cooking in the oven. It shows the temperature of the food while it is cooking. Use this



Oven-Safe Thermometer



type of thermometer for thick foods such as a roast. After inserting the thermometer into the food, wait at least 1 minute before reading the temperature. **Ask an adult or check the directions on the package to make sure the thermometer is oven-safe.**

Instant Read Thermometers

This food thermometer quickly measures the temperature of a food in about 15 to 20 seconds. Insert the probe at least two to three inches into the food. If measuring the temperature of a thin food, such as a hamburger patty or boneless chicken breast, insert the probe through the side of the food so that the probe reaches the center of the food. Make sure you have inserted the thermometer up to the indentation on the stem. **Do not leave the thermometer in food while it is cooking in the oven.** To prevent overcooking, check the temperature before the end of the cooking time given in the recipe.



Temperature Rules! Cook Food to Safe Internal Temperatures

Use a food thermometer to check the internal temperature of food to determine doneness. Temperatures listed below destroy bacteria that may cause foodborne illness.

145 degrees F	Beef, lamb, and veal; steaks and roasts prepared medium rare
160 degrees F	Beef, lamb, and veal; steaks and roasts prepared medium Ground beef, pork, veal, and lamb Pork chops, ribs, and roasts Egg dishes
165 degrees F	Ground chicken and turkey Chicken and turkey; whole or pieces Casseroles and stuffing Leftovers

Source: USDA Food Safety and Inspection Service

Checking Refrigerator Temperature

One of the most important practices to prevent foodborne illness is to keep hot foods hot and cold foods cold. The food thermometer can measure the temperature in many foods and locations — including the refrigerator. In order for food to stay safe, the refrigerator must keep foods no higher than 40 degrees F. Use a thermometer to check the temperature of your refrigerator so you know food is stored at a safe temperature.

To measure the temperature in the refrigerator:

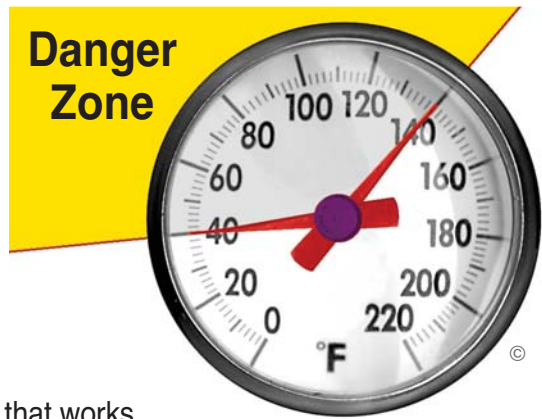
Put the thermometer in a glass of water and place the glass in the middle of the refrigerator. Wait 5 to 8 hours and check the temperature. The temperature should read between 38 to 40 degrees F. If the temperature is too hot or too cold, ask an adult to help you adjust the refrigerator temperature control. Check the temperature again after 5 to 8 hours. Note: The air temperature in the refrigerator may have to be lower than 40 degrees F for the refrigerator to keep liquids and foods at 40 degrees.

Thawing Meat Safely

Keep food at a safe temperature during "the big thaw." Foods are safe as long as they remain frozen. However, as soon as food begins to thaw and becomes warmer than 40 degrees F, any bacteria that was present before freezing can begin to multiply.

Frozen foods should never be thawed at room temperature, or defrosted in hot water. Even though the center of the package may still be frozen as it thaws at room temperature, the outer layer of the food is in the "**Danger Zone**." When temperatures are between 40 and 140 degrees F, bacteria multiply rapidly. This is the Danger Zone for food safety.

There are three safe ways to thaw meat. Choose the way that works best for you.



Thaw in the Refrigerator

Planning ahead is the key to this method because of the length of time involved. Small amounts of frozen food — such as a pound of ground meat or boneless chicken breasts — require a full day to thaw.

Thaw in Cold Water

This method is faster than refrigerator thawing, but requires more attention. Place food in a leak-proof package or plastic bag to keep the water out of the food. Fill the sink or a clean container with cold tap water. Submerge the plastic bag or package in the cold water. Change the water every 30 minutes so the food continues to thaw. Small packages of meat or poultry — about a pound — may defrost in an hour or less.

Thaw in the Microwave

Follow the manufacturer's directions to thaw food in the microwave. Cook the food immediately after thawing because some areas of the food may become warm and begin to cook during defrosting, but not reach a temperature high enough to destroy any bacteria that may be present.



Food Safety and Eggs

Because eggs may contain bacteria that can cause foodborne illness, you must use good safety practices when buying, storing, and using eggs. Any bacteria present in an egg can multiply quickly at room temperature.

Buying Eggs

- Buy eggs that are refrigerated.
- Check eggs carefully before purchasing.
- Buy eggs that are clean and not cracked or broken.
- Pack the eggs on top of the grocery bag to prevent damage.



Keeping Eggs Safe

- Take the eggs home and refrigerate immediately.
- Check to make sure none of the eggs cracked on the way home.
- If any eggs cracked during transport, break them into a clean container, cover it tightly, keep refrigerated, and use within 2 days.
- Store eggs in the carton they came in.
- Store eggs in the coldest part of the refrigerator instead of the door. In the door, eggs are exposed to warm air each time the refrigerator is opened.
- Do not leave eggs at room temperature more than 2 hours.
- Uncooked eggs can be kept in the refrigerator for 3 to 5 weeks.
- Don't wash eggs. That could remove the protective coating and increase the potential for bacteria on the shell to enter the egg.

Cooking with Eggs

- Wash utensils, equipment, and work areas with hot, soapy water before and after contact with eggs.
- Cook eggs thoroughly until the whites and yolks are firm. Eggs should not be runny.
- If eggs crack during hard cooking, they are safe to use.
- Serve eggs right after cooking or refrigerate at once for later use. Use within 3 to 4 days.
- Do not eat foods that contain raw eggs (such as cookie dough).
- When mixed with other ingredients, the raw egg mixture should be cooked immediately or refrigerated and cooked within 24 hours.