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University of California
Agriculture and Natural Resources

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UC PEER REVIEWED

Lovin' Dutch Oven

A California 4-H Foods and Nutrition Project

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Name

Date

Photo: Courtesy of Lodge Cast Iron

Contents

Note to the Project Helper

Congratulations! A young person who is interested in learning how to cook using Dutch ovens has asked you to be his or her helper. Your role as a helper is very important to the total educational experience of the young person. Not only will you be providing encouragement and recognition, you will also be the key person with whom the young person shares each of the experiences outlined in this activity guide.

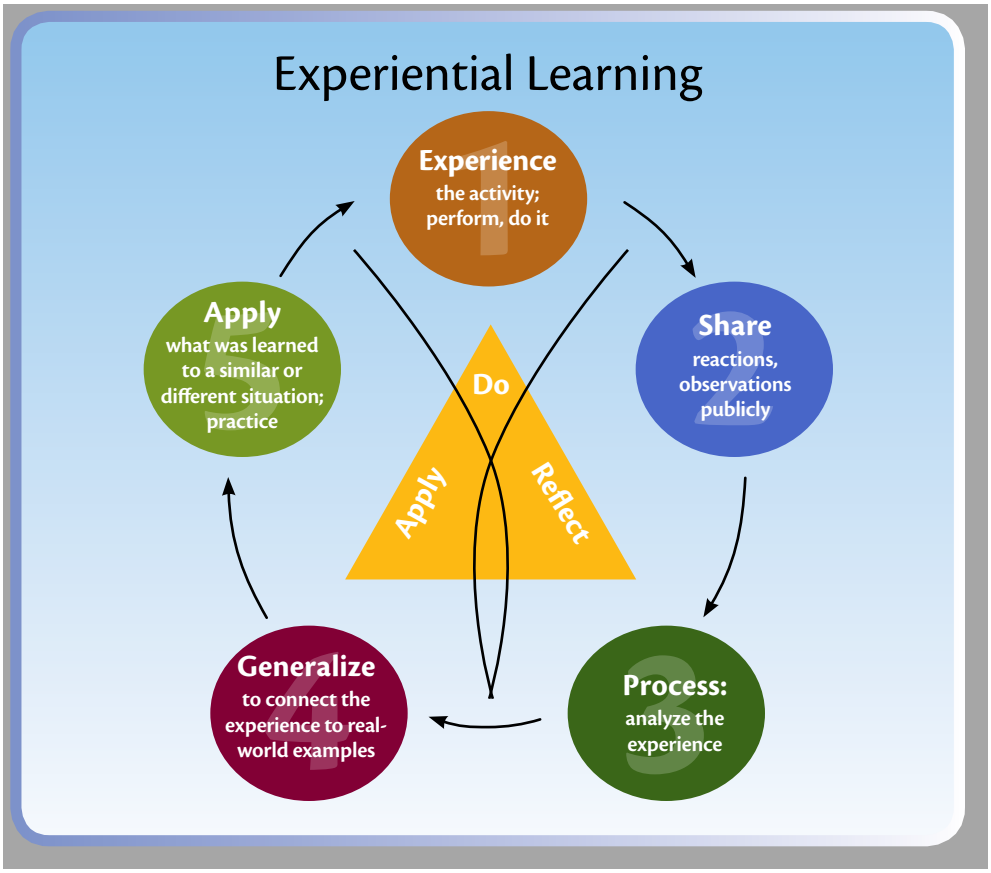
The "Lovin' Dutch Oven" curriculum series is designed to help youth ages 11 to 19 have fun cooking out of doors as they prepare different foods, do fun experiments, and go on fact-finding missions. This curriculum is designed around six major categories: Dutch oven history, purchasing quality Dutch ovens, Dutch oven care, Dutch oven tools and techniques, fires and fire safety, and cooking healthy foods.

There is also a wealth of information on the web about Dutch ovens and several recipes to add to any cook's repertoire. The web also has lots of additional resources to help you as you help youth achieve their best! Web links for more information are located in the back of this publication.

National Educational Standards

Each activity in this guide supports one or more of the national educational standards developed by several national and educational organizations. These standards can be found at www.ets.org/Media/Research/pdf/PICNATEDSTAND.pdf. For more information on the standards, codes, and links to state standards for California, visit http://www.cde.ca.gov/be/st/ss/.

This five-step model is included in each activity in this "Lovin' Dutch Oven" curriculum series. As you can see, the youth first attempt the activity by themselves. After the youth do as much as they can and write answers to the last "Process, Generalize, and Apply" questions, you then meet together and discuss: What was it they did? What was important about what they did? How does what they did relate to their lives? And finally, how might they use the life and project skills practiced in the future? Your ability to ask additional thought-provoking questions and clarify and expand the youth's ideas will add to the educational experience.



Good luck in your role as project helper!

Havin' Fun with Lovin' Dutch Oven

Are You Ready?

Dutch oven cooking is a great way to have fun while cooking outdoors! Using a Dutch oven while you are cooking will take you back to a time when things were down-to-earth, rugged, and adventurous. Cooks on the trail had to be strong and independent while cooking meals for their groups—roundup cowboys, pioneers forging West, or hunters and trappers! The essence of these cooks symbolizes the spirit of the American West!

This project manual—to be used by both youth members and leaders—is divided into six chapters: Dutch Oven History, Purchasing a Dutch Oven, Getting Ready to Cook, Fire Information, Let's Cook, and Cleaning and Storing Your Dutch Oven. In addition to the activities in this publication, there are exciting recipes and interesting Dutch oven facts on the websites provided. There is also a list of ideas that you can use as an exhibit at your county or state fair (p. 34).

Use your Program Goals sheet and your Achievement sheet to identify and plan your activities as well as record all of your fun and exciting experiences! After completing any activity, remember to have your project helper initial it. You will also need to fill out the checklist summary sheet at the end of the publication.

The Project Helper

The project helper is an important part of your experience in the "Lovin' Dutch Oven" project. This person may be your project leader or advisor, a 4-H teen leader, Mom or Dad, an adult or teen neighbor or friend, or anyone who has the interest to work with you to complete your project. *Whoever the adult or teen person is, they must be trained in the Dutch oven project.* You need to involve your helper as you work with each activity and answer the questions. They are there to give you support and to help you be successful! Write the name and contact information of your project helper here:

My project helper's name is: _____

_____

Phone number_____

E-mail address_____

Demonstrations

This is a fun way to share what you have learned with other people. To make sure you have a successful presentation, provide a way for your audience to become involved. Dutch oven cooking is an exciting way to show others what you have learned! You can also cook using your favorite recipes and they can eat what you cook!

TIP: Because Dutch oven cooking is time consuming, have a couple of Dutch ovens already done cooking so that after you demonstrate the unique cooking experience that Dutch ovens provide, the audience members can enjoy the good food while the other Dutch oven cooks!

"Lovin' Dutch Oven" Achievement Program

Directions

1. Do at least six of the "Lovin' Dutch Oven" activities each year.
2. Complete all 17 of the "Lovin' Dutch Oven" activities as well as give a demonstration each year within 3 years to complete this Achievement Program.
3. Have your project helper date and initial the activities as you complete and discuss them.
4. Complete the survey before and after you do the activities in this publication.
5. Complete identified project goals and outcomes on the following page.

Lovin' Dutch Oven activities	Date completed	Helper's initials
Chapter 1		
History of the Dutch Oven		
Dutch Ovens Shape the West		
Chapter 2		
Purchasing a Dutch Oven		
Size and Selection of Dutch Ovens		
Tools of the Trade		
Chapter 3		
Getting Ready to Cook - Seasoning Your Oven		
Home Investigation Activity		
Food Safety		
Chapter 4		
Fire Information		
Fire Safety		
Chapter 5		
Let's Cook!		
Maintaining Correct Temperatures		
Wrangling Up Good Eats!		
MyPlate Activity Page		
MyPlate Worksheet		
"10 Tips to a Great Plate" Handout		
Let's Be Creative		
Chapter 6		
Cleaning and Storing Your Dutch Oven		
Knowledge Bowl—Dutch Style		

_____
Title of demonstration given

_____
Location

_____
Name

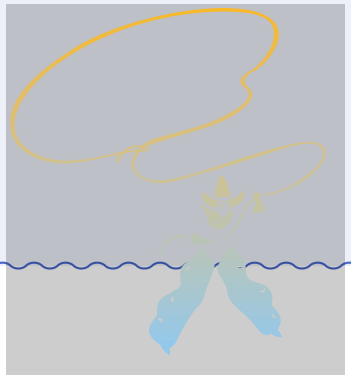
_____
Age

_____
Club/school

I certify that this youth has completed all requirements of the "Lovin' Dutch Oven" project.

_____
Project helper's signature

_____
Date



Project Goals and Outcomes

My Project Goals

Name: _____

Age: _____

Grade: _____

What I want to do and learn in Level 1

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Test Your Knowledge

Here's an easy way to tell if you learned something new and developed important project skills. **BEFORE** you start doing the activities in this guide, provide answers to the comments below. **AFTER** you finish the "Lovin' Dutch Oven" project, provide answers to the same comments. It may surprise you to find out what you learned! Start each statement with the word "I..." and then check the appropriate answer for each statement.

Knowledge and skills	Before	After
Know how the Dutch oven got its name.	_Yes _No	_Yes _No
Can describe the two-thirds timing method.	_Yes _No	_Yes _No
Can name the parts of a Dutch oven.	_Yes _No	_Yes _No
Know how to season a Dutch oven.	_Yes _No	_Yes _No
Know what the "3 up, 3 down" method is.	_Yes _No	_Yes _No
Can cook bread using a Dutch oven.	_Yes _No	_Yes _No
Have my own Dutch oven that I bought.	_Yes _No	_Yes _No
Can demonstrate proper food safety protocol.	_Yes _No	_Yes _No
Understand how to be safe around campfires.	_Yes _No	_Yes _No
Know that Dutch ovens come in all sizes.	_Yes _No	_Yes _No

Project Highlights

Date and list the exciting things you do and learn:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Tips for the Master!

1. Always start your coals 30 to 45 minutes before cooking.
2. When baking, use twice as many coals on top as on bottom. Also, preheating the lid cuts baking time.
3. Start with fewer coals and work your way up. It is preferable to feed your guests late than burn their dinner!
4. To prevent hot spots, rotate your Dutch oven ⅓ turn every 15 minutes. Rotate the lid the opposite direction.
5. Allow air to circulate underneath your Dutch oven to keep the coals alive.
6. While allowing bread to rise, use four coals on the bottom and five coals on top of a 12-inch Dutch oven. Rising slow doesn't burn out the yeast.
7. When baking with melted chocolate, be sure your fire isn't too hot. If it is, the chocolate will separate and rise to the top.
8. Use a wok ring to hold coals on top of a dome lid. If a wok ring isn't available, a chain laid around the lid will work.
9. Always be careful when removing the lid. Many a dish has been garnished by ash and coals!
10. Be careful where you put your lid. A lid in the sand means sand in the teeth.
11. If your Dutch oven is hot, never add cold water and never set a hot Dutch oven in a cold river.
12. If you tap your coals to remove the ash, they conduct heat better.
13. When cooking with Dutch ovens in a stack, put the dish that requires the longest cooking time and least amount of attention on the bottom.
14. The "two-thirds timing method" means cooking the food with both top heat and bottom heat for about two-thirds of the total baking time. Then, remove the oven from bottom heat and finish baking with top heat only for the remaining third of baking time. To insure even browning, make sure to turn the oven and lid a third turn in opposite directions every 5 to 10 minutes. For example, your biscuit recipe calls for 15 minutes in the oven. For 10 minutes cook with both top and bottom heat while rotating a t turn every 5 to 10 minutes. For the last 5 minutes, re from bottom heat and cook only using top heat.

Photo: Courtesy of Lodge Cast Iron

Lovin' Dutch Oven Completion Certificate

I certify that

_____

has completed all requirements

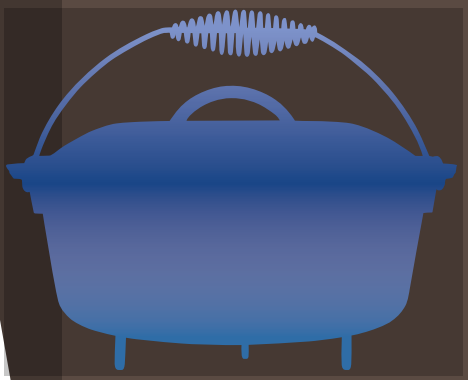
in the "Lovin' Dutch Oven" Achievements Program

of the 4-H Dutch Oven "Skills for Life" Project.

Helper's signature _____

Date_____

Picture of you cooking with your Dutch Ovens



CHAPTER ONE

The History of Dutch Oven Cooking

Have you ever wondered what pioneers, revolutionary soldiers, and cowboys cooked in when they were alive? Do you wish that you could cook like they did? In this section, we learn how the Dutch oven first got its name and where it came from!

First, it got its name from the Dutch traders who sold this very important item in the early days of the colonies. They were actually manufactured in England.

Second, the oven was a flat-bottomed cast iron pot with a curved lid. Paul Revere is said to have been the one that invented the flange (or raised edge) around the lid because he disliked ashes in his food. He also added legs on the bottom to allow room for cooking coals under the oven, and he standardized the sizes. He also developed a long, removable handle similar to a fry pan. The Dutch ovens used by Paul Revere were very similar to those we use today.

Third, the versatile ovens were one of the most important items in any household. In fact, Martha Washington thought so much of her ironware that when she died, they were willed to family members along with her other valuable possessions. When John Colter, the discoverer of Yellowstone Park, died in 1813, the goods sold at the estate sale listed the following item:

> To John Simpson – one Dutch oven – $4.00

This oven brought the equivalent of a week's pay at that executor's auction. Today we can buy an identical Dutch oven but it would only cost us several hours pay.

Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. How did the Dutch oven get its name? _____

   _____

2. Name several different groups of people that used Dutch ovens. _____

   _____

3. Describe specifically the changes that Paul Revere made to make Dutch ovens more efficient. _____

   _____

4. Discuss why adding legs was an important change that Paul Revere made. _____

   _____

5. List some different foods that pioneers may have cooked in their Dutch ovens. _____

   _____

6. What are some of the dishes that you would like to cook in your Dutch oven? _____

   _____

Dutch Ovens Shape the West

A Little More History

At the time of Colter's death, the Dutch oven had been part of frontier history and legend for more than 100 years and was one of the most efficient cooking devices ever developed. It was a very practical and necessary item. In the very early days of our country, life was simple, conveniences few, and people experienced activities in the outdoors. As a result, early frontier cooking was greatly influenced by place and season. Indigenous plants and animals supplied much of the food. Other provisions (flour, dried beans, coffee, sugar, etc.) were stocked at points of origin and resupplied along the way. The first pioneers in most places ate by campfires. By necessity, foods were cooked by very simple methods. Dutch ovens, frying pans, boiling pots, and spits—a tool for roasting meat over fires—were typically employed. As settlements grew, so did the range of cuisine.

As people moved westward, society became more mobile. Constant packing up and starting life over and over again in a new location encouraged the creation of such things as the Kentucky long rifle and the Conestoga wagon. A family moving to a new home in one of these wagons had very limited space and had to take only those things that were most important and versatile.

The Dutch oven was one of these things. It was very portable, amazingly simple, and eliminated the need for a bulky stove or even a fireplace. There was one pioneer woman who was comparing cooking in a Dutch oven to cooking with a new cast iron stove. She professed the "new-fangled contraption" changed foods' flavors. In short, she concluded, "No proper cook would discard her Dutch oven for such a 'temporary' gadget."

Now, as we go forth into the 21st century, good home cooks and great chefs alike will have a Dutch oven as part of their essential cookware! Let's join the fun!

Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. How long have Dutch ovens been used? _____

2. List reasons why you think people moved a lot 100 years ago. _____

3. How do you think people in the olden days cooked, since they didn't have electricity? _____

4. Why do you think that people then and now like cooking in Dutch ovens? _____

5. How much do you think a 12-inch Dutch oven cost in the olden days? Today? _____

CHAPTER TWO

Purchasing a Dutch Oven

A good Dutch oven is made of pure cast iron. It is a pot with a flat bottom that has three legs and a lid with a flange around the outside of it, which helps hold the coals while cooking. If this flange is not there, a wok ring or heavy link chain can be used to keep coals on the top. Since the oven is made out of cast iron, it will heat evenly.

When you shop for a new Dutch oven, you should be aware that all ovens are not the same. There are ovens ranging in size from 6 inches in diameter to 22 inches in diameter. There are also various depths available. Most families start out with a 12- or 14-inch oven and then add ovens to meet their particular needs.

Be sure to check the following before purchasing your Dutch oven:

- Make sure the lid fits well. The lid needs to make a seal during cooking, so the fit is very important. Make sure you keep the correct lid with its oven. Always use a lid that fits properly.
- Check the walls of the oven. They should be the same thickness all the way around.
- Check the oven surface. The surface should be an even gray color and should not show too many signs of grinding where they have had to fix imperfections.

Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. Describe what cast iron looks like. _____

2. Why is it important that the lid fits well during cooking?_____

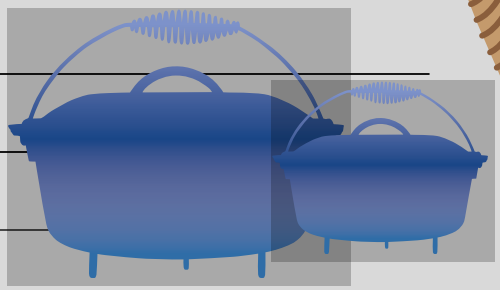
3. Is it really important for the walls of the oven to be the same thickness all the way around? Why or why not?

   What effect would overgrinding a Dutch oven in the manufacturing process have on your cooking?

4. Brainstorm what other ways Dutch ovens could differ from one another. Write your thoughts below.

Special Activity—Money Matters

What things would you do to earn the money it takes to purchase a Dutch oven? List ideas in the space provided.



Size and Selection of Dutch Ovens

Selecting the right size oven depends on the kinds of food one wants to cook and the number of people one wishes to serve. Define those needs, and then select an oven that fulfills them. The diameter of the oven determines the size. A number, usually cast on the lid, indicates the diameter.

Lodge Manufacturing sets the standard for most Dutch ovens. They have been casting ovens since 1896. Check local hardware stores, grocery stores, online sites, or places that specialize in camping gear. The following chart applies to Lodge Dutch ovens. All sizes are 4 inches deep.

Lodge Dutch Ovens

Size	Capacity	Suggested uses and servings*
6⅝ inches	1 quart	main dishes, 1 serving (gravy and sauces), 10 to 12 servings side dishes
8 inches	2 quarts	main dishes, 2 to 6 servings side dishes, 8 to 10 servings
10 inches	4 quarts	main dishes, 2 to 12 servings side dishes, 16 to 20 servings
12 inches	6 quarts	main dishes, 6 to 18 servings side dishes, to 30 servings
14 inches	8 quarts	main dishes, 8 to 25 servings side dishes, to 40 servings
16 inches	12 quarts	main dishes, 12 to 38 servings side dishes, to 60 servings

Note: Servings may vary. Main dishes are based on a 10-oz serving. Side dishes are based on a 6-oz serving.

Photo: Courtesy of Lodge Cast Iron

Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. Explore and list other Dutch oven manufacturers besides Lodge Manufacturing. _____

2. Where is the diameter of a Dutch oven indicated on the oven? _____

3. What size of Dutch oven do you have or do you want? Determine how many people it would serve using the chart above.

Tools of the Trade

There are a few accessories and tools that will help you as you work with your Dutch ovens. Using them makes cooking easier and more comfortable.

A. **Heavy hot pads** – These need to be large enough to keep you from burning your fingers. Don't use the best hot pads in your house. Hot pads get black with use. You may want to make a special pair with extra batting. Keep pads away from the hot coals. They may catch fire.

B. **Chimney starter** – This method is a good way to shorten the heating time of briquettes and to maintain even heat.

C. **Charcoal bucket** – This needs to be a metal bucket that you put hot coals into after you are finished cooking. Put sand in the bottom of the bucket to keep the bucket cool. Covering the coals with sand or the bucket with a tight lid robs the coals of oxygen and smothers them. Then it may be possible to reuse these coals.

D. **Cooking stand** – This can be as simple as a cinder block with a barrel lid on top. Anything will do that is fireproof and up off the grass at least 10 inches.

E. **Lid holder** – This can be anything that is fireproof and will hold the lid out of the dirt. You can use three rocks, a bucket, or a wooden box or board. They are easy to make. The important thing is to keep your lid clean. No one likes gritty food.

F. **Lid lifters** – Both short and long handles are available. You can purchase these at any outdoor supply store. Even a pair of vise grips or channel locks will do the trick. There are several different types of lifting tools on the market or you may make your own.

G. **Long-handled tools** – This list could include spoons, tongs, turners, and forks. The long handles will keep you from burning yourself.

H. **Tongs** – At least two long-handled pairs will be needed: **charcoal tongs**, used for placing hot coals on top and underneath Dutch oven, and **food tongs**, used for lifting food. Do not use charcoal tongs for food.

I. **Utensil bag** – This is just a convenient way to store and take your tools with you when you go somewhere else to cook. It is usually made out of a heavy or quilted fabric. If you keep your Dutch oven tools all in one place, they're easier to locate.

Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. Match each picture below with the corresponding letter from the list on the previous page to identify each tool discussed. Put the answer in the circle next to its picture.
2. Research how much each of these tools cost and list some prices next to the corresponding image.

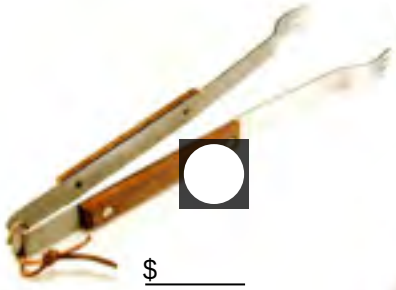


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Photo: Courtesy of Lodge Cast Iron

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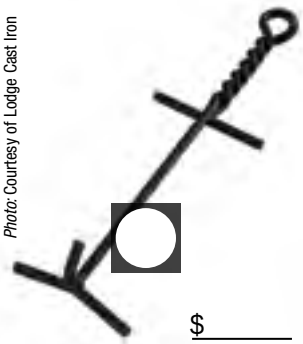

Photo: Courtesy of Lodge Cast Iron

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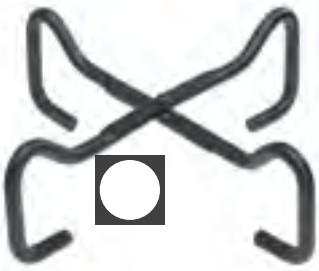

Photo: Courtesy of Lodge Cast Iron

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CHAPTER THREE

Getting Ready to Cook

Now that you have purchased your first Dutch oven, it is time to learn how to cook in it. However, there are a few things to do first before you can actually produce that mouthwatering meal you and your family have been waiting for. So, let's get started!

Seasoning Your Dutch Oven

The most important thing that you can do to your Dutch oven is to season it. It is the seasoning on the oven that protects it from rusting while not in use and gives your oven a stick-free surface.

Here's the procedure that Lodge Manufacturing recommends to season a new Dutch oven. (Parents, some of the 4-Hers might need some help with the following steps.)

1. Warm the Dutch oven and peel off the label. Wash, using mild, soapy water (**not** an abrasive cleanser) and a stiff brush to remove the manufacturer's protective coating.
2. Warm the oven again and spread a thin coating of olive or vegetable oil over the entire surface, inside and out, with a cloth or paper towel. Be certain that the entire surface of the oven has been coated thoroughly. Do not use margarine or butter. Grease and animal fat can become rancid. Salt in some fats can attract moisture that promotes rust. According to the Dutch Oven Pro website (http://www.dutchovenpro.com/), you can use a can of carbonated cola to take out rust. If the inside is rusty, pour the cola in and let it do its job. The length of time you will need to leave the cola on the rusty spot will depend on how rusty the oven is.
3. Place the Dutch oven in your conventional oven and heat to 300 degrees for 60 minutes. Allow the Dutch oven to remain in the oven until it cools to room temperature. Do not open the oven door to speed cooling. An alternative method is to heat the Dutch oven in a gas barbecue with lid closed at medium heat for 60 minutes. Your oven is now ready for use. If you haven't used your oven for some time and it smells rancid (smelling or tasting as if spoiled), you can reseason your oven and bring it back into service. Just start as if you had a brand new oven and complete the seasoning process.

Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. List two reasons why a Dutch oven should be seasoned. _____

_____

_____

_____

2. Explain why a Dutch oven may smell rancid if not seasoned properly. _____

_____

_____

_____

3. List two occasions that call for a Dutch oven to be seasoned or reseasoned. _____

_____

_____

_____

This oven was left outside in the weather for the winter.

4. Look at the picture above. Explain in the space provided what you think made this happen and what you can do to save the oven. Be specific. _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

5. **Home investigation activity** – Let's take a look at the common, everyday occurrence of rust. We see rust, that reddish-brown flaky stuff, on the sides of old cars or on our bicycle that we absent-mindedly left outside for an entire winter. But what is rust caused by? You can try this simple experiment at home to find out.

What you need:

- 2 pieces of steel wool • 2 glass cups or beakers
- 2 pieces of clay or putty • 2 pie pans • some water

Home Investigation Activity – Rust

What you do:

Fill the pie pan with water until it is half full. Stick the putty to one side of the steel wool. Attach the steel wool (putty side down) to the bottom of the glass. Place the glass, upside down, into the pie pan. Leave this to sit overnight and observe any changes during the next few days. Repeat the same procedure with the second set of materials, only this time fill the pie pan with more water. Let the second set sit overnight as well.

What's going on here?

Water should begin to rise up into the glass and the steel wool should start to rust. Why does this happen? Well, rust forms as the steel, which is mainly composed of iron, reacts with the oxygen in the air. But if we left a piece of steel wool on the countertop overnight, it would not rust. The key is that we are suspending the iron over water. Inside the tube, there are the correct elements for rust: iron, oxygen in the air, and water vapor. How do I know that there is water vapor in the glass? Any time we have liquid water, a certain amount of that liquid spontaneously turns to gas even if we didn't heat it! The oxygen combines with regular iron to turn it into iron (III) oxide. Iron (III) oxide, $Fe_2 O_3$, is commonly known as rust.

So, why does the water rise up in the glass? Since oxygen gas is being consumed in the reaction, there are fewer oxygen particles in the glass. If there are fewer particles of oxygen, fewer particles hit the sides of the glass as they move around. This decreases the pressure inside the glass. How do we know this? If the pressure on the inside of the glass is lower than the pressure of the air that is pushing down on the water in the pie pan, the air outside pushes the water up and into the glass to equalize the pressure.

What does this tell us about how fast the oxygen reacts with the iron? Did the water level of the two separate sets differ? If not, we know that a certain size of steel wool and a certain size of beaker will give similar results. So, we could predict how fast the reaction will proceed by knowing the level the water should be at when the reaction is finished. To test this, use a piece of tape or putty to mark the line where the water ended up in the finished experiment. You can then repeat the experiment, checking every hour during the day, and find out how long it took for the water level to rise to the tape. This would tell you how fast the oxygen reacted with the steel wool.

Answer the questions in "Let's Talk Dutch" and test your knowledge!

Rust Facts

- Rust happens when things made from iron get left lying around in damp conditions, and the iron gets reddish brown flakes on it.
- Rust happens when iron, water, and oxygen mix together. It's called oxidation.
- Rust is a chemical reaction because it makes a new substance called iron oxide.
- The oxidation makes the metal weak, so it's easy to break.

1. Record your observations with your experiment. _____

2. Taking what you learned from this experiment, please describe how you will keep your Dutch ovens from getting rusty.

3. Write the steps involved, which you would follow every time, in taking care of your Dutch oven after using it. Use the space below to list your steps. _____

Food Safety

Keeping food safe is a priority for every cook. People who eat food that is mishandled can get very ill. There are four general areas with rules that every cook should follow in order to keep food safe. According to the Food Safety division of the United States Department of Agriculture, they are as follows:

1. Clean
   - Wash hands in warm, soapy water for 20 seconds. (Portable washing station recommended.)
   - Wash surfaces and utensils in hot, soapy water.
2. Separate
   - Separate raw meat from other food in the refrigerator. Store raw meat, covered, in the refrigerator.
   - Put cooked food on a clean plate.
   - To avoid cross-contamination, use separate cutting boards for produce and raw meat, poultry, or fish.
3. Cook
   - Use a food thermometer when cooking meat. (See temperature information in Appendix A.)
4. Chill
   - Use a thermometer to be sure your refrigerator is 40°F or below.
   - Refrigerate or freeze prepared food within 2 hours after cooking.
   - Never thaw at room temperature. Thaw food in the refrigerator or microwave just before cooking.

Important Food Safety Information

- A foodborne illness is often called "food poisoning," and it comes from a food you eat. It's caused by ingesting pathogenic bacteria.
- Always refrigerate perishable food within 2 hours (1 hour if the temperature is above 90 °F).
- Discard perishable food if it has been left at room temperature for more than 2 hours (1 hour if it's above 90°F). This includes leftovers that were mistakenly left out overnight.
- Use hot, soapy water and a clean dishcloth (or paper towels) to clean kitchen surfaces and wipe up spills.

Answer the questions in "Let's Talk Dutch" and test your knowledge!

Match the following terms with their proper definitions by inserting the corresponding letter before the term. Use the Web to research the meanings if you desire.

_____ 2-hour rule

_____ personal hygiene

_____ perishable food

_____ cross-contamination

_____ contaminated food

_____ danger zone

_____ foodborne illness

_____ the thaw law

_____ sanitation

_____ thorough cooking

A. The transfer of harmful bacteria from one food to another. Harmful bacteria can also be transferred to food from another source such as hands.

B. Defrost foods in refrigerator, microwave, or under running water. Never defrost food on the kitchen counter.

C. Keeping work areas free from dirt or bacteria.

D. Foods that can become unsafe or spoil quickly if not refrigerated or frozen.

E. Cleanliness, keeping yourself clean.

F. Perishable food should not be left at room temperature longer than 2 hours.

G. Food that contains harmful bacteria.

H. Cooking food to a safe internal temperature.

I. Sickness caused by eating contaminated food, sometimes called food poisoning.

J. The range of temperatures at which most bacteria multiply rapidly—between 40° and 140°F.

CHAPTER FOUR

Fire Information

Every year, state and national parks place more restrictions on gathering wood and building open fires. Charcoal (briquettes) is a good alternative to wood. Besides being easy to obtain and transport, it is useful for regulating temperatures. Remember to always have an adult present while working around fires.

Before building your fire, take time to first discuss the following questions with your project leader or helper. 1) What's the fire's purpose? Is it for cooking or for a campfire? 2) Should you use wood or charcoal? How many briquettes do you need? 3) Do weather conditions matter? Why or why not? 4) Are there fire restrictions in place where you are cooking? 5) How much time do you need to plan for the fire to burn before it reaches the cooking stage?

Site preparation is important. Clearing a site that is free of shrubs and debris is necessary to make sure that there is no danger of sparks and flames spreading to the surrounding area. In addition, set up your cooking station in a low-traffic area, where people will not walk through repeatedly. Also, having fire safety rules memorized and using them automatically will ensure that you have a safe cooking environment. Rules should include the following:

- Have a bucket of water and sand, as well as a shovel, close to the fire site.
- While cooking, keep loose cloth, like sleeves, tablecloths, and towels, away from hot coals. Stepping on a hot coal can ruin rubber-soled shoes. Many of the materials that clothes are made of today will also burn easily, so keep them from touching the hot coals or the burning fire. Do not wear loose-fitting clothing that may catch fire. If you have long hair or loose clothing on, make sure you pull it back securely to avoid it getting into the hot coals.
- Make sure that nobody who is cooking reaches across the hot coals.
- Charcoal is hot! Do not drop on the ground. A small child may try to pick up a glowing coal. Check around your cooking area often for these stray coals.
- Use a hot pad when moving a hot Dutch oven. If you use a Dutch oven tool, make sure the oven is balanced and does not tip.
- Always open Dutch oven lids away from you and others. The escaping steam burns!
- Put lids on a clean rock or lid stand.
- Watch hot oil closely; it can burst into flames if it gets too hot.
- Important!! Do not burn charcoal briquettes indoors. They give off toxic fumes when burning. Hot coals require good outdoor ventilation.
- Remember, most accidents can be prevented if people think about what they are doing and have the proper respect for fire and hot Dutch ovens.

Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. What did you use to lift the lid off your hot Dutch oven? How did it protect you from the heat? _____

_____

_____

2. Where did you place your Dutch oven lid when you were checking or stirring the food in your Dutch oven? _____

_____

_____

3. Describe specifically what the safe process of cleaning up hot coals is after you are finished cooking. Refer to the section on Dutch oven accessories and cooking tools. _____

_____

_____

_____

4. Describe at least two safety techniques you have learned in Dutch oven cooking that you feel are very important to follow.

_____

_____

_____

_____

_____

Fire Safety

You can heat your Dutch oven for cooking in a number of ways. You can use a gas grill, barbecue, even your home range, but we recommend you use charcoal briquettes. This will allow cooking methods, temperatures, and results to be more manageable.

To cook, you will need a contained fire site. You may dig a hole in the dirt deep enough so that your Dutch oven sets in level and the lid is at ground level (approximately 6 to 8 inches). You can use an empty charcoal barbeque base (like a Weber kettle), a fire pit, or you can use the bottom of a 55-gallon metal drum that is 9 to 12 inches deep.

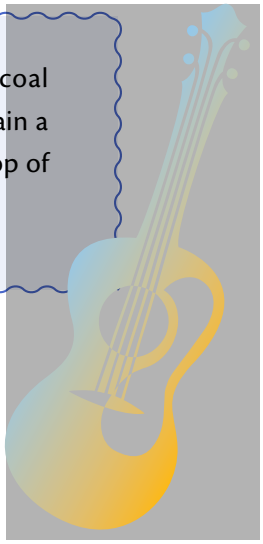
Chimney Starter Method of Starting Briquettes

This method is a good way to shorten the heating time of briquettes and to maintain even heat. Using two or three sheets of newspaper, matches, and a #10 (15-cup) tin can, follow these steps:

- Cut both ends off the can.
- Punch holes every 2 inches around the lower edge of the can with a punch-type can opener.
- Set the can down so that the holes are next to the ground.
- Crumple two or three sheets of newspaper and place them in the bottom of the can.
- Place charcoal briquettes on top of the crumpled newspaper.
- Lift the can and light the newspaper. Prop a bottom edge of the can on a rock to create a good draft. The briquettes (now coals) will be ready to use in 30 to 40 minutes.
- If a greater draft is necessary, prop the can on small rocks and fan the flames with a paper plate.
- When the coals have an ash around them, lift the chimney off the coals and spread the coals out. They are ready to use.

At home, one determines the temperature on a stove by knowing how to manipulate the knobs. It is common knowledge that frying, boiling, and steaming all require a different amount of heat under the cooking utensil. Baking requires both a top and bottom heat source. Dutch oven cooking employs the same principles. With a Dutch oven, one determines a certain temperature by knowing the correct amount of coals to use and how to place them.

In order to properly start briquettes, a charcoal chimney starter should be used. When coals obtain a gray ash, they are ready to place under and on top of the Dutch oven.



Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. Describe why a chimney starter must have holes in the bottom. Is oxygen important for a fire to start? Why or why not? Be concise. _____

2. List two fire safety rules you will use all the time while cooking over an open flame. _____

3. Think Hard Activity. Brainstorm two different ways you can confine your fire. Think of ways that you can restrict your fire so that it will not be a hazard. List your ideas in the space provided. _____

4. If a fire breaks out from your briquettes, list some ideas about what you would do to try to contain it._____

Always keep an eye on what you are cooking!

CHAPTER FIVE

Let's Cook!

Remember, you don't have to use a very hot fire all the time. The design of the cast iron Dutch ovens will help distribute heat around the oven. You can start with a low to moderate heat and then build it up as you need more heat. Also, you can open up your Dutch oven and watch what is happening inside. If you need to change the amount of heat up or down, do so. Just take off some coals or add some, as described below. Use charcoal briquettes for a fuel source.

Determine the Basic 325°F Baking Temperature for Dutch Ovens

To help determine baking temperatures for Dutch ovens, use the **"3 up, 3 down = 325°F"** formula. (Plus three up, minus three down = 325°F). It is based on the oven's diameter and the use of full-sized coals. The diameter plus 3 equals the number of coals required for top heat. The diameter minus 3 equals the number of coals needed for bottom heat. "**Top heat"** refers to the fuel placed on the Dutch oven's lid. **"Bottom heat"** refers to the fuel placed under the oven.

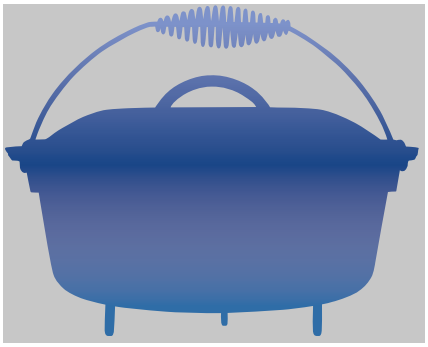
This formula heats and maintains the oven at 325°F. For example, a 12-inch oven uses 15 top coals ("3 up" = 12 + 3) and 9 bottom coals ("3 down" = 12 – 3) to reach a temperature of 325°F. The chart below gives the standard number of coals on top and on bottom to reach 325°F for the most common Dutch oven sizes.

Exceptions

- If you are **baking** (between 325° and 350°F) bread, rolls, or cakes, put only 6 to 8 charcoal coals on the bottom of the 12-inch oven and 14 to 16 charcoal coals on the top. Use the two-thirds timing method mentioned in the "Tips for the Master" section.
- For **frying or roasting** in a 12-inch oven, start out with about 12 to 14 coals on the bottom and 26 coals on the top.
- For **steaming or broiling**, add 3 to 6 coals on the bottom; eliminate top heat. Reduce the bottom heat for simmering.

Modify the Standard 325°F Temperature

The chart at the bottom of this page gives the amount of charcoal coals required to heat different sizes of Dutch ovens at various degrees. Follow the chart below.



Cast iron Dutch oven baking temperature chart

Temperature (°F)	8-inch oven		10-inch oven		12-inch oven		14-inch oven		16-inch oven	
	Top	Btm	Top	Btm	Top	Btm	Top	Btm	Top	Btm
300°	9	4	12	6	14	8	16	9	18	12
325°	11	5	13	7	15	9	17	11	19	13
350°	12	5	14	7	17	9	18	11	20	14
375°	13	6	16	8	18	10	19	12	21	15
400°	14	6	17	8	19	10	20	12	22	16
425°	15	7	18	9	21	11	21	13	23	17
450°	16	7	19	10	22	11	22	14	24	18
500°	17	8	20	11	23	12	23	14	25	19

Maintaining Correct Temperatures

Under ideal circumstances, freshly lit briquettes yield up to 1 hour of cooking time. Replace coals when they are half of their original size, or add more coals. There are many brands of charcoal briquettes available. Investigate and try several brands until you find one that meets your needs.

You will have to watch your food as you cook. As you become more proficient with your Dutch oven, you will be able to estimate the number of coals you will need for each recipe you might cook. Make note of the number of coals you used on your recipe, so that you don't have to guess the next time you make the dish.

Remember, altitude and wind will also make a difference in the amount of coals you use. If you use a wind screen, heat from the coals all around the oven will be more even. Therefore, your food will cook more evenly.

Below is a diagram of how coals should be placed on top and underneath a 12-inch oven. For other oven sizes, just add or subtract coals as the temperature of the recipe states.

Diagram of top coals placement

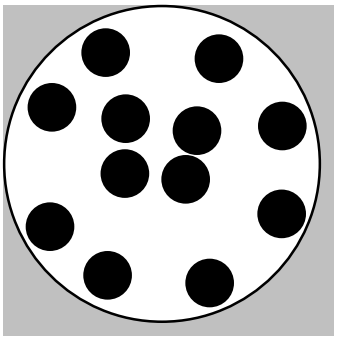
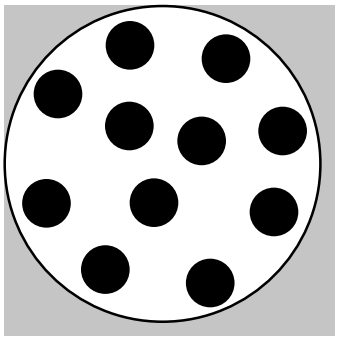


Diagram of bottom coals placement



Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. You are cooking a dish in your Dutch oven using coals on the top and bottom and at a temperature of 400°F. You decide, after looking at it, that it is cooking too fast, and you need to lower the temperature to 350°F. Describe how you should do it.

   _____

   _____

   _____

2. Describe in complete sentences when you should add more coals to your Dutch oven to maintain the correct heat.

   _____

   _____

   _____

3. **Thinking Ahead.** You are planning a meal that includes three different dishes. How will you plan the timing of starting your coals so that everything is done at the same time? _____

   _____

   _____

   _____

- **Critical Thinking Activity.** What difference would it make to your cooking time and temperatures if the weather was 90°F versus 20°F outside? Describe what the differences might be. _____

_____

_____

_____

_____

_____

_____

Wrangling Up Good Eats!

Healthy eating is important no matter where we are and what we are doing. Cooking with your Dutch oven can produce healthy meals just as if you were eating at home.

According to the United States Department of Agriculture (USDA), young people should eat a wide array of food from the five food groups. Below is a picture of USDA's MyPlate. See if you can determine the five food groups and how many servings you should eat from each group daily. At the 2,000 calorie per day level, here's what the guidelines suggest.

- **Fruit Group.** Should consume 4 daily servings, or 2 cups.
- **Vegetable Group.** Should consume 5 servings, or 2½ cups.
- **Grain Group.** Should consume 6 ounce-equivalents (1 ounce-equivalent means 1 serving), half of which should be whole grains.
- **Meat and Beans Group.** Should eat 5½ ounce-equivalents or servings.
- **Milk Group.** Should consume three to four servings daily.
- **Oils.** Should consume 24g, or 6 teaspoons.

Discretionary Calories: These are the remaining amount of calories in each calorie level after nutrient-dense foods have been chosen. Up to 267 calories can be consumed in solid fats or added sugars if the other requirements have been met.

Do you believe that physical activity should be a part of your everyday life? Being active and keeping fit is a good way to improve your health while having fun. You may think of physical activity as exercise and special equipment—actually, it means *moving your body*. It is recommended that young people get at least 60 minutes of moderate physical activity every day.

Challenge

How often each day do you watch television or play on the computer? This week, alternate those inactive, or sedentary, forms of play with periods of activity. Afterward, answer these questions: What surprised you? Which was easier? Which was more fun? Share your results below. _____

Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. List the five food groups and the recommended amount of daily servings for each group in the space provided below.

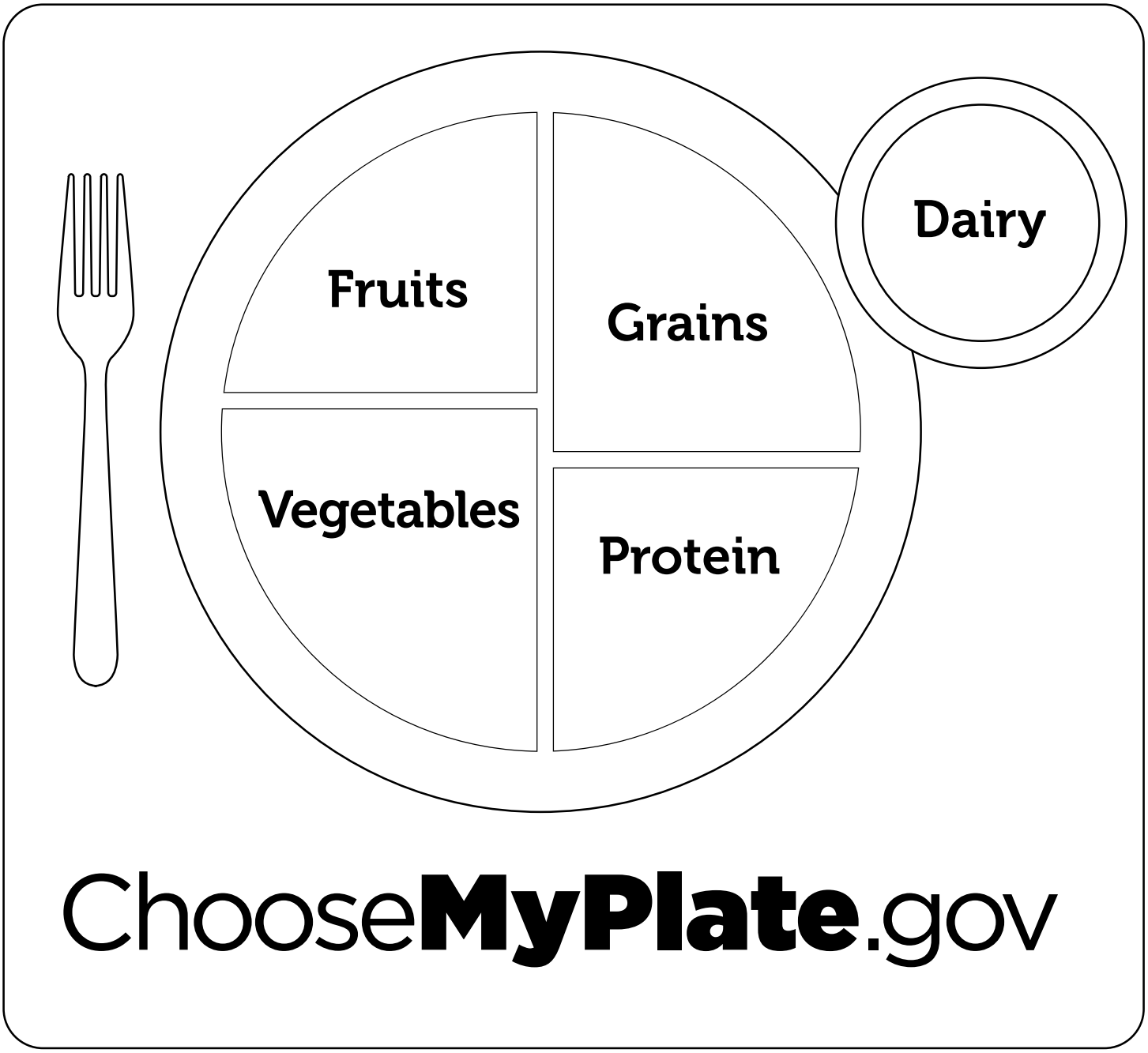
2. Describe in the space provided below how many minutes a day you should exercise and how often you actually do exercise. Set a goal for daily activity. _____

On the next three pages you will find a MyPlate activity page, a MyPlate worksheet, and a handout called "10 Tips to a Great Plate." The MyPlate activity sheet provided on the following page is to help you identify and label the five food groups. Within each of the five food group areas, draw your favorite foods from that group. For example, if you love turkey burgers and salmon, draw them in the "protein" section of the plate. (Hint: use a different color for each food group.)

The MyPlate worksheet is for you to list what you ate on a particular day and to help you determine if you ate in a healthy way. If there are changes you wish to make, list your goal on the worksheet and use it to help you stay on track. Use the "10 Tips to a Great Plate" handout to help you make your decisions.

Have fun and eat healthy!

MyPlate Activity Page

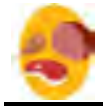


USDA Center for Nutrition Policy and Promotion

MyPlate Worksheet

Name:_____ MyPlate

Check how you did yesterday and set a goal to aim for tomorrow.

Write in your choices from yesterday	Food and activity	Tip	Goal (based on a 1800-calorie pattern)	List each food choice in its food group*	Estimate your total
Breakfast:	**Grains** 	Make at least half your grains whole grains.	**6-ounce equivalents (A 1-ounce equivalent is about 1 slice bread, 1 cup dry cereal, or cup cooked rice, pasta, or cereal.)**		_____ounce equivalents
Lunch:	**Vegetables** 	Color your plate with all kinds of great tasting veggies.	**2 cups (Choose from dark green, orange, starchy, dry beans and peas, or other veggies.)**		_____cups
Snack:	**Fruits** 	Make most choices fruit, not juice.	**1 cups**		_____cups
Dinner:	**Dairy** 	Choose fat-free or low-fat most often.	**3 cups (1 cup yogurt or 1 ounces cheese = 1 cup milk.)**		_____cups
Physical activity:	**Protein** 	Choose lean meat and chicken or turkey. Vary your choices—more fish, beans, peas, nuts, and seeds.	**5-ounce equivalents (A 1-ounce equivalent is 1 ounce meat, chicken or turkey, or fish, 1 egg, 1 T peanut butter, ounce nuts, or cup dry beans.)**		_____ounce equivalents
	Physical activity 	Build more physical activity into your daily routine at home and school.	At least **60 minutes** of moderate to vigorous activity each day or on most days.		____minutes

How did you do yesterday? Great So-so Not so great

My food goal for tomorrow is:_____

My activity goal for tomorrow is:_____

***Some foods don't fit into any group. These "extras" may be mainly fat or sugar—limit your intake of these.**

10 tips
Nutrition Education Series

choose MyPlate

10 tips **to a great plate**

Making food choices for a healthy lifestyle can be as simple as using these 10 Tips. Use the ideas in this list to *balance your calories*, to choose foods to *eat more often*, and to cut back on foods to *eat less often*.

1 balance calories

Find out how many calories YOU need for a day [illegible] www.ChooseMyPlate.gov [illegible] physically active also helps you balance calories.

2 enjoy your food, but eat less

Take the time to fully enjoy your food as you eat it. Eating too fast or when your attention is elsewhere may lead to eating too many calories. Pay attention to hunger and fullness cues before, during, and after meals. Use them to recognize when to eat and when you've had enough.

3 avoid oversized portions

Use a smaller plate, bowl, and glass. Portion out foods before you eat. When eating out, choose a smaller size option, share a dish, or take home part of your meal.

4 foods to eat more often

Eat more vegetables, fruits, whole grains, and fat-free or 1% milk and dairy products. These foods have the nutrients you need for health—including potassium, calcium, [illegible] basis for meals and snacks.

5 make half your plate fruits and vegetables

Choose red, orange, and dark-green vegetables like tomatoes, sweet potatoes, and broccoli, along with other vegetables for your meals. Add fruit to meals as part of main or side dishes or as dessert.

6 switch to fat-free or low-fat (1%) milk

They have the same amount of calcium and other essential nutrients as whole milk, but fewer calories and less saturated fat.

7 make half your grains whole grains

To eat more whole grains, substitute a whole-grain [illegible]—such as eating whole-wheat bread instead of white bread or brown rice instead of white rice.

8 foods to eat less often

Cut back on foods high in solid fats, added sugars, and salt. They include cakes, cookies, ice cream, candies, sweetened drinks, pizza, and fatty meats like ribs, sausages, bacon, and hot dogs. Use these foods as occasional treats, not everyday foods.

9 compare sodium in foods

Use the Nutrition Facts label to choose lower sodium versions of foods like soup, bread, and frozen meals. Select canned foods labeled "low sodium," "reduced sodium," or "no salt added."

10 drink water instead of sugary drinks

Cut calories by drinking water or unsweetened beverages. Soda, energy drinks, and sports drinks are a major source of added sugar, and calories, in American diets.

USDA United States Department of Agriculture
Center for Nutrition Policy and Promotion

Go to www.ChooseMyPlate.gov for more information.

DG TipSheet No. 1
June 2011

Let's Be Creative!

Now that you have spent some time learning about healthy eating and nutrition, let's have some fun! This lesson will focus on cooking recipes you create, using knowledge you have gained from earlier lessons.

Planning Activity

So, let's cook! First, we need to do some planning. You are going to cook a meal using any size Dutch ovens you desire, and you will be cooking for four people. You are in charge of cooking a main dish and a dessert. In the space below, list the groceries you will need. (Hint: Use recipes you are familiar with.)

_____

_____

_____

_____

_____

_____

_____

_____

_____

Critical Thinking. Now that you have spent some time thinking about your meal, let's have some fun! Create two recipes for a family of four—in the space provided—that you will cook for your main dish. But this time, use only the following ingredients that are estimated for two people:

½ pound fresh or frozen broccoli
1 cup of rice
2 chicken breasts
½ onion, green or yellow
1 can cream of mushroom or chicken soup
1 teaspoon sour cream
1 cup of milk
salt & pepper and any other seasonings you need

When developing your recipes, develop one that is low fat and another that has increased fiber. Use any cooking method(s) necessary to achieve your goal (i.e., sauté, brown, boil, etc.). Be creative! Test your recipe to achieve your desired results, and when completing your recipe, make sure to include how many briquettes you will need and how long you will cook the dish in your Dutch oven. Don't be afraid to experiment with different combinations and cooking methods. All methods must be done using your Dutch oven! Record your successes and things you did to improve your recipe. Don't change the ingredients, but have some fun! (**NOTE**: Remember to use food safety precautions when cooking with chicken and fresh vegetables.)

Answer the questions in "Let's Talk Dutch" and test your knowledge!

Share what happened during this critical thinking activity here:_____

_____

_____

_____

_____

Write your recipe and directions here: _____

_____

_____

_____

_____

_____

Title:_____ Serves:_____

Temperature (refer to baking temperature chart): _____

CHAPTER SIX

Cleaning Your Dutch Oven

Cleaning your Dutch oven right after it is used is very important. A dirty oven will cause the seasoning to deteriorate. First, scrape out any leftover food and wash the oven just as you would your dishes. Thoroughly dry by heating your Dutch oven over your leftover coals. Take off the heat and cool. Next, spread a thin coat of olive or vegetable oil on the inside bottom and sides of the Dutch oven. Return your Dutch oven to the coals and heat 3 to 4 minutes.

Here are several tips to help with your cleaning:

- Put only a **thin coat of olive or vegetable oil** on your oven at any one time. Otherwise, it will just get sticky.
- If cooking sugary foods (cobblers, etc.), line the Dutch oven with aluminum foil or a metal baking pan that is set on 3 or 4 small stones placed on the bottom of the Dutch oven. Then just wipe out your oven.
- If a sugary buildup occurs after cooking, wash it out with very mild, soapy water. Rinse with hot water. Dry the Dutch oven and oil as stated above.
- When cleaning, *never* add cold water to a hot Dutch oven. The Dutch oven could crack.

Storing Your Dutch Oven

Store your Dutch oven in a cool, dry place without drastic temperature changes. Also store it with the lid ajar, as this will let the air circulate. And you should also try to keep it in a warm, dry place. You can also put a piece of clean paper towel or newspaper wadded up inside, which will help absorb any moisture that builds up. This helps prevent rust from developing in the Dutch oven. If your Dutch oven does get rusty, just clean off all the rust you can and then rub with oil, heat it and rub with oil some more, then reseason it as you have already learned.

Remember that your oven is breakable and quite heavy. Store in a place you can easily manage getting it out and putting it away.

Answer the questions in "Let's Talk Dutch" and test your knowledge!

1. Explain in detail what you did to get the Dutch oven you used ready for this project. (Washing it, seasoning it, and/or cleaning it.) Use complete sentences._____

2. Explain the reason it is a good idea to line the Dutch oven with aluminum foil when cooking a dessert like pineapple upside down cake._____

3. Explain what you should do to prevent your Dutch oven from rusting during storage._____

4. Where is the best place to store a Dutch oven in your house? Why? Be specific (which room, cupboard, etc.) _____

Knowledge Bowl—Dutch Style!

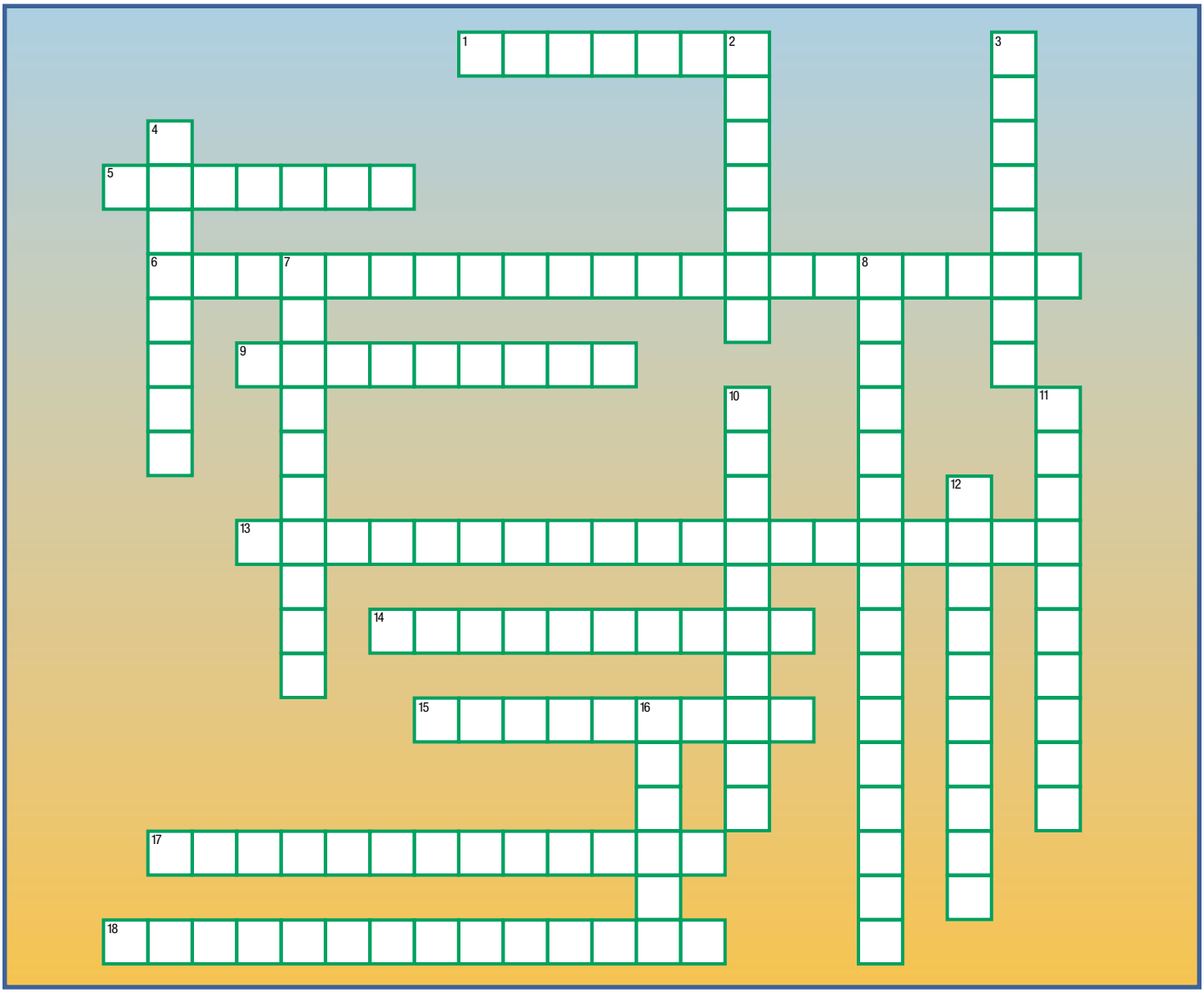
Crossword fun!! Test your knowledge. Solve the clues and complete the puzzle below.

ACROSS

1 Dual purpose for lid.
5 Unit of heat burned with exercise.
6 Method used for cooking breads, rolls, and cakes.
9 Method of curing oven for quality cooking.
13 Cooking method used mostly with breads.
14 A food group on MyPlate.
15 Tool for lid removal.
17 An exercise activity.
18 A fire starter.

DOWN

2 Place where Dutch ovens were first manufactured.
3 Takes rust out of a Dutch oven.
4 Dutch oven material.
7 Size of Dutch oven that has a 6-quart capacity.
8 A method of starting briquettes; also for holding poultry products.
10 Dutch oven leg designer.
11 Abilities that youth learn that help them become successful in living a good life.
12 A heat source.
16 Lip on lid.



WORD BANK: briquettes, calorie, cast iron, chimney starter, coca cola, egg carton starter, England, flange, griddle, lid lifter, life skills, minus three plus three, Paul Revere, rollerblading, seasoning, twelve inch, two-thirds timing method, vegetables

Dutch Oven Links

ChooseMyPlate (was MyPyramid) - www.choosemyplate.gov

Food Safety - www.fightbac.org

International Dutch Oven Society - www.idos.com

Suncoast Chapter, IDOS - http://www.geocities.com/suncoastidos

Western New York Chapter, IDOS - www.wnydos.com

Greater Wasatch Dutch Oven Society - www.gwdos.com

Lone Star Dutch Oven Society - www.lsdos.com

Storm Mountain Chapter, IDOS - http://stormmtn.phpnet.us/index.htm

Central California Dutch Oven Adventures - http://ccdoa.webs.com/

Wagner and Griswold Society (WAGS) - http://www.wag-society.org

DutchOvenstuff.com ("*cute Dutch oven items*") - http://www.dutchOvenstuff.com

Outdoorcook.com - http://www.outdoorcook.com

Camp Chef - http://www.campchef.com

Iron Pots Depot - http://www.ironpotsdepot.com

The Pan Man - http://www.panman.com

LODGE Manufacturing - http://www.lodgemfg.com

A Happy Camper - http://www.ahappycamper.com

Chuckwagon Supply - http://www.chuckwagonsupply.com

Campfire Café - http://www.campfirecafe.com

Byron's Dutch oven cooking page – http://papadutch.home.comcast.net

Maca Supply (large Dutch ovens) - http://www.macasupply.com

ISU Dutch oven page - http://www.isu.edu/outdoor/dutch.html

Jas. Townsend and Son, Inc. - http://www.jastown.com

Checklist/Summary

Name: _____

In this project you will do the following activities and make foods to learn about basic Dutch oven cooking.

Suggested minimum age to start project: 11–12 years old.

Completed units (X)	Activities
	Completing project manual
	Selecting and buying a Dutch oven
	Seasoning the Dutch oven
	Temperature control and use of your Dutch oven
	Safety when using a Dutch oven
	Keeping your Dutch oven clean
	Storing your Dutch oven
	Preparing one bread or breakfast item
	Preparing two other items of your choice
	Preparing two desserts
	Giving a demonstration

Completed (X)	What you will exhibit
	Completed project manual and record book
	Completed checklist/summary
	A poster (14" x 22") or display (12" x 16") about something you learned in this project. (Check with local fair requirements for exact size.)

Expense Worksheet

Summarize, totaling all expenses such as ingredients, materials, exhibitor's fees, and all income such as the value of finished products, exhibit premiums, etc.

Item	Number	Expense	Income or value
		$	$
		$	$
		$	$
		$	$
		$	$
		$	$
		$	$
		$	$
		$	$
		$	$
		$	$
TOTAL		**$**	**$**

Solutions and Answers

Crossword Puzzle Solution

From page 32

Word Match Answers

From page 19

F 2-hour rule

E Personal hygiene

D Perishable food

A Cross contamination

G Contaminated food

J Danger zone

I Foodborne illness

B The thaw law

C Sanitation

H Thorough cooking

MAIN DISHES

Lemon Pepper Chicken with Sautéed Mushrooms – Serves 20

14-inch Dutch oven

Ingredients:

20 chicken thighs, bone in
2 pounds fresh mushrooms
2 cloves garlic minced
3 cups flour
2 tablespoons garlic powder
2 tablespoons onion powder
1½ teaspoons salt
1 teaspoon pepper
½ cup butter
lemon pepper

Preparations

Sauté mushrooms and minced garlic in butter. Remove sautéed mixture from oven and put in separate container. Mix flour, garlic powder, onion powder, salt, and pepper together and coat chicken. Put a small amount of oil in oven and brown chicken. Remove and wipe out excess oil. Layer chicken, lemon pepper seasoning, and sautéed mix, and then repeat. **Bake with 11 coals on top and 17 coals on bottom for 40 to 45 minutes.**

Photo: Courtesy of Lodge Cast Iron

Lasagna – Serves 12

12-inch Dutch oven

Ingredients:

1½ pounds 95% lean ground beef
2 large cans whole tomatoes
1 clove garlic
2 6-oz cans of tomato paste
1½ tablespoons parsley flakes
1 pound of lasagna noodles
1½ tablespoons basil
5 cups low-fat cottage cheese or ricotta
1 teaspoon salt
2 eggs, beaten
½ teaspoon pepper
1½ pound skim mozzarella cheese, shredded
¾ cup parmesan cheese, shredded

Preparations:

Brown meat. Add tomatoes, garlic, tomato paste, and parsley flakes; simmer uncovered for 30 minutes. Cook noodles and rinse in cold water. Combine cottage cheese with salt, eggs, pepper, and parmesan cheese. Add half of the cheese, mozzarella, and meat to the noodles layered out in the Dutch oven. Repeat. **Cook with 6 to 8 coals on bottom and 14 to 16 coals on top for 30 minutes.**

Chicken Barley Soup – Serves 10

12-inch Dutch oven

Ingredients:

1 broiler/fryer chicken (2 to 3 pounds), cut
1 chicken bouillon cube
10 cups of water
½ teaspoon salt
1½ cup chopped carrots
½ teaspoon poultry seasoning
1 cup diced celery
½ teaspoon pepper
½ cup barley
½ teaspoon dried sage
½ cup chopped onion
1 bay leaf

Preparations:

In your Dutch oven, boil chicken in water until tender. **Use 16 coals on bottom and 14 coals on top.** Water should keep bubbling throughout cooking time. Cool broth and skim off fat. Bone the chicken and cut meat into bite-sized pieces. Return to the Dutch oven, along with the remaining ingredients. Put back on coals and cook for about 1 hour or until the vegetables are tender. Remove bay leaf. Add more liquid if needed. **Cook with 8 coals on bottom and 14 coals on top.**

SIDE DISHES

Dutch Oven Potatoes – Serves 15

12-inch Dutch oven

Ingredients:

6 slices of bacon cut into bite-sized pieces
1 cup chopped fresh mushrooms
2 medium onions, sliced
1 10.75-oz can cream of mushroom soup
5 pounds of potatoes, sliced
1 cup cheddar cheese, shredded

Preparations:

Warm Dutch oven using 12 coals on the bottom, and cook bacon until almost done. Add onions and cook until lightly brown. Dump in potatoes and stir together. **Cover and cook, using 10 to 12 coals on bottom and 12 to 14 coals on top, until potatoes are almost done (about 30 to 45 minutes).** Add mushrooms, cover, and cook for 5 minutes. Add soup and cook for 5 more minutes, or until heated all the way through. Remove from heat and spread cheese all over the top; cover and let stand until cheese melts.

Spuds and Onions Au Gratin – Serves 12

12-inch Dutch oven

Ingredients:

6 to 8 large potatoes, sliced thin
2 or 3 onions, sliced thin
2 cans low-sodium cheese soup
½ cup skim or 1% milk
½ cup seasoned bread crumbs
2 cups cheddar cheese, shredded
salt and pepper to taste

Preparations:

Wipe oven with a little olive or vegetable oil. Layer potatoes, salt, pepper, and onions. Keep layering until you've used all of the potatoes and onions. Thin cheese soup with milk and pour over top. Sprinkle with bread crumbs. **Bake for 40 to 45 minutes with 4 to 6 coals on bottom and 16 to 18 coals on top.** Sprinkle the shredded cheese on the top, and let set for 5 minutes before serving.

String Bean Casserole – Serves 8

10-inch Dutch oven

Ingredients:

2 14.5-oz cans green beans
1 10.5-oz can cream of low-sodium mushroom soup
1 cup grated cheddar cheese
1⅓ cups French-fried onions
1 4-oz can mushrooms, sliced

Preparations:

Drain liquid from beans and mushrooms. Combine vegetables in Dutch oven. Add soup and stir. Top with grated cheese. **Bake for 30 minutes with 8 to 10 coals on bottom and 10 to 12 on top.** Add French-fried onions and bake for 15 minutes. Makes 8 servings.

BREAKFAST DISHES

German Pancakes – Serves 12

12-inch Dutch oven

Ingredients:

1 cup skim or 1% milk
6 eggs
3 tablespoons butter
1 cup flour
¼ teaspoon salt
powdered sugar

Preparations:

Mix milk, flour, eggs, and salt until smooth. Melt butter in oven and add pancake mixture. **Bake for 20 to 25 minutes with 9 coals on bottom and 14 on top.** Sprinkle sugar on top when done.

Dutch Oven Monkey Bread – Serves 20

12-inch Dutch oven

Ingredients:

1 cup butter, melted (don't substitute)
½ cup brown sugar
3 7.5-oz tubes of Pillsbury grand biscuits (not flaky)
½ teaspoon cinnamon

Preparations:

After melting the butter in the bottom of the oven, remove ½ of it and stir in brown sugar. Open tubes of biscuits and cut into quarters. Dredge in a white sugar and cinnamon mixture that you have mixed beforehand. Lay pieces in Dutch oven with remaining butter. Pour the butter that was previously removed over the top of the biscuits.

Bake with 8 or 9 coals on top and 14 or 15 coals on bottom for 18 to 20 minutes, or until golden brown on top. Watch carefully—the time depends on the number of briquettes used. Once done, invert immediately and serve on a platter. Note: you can use crushed pecans or any other nuts you'd like. Simply add them to the brown sugar/butter mix before adding to the bread.

Photo: Courtesy of Lodge Cast Iron

Mountain Man Breakfast – Serves 10 to 12

12-inch Dutch oven

Ingredients:

1 pound bacon
10 to 12 medium potatoes, sliced
2 medium yellow onions, diced
12 eggs, beaten
1½ cups fresh mushrooms, sliced
salt and pepper to taste
1 green bell pepper, diced
3 cups grated cheddar cheese
3 cloves garlic, minced
picante sauce

Preparations:

Heat a 12-inch Dutch oven using 18 to 20 briquettes on bottom until hot. Cut bacon into 1-inch slices. Add to Dutch oven and fry until brown. Add onion, mushrooms, and bell pepper, and sauté until onions are translucent. Add potatoes and season with salt and pepper. **Cover and bake using 8 briquettes on bottom and 14 to 16 briquettes on top for 30 minutes.** Season eggs with salt and pepper; then pour eggs over top of potatoes. Cover and bake another 20 minutes. Stir gently every 5 minutes. When eggs are done, cover top with cheese and replace lid. Let stand until cheese is melted. Serve topped with picante sauce. Serves: 10 to 12.

DESSERTS

Peach and Apple Crunch – Serves 15

12-inch Dutch oven

Ingredients:

5 cups apples
1 cup regular rolled oats (not instant)
5 cups peaches
1 to 2 tablespoons honey
½ cup brown sugar
1 tablespoon lemon juice
2 teaspoons cinnamon
dash of nutmeg

Preparations:

Simmer apples and peaches in oven with ½ cup of water while preparing dry ingredients. Swirl honey over hot fruit. Sprinkle lemon juice over filling. Mix dry ingredients and shake evenly over fruit.

Cook for 15 to 20 minutes until oats are brown. **Bake with 8 to 10 coals on bottom and 14 to 16 coals on top.**

Fruit Pizza – Serves 10

10-inch Dutch oven

Ingredients:

1 large egg white
¼ cup vegetable oil
¼ cup brown sugar, firmly packed
⅓ cup all-purpose flour
¼ teaspoon ground cinnamon
1 cup uncooked quick-cooking oatmeal
¼ teaspoon baking soda
***Frosting:** ½ 6-oz container non-fat vanilla yogurt, ½ 8-oz package cream cheese*
***Fruit topping:** fresh apples, strawberries, grapes, and kiwi, sliced*

Preparations:

Dough: Mix flour, cinnamon, and soda. Set aside. In separate bowl, beat egg white till foamy. Add oil and sugar, and mix till smooth. Add dry ingredients and mix. Stir in oatmeal. Oil bottom of oven. Press dough into bottom.

Cook with 9 coals on bottom and 12 on top for 30 minutes. Remove and cool.

Mix frosting ingredients together, and spread onto dough. Spread fruit on top when done.

Chocolate Lovers Delight – Serves 12

12-inch Dutch oven

Ingredients:

1½ cups water
¼ cup cocoa powder
1 chocolate cake mix; prepared as directed
1 cup light brown sugar
1 6-oz bag semi-sweet chocolate chips
1 10-oz bag miniature marshmallows

Preparations:

Line the bottom and sides of the Dutch oven with heavy foil. Mix the water, cocoa powder, and brown sugar together, and pour into the Dutch oven. Add marshmallows and spread them out evenly. Pour prepared chocolate cake mix over marshmallows.

Sprinkle chocolate chips over cake batter. **Cover oven and bake, using 8 to 10 briquettes on bottom and 14 to 16 briquettes on top for 60 minutes.** Serve warm with whipped cream.

Appendix A

Food Thermometer Tips

- Insert the food thermometer into the thickest part of the food, making sure it doesn't touch bone, fat, or gristle.
- Cook food until the thermometer shows an internal temperature of 160°F for hamburger, pork, and egg dishes; 145°F for beef, veal, and lamb steaks and roasts; and 165°F for all poultry.
- Clean your food thermometer with hot, soapy water before and after each use.

Nutritional Information

Lemon Pepper Chicken with Sautéed Mushrooms

Calories (kcal):	324
% Calories from Fat:	53.9%
% Calories from Carbohydrates:	22.0%
% Calories from Protein:	24.1%

Per Serving Nutritional Information

Total Fat (g):	19g	30%	Vitamin B6 (mg):	.3mg	15%
Saturated Fat (g):	7g	35%	Vitamin B12 (mcg):	.3mcg	5%
Monounsaturated Fat (g):	7g	33%	Thiamin B1 (mg):	.2mg	15%
Polyunsaturated Fat (g):	3g	15%	Riboflavin B2 (mg):	.4mg	25%
Cholesterol (mg):	91mg	30%	Folacin (mcg):	22mcg	6%
Total Carbohydrate (g):	18g	6%	Niacin (mg):	8mg	40%
Dietary Fiber (g):	1g	5%	Caffeine (mg):	0mg	N/A
Protein (g):	19g	39%	Alcohol (kcal):	0	N/A
Sodium (mg):	306mg	13%	% Refuse:		
Potassium (mg):	383mg	11%			
Calcium (mg):	21mg	2%	**Food Exchanges**		
Iron (mg):	2mg	13%	Grain (Starch):		1
Zinc (mg):	2mg	13%	Lean Meat:		2 1/2
Vitamin C (mg):	4mg	7%	Vegetable:		1/2
Vitamin A (i.u.):	310IU	6%	Fruit:		0
Vitamin A (r.e.):	84 1/2RE	8%	Non-Fat Milk:		0
			Fat:		2 1/2
			Other Carbohydrates:		0

** Percent Daily Values are based on a 2000 calorie diet.*

Lasagna

Calories (kcal):	532
% Calories from Fat:	26.6%
% Calories from Carbohydrates:	39.2%
% Calories from Protein:	35.2%

Per Serving Nutritional Information

Total Fat (g):	12g	18%	Vitamin B6 (mg):	.4mg	20%
Saturated Fat (g):	7g	33%	Vitamin B12 (mcg):	1.7mcg	28%
Monounsaturated Fat (g):	4g	16%	Thiamin B1 (mg):	.5mg	34%
Polyunsaturated Fat (g):	1g	4%	Riboflavin B2 (mg):	.6mg	36%
Cholesterol (mg):	79mg	26%	Folacin (mcg):	46mcg	12%
Total Carbohydrate (g):	41g	14%	Niacin (mg):	6mg	29%
Dietary Fiber (g):	3g	12%	Caffeine (mg):	0mg	N/A
Protein (g):	37g	74%	Alcohol (kcal):	0	N/A
Sodium (mg):	1114mg	46%	% Refuse:		
Potassium (mg):	723mg	21%			
Calcium (mg):	444mg	44%	**Food Exchanges**		
Iron (mg):	4mg	20%	Grain (Starch):		2
Zinc (mg):	4mg	26%	Lean Meat:		3 1/2
Vitamin C (mg):	26mg	44%	Vegetable:		1 1/2
Vitamin A (i.u.):	1547IU	31%	Fruit:		0
Vitamin A (r.e.):	224 1/2RE	22%	Non-Fat Milk:		0
			Fat:		1/2
			Other Carbohydrates:		0

** Percent Daily Values are based on a 2000 calorie diet.*

Chicken Barley Soup

Calories (kcal):	369
% Calories from Fat:	58.6%
% Calories from Carbohydrates:	11.2%
% Calories from Protein:	30.2%

Per Serving Nutritional Information

Total Fat (g):	24g	36%	**Vitamin B6 (mg):**	.6mg	28%
Saturated Fat (g):	6g	32%	**Vitamin B12 (mcg):**	1.5mcg	25%
Monounsaturated Fat (g):	9g	42%	**Thiamin B1 (mg):**	.2mg	11%
Polyunsaturated Fat (g):	5g	22%	**Riboflavin B2 (mg):**	.3mg	18%
Cholesterol (mg):	136mg	45%	**Folacin (mcg):**	49mcg	12%
Total Carbohydrate (g):	10g	3%	**Niacin (mg):**	10mg	52%
Dietary Fiber (g):	2g	9%	**Caffeine (mg):**	0mg	N/A
Protein (g):	27g	55%	**Alcohol (kcal):**	0	N/A
Sodium (mg):	311mg	13%	**% Refuse:**		
Potassium (mg):	450mg	13%			
Calcium (mg):	38mg	4%			
Iron (mg):	3mg	15%			
Zinc (mg):	2mg	16%			
Vitamin C (mg):	7mg	11%			
Vitamin A (i.u.):	6445IU	129%			
Vitamin A (r.e.):	897 1/2RE	90%			

Food Exchanges

Grain (Starch):	1/2
Lean Meat:	3 1/2
Vegetable:	1/2
Fruit:	0
Non-Fat Milk:	0
Fat:	2 1/2
Other Carbohydrates:	0

** Percent Daily Values are based on a 2000 calorie diet.*

Dutch Oven Potatoes

Calories (kcal):	180
% Calories from Fat:	22.2%
% Calories from Carbohydrates:	64.2%
% Calories from Protein:	13.5%

Per Serving Nutritional Information

Total Fat (g):	5g	7%	**Vitamin B6 (mg):**	.4mg	21%
Saturated Fat (g):	2g	11%	**Vitamin B12 (mcg):**	.1mcg	2%
Monounsaturated Fat (g):	1g	6%	**Thiamin B1 (mg):**	.2mg	10%
Polyunsaturated Fat (g):	1g	3%	**Riboflavin B2 (mg):**	.1mg	7%
Cholesterol (mg):	10mg	3%	**Folacin (mcg):**	25mcg	6%
Total Carbohydrate (g):	29g	10%	**Niacin (mg):**	3mg	13%
Dietary Fiber (g):	3g	11%	**Caffeine (mg):**	0mg	N/A
Protein (g):	6g	12%	**Alcohol (kcal):**	0	N/A
Sodium (mg):	166mg	7%	**% Refuse:**		
Potassium (mg):	888mg	25%			
Calcium (mg):	71mg	7%			
Iron (mg):	1mg	8%			
Zinc (mg):	1mg	7%			
Vitamin C (mg):	32mg	53%			
Vitamin A (i.u.):	80IU	2%			
Vitamin A (r.e.):	24RE	2%			

Food Exchanges

Grain (Starch):	2
Lean Meat:	1/2
Vegetable:	1/2
Fruit:	0
Non-Fat Milk:	0
Fat:	1/2
Other Carbohydrates:	0

** Percent Daily Values are based on a 2000 calorie diet.*

Spuds & Onions Au Gratin

Calories (kcal):	467
% Calories from Fat:	20.7%
% Calories from Carbohydrates:	66.0%
% Calories from Protein:	13.3%

Per Serving Nutritional Information

Total Fat (g):	11g	17%	**Vitamin B6 (mg):**	1.0mg	51%
Saturated Fat (g):	7g	34%	**Vitamin B12 (mcg):**	.2mcg	3%
Monounsaturated Fat (g):	3g	14%	**Thiamin B1 (mg):**	.4mg	25%
Polyunsaturated Fat (g):	1g	2%	**Riboflavin B2 (mg):**	.3mg	17%
Cholesterol (mg):	31mg	10%	**Folacin (mcg):**	64mcg	16%
Total Carbohydrate (g):	78g	26%	**Niacin (mg):**	6mg	31%
Dietary Fiber (g):	7g	28%	**Caffeine (mg):**	0mg	N/A
Protein (g):	16g	32%	**Alcohol (kcal):**	0	N/A
Sodium (mg):	555mg	23%	**% Refuse:**		
Potassium (mg):	2202mg	63%			
Calcium (mg):	246mg	25%			
Iron (mg):	4mg	20%			
Zinc (mg):	2mg	16%			
Vitamin C (mg):	76mg	127%			
Vitamin A (i.u.):	641IU	13%			
Vitamin A (r.e.):	108 1/2RE	11%			

Food Exchanges

Grain (Starch):	5
Lean Meat:	1
Vegetable:	1/2
Fruit:	0
Non-Fat Milk:	0
Fat:	1 1/2
Other Carbohydrates:	0

** Percent Daily Values are based on a 2000 calorie diet.*

String Bean Casserole

Calories (kcal):	250
% Calories from Fat:	52.6%
% Calories from Carbohydrates:	36.0%
% Calories from Protein:	11.4%

Per Serving Nutritional Information

Total Fat (g):	15g	23%	**Vitamin B6 (mg):**	.1mg	3%
Saturated Fat (g):	7g	35%	**Vitamin B12 (mcg):**	.2mcg	3%
Monounsaturated Fat (g):	5g	23%	**Thiamin B1 (mg):**	.1mg	5%
Polyunsaturated Fat (g):	2g	8%	**Riboflavin B2 (mg):**	.2mg	10%
Cholesterol (mg):	22mg	7%	**Folacin (mcg):**	44mcg	11%
Total Carbohydrate (g):	23g	8%	**Niacin (mg):**	1mg	5%
Dietary Fiber (g):	3g	12%	**Caffeine (mg):**	0mg	N/A
Protein (g):	7g	15%	**Alcohol (kcal):**	0	N/A
Sodium (mg):	923mg	38%	**% Refuse:**		
Potassium (mg):	231mg	7%			
Calcium (mg):	175mg	17%			
Iron (mg):	2mg	9%			
Zinc (mg):	1mg	8%			
Vitamin C (mg):	6mg	9%			
Vitamin A (i.u.):	512IU	10%			
Vitamin A (r.e.):	81 1/2RE	8%			

Food Exchanges

Grain (Starch):	1
Lean Meat:	1/2
Vegetable:	1 1/2
Fruit:	0
Non-Fat Milk:	0
Fat:	2 1/2
Other Carbohydrates:	0

** Percent Daily Values are based on a 2000 calorie diet.*

German Pancakes

Calories (kcal):	117
% Calories from Fat:	42.8%
% Calories from Carbohydrates:	40.2%
% Calories from Protein:	17.1%

Per Serving Nutritional Information

Total Fat (g):	5g	8%	**Vitamin B6 (mg):**	trace	2%
Saturated Fat (g):	3g	13%	**Vitamin B12 (mcg):**	.4mcg	7%
Monounsaturated Fat (g):	2g	8%	**Thiamin B1 (mg):**	.1mg	7%
Polyunsaturated Fat (g):	trace	2%	**Riboflavin B2 (mg):**	.2mg	12%
Cholesterol (mg):	114mg	38%	**Folacin (mcg):**	16mcg	4%
Total Carbohydrate (g):	12g	4%	**Niacin (mg):**	1mg	3%
Dietary Fiber (g):	trace	1%	**Caffeine (mg):**	0mg	N/A
Protein (g):	5g	10%	**Alcohol (kcal):**	0	N/A
Sodium (mg):	119mg	5%	**% Refuse:**		
Potassium (mg):	79mg	2%			
Calcium (mg):	41mg	4%			
Iron (mg):	1mg	5%			
Zinc (mg):	trace	3%			
Vitamin C (mg):	trace	0%			
Vitamin A (i.u.):	272IU	5%			
Vitamin A (r.e.):	74 1/2RE	7%			

Food Exchanges

Grain (Starch):	1/2
Lean Meat:	1/2
Vegetable:	0
Fruit:	0
Non-Fat Milk:	0
Fat:	1
Other Carbohydrates:	0

** Percent Daily Values are based on a 2000 calorie diet.*

Monkey Bread

Calories (kcal):	205
% Calories from Fat:	58.7%
% Calories from Carbohydrates:	37.2%
% Calories from Protein:	4.1%

Per Serving Nutritional Information

Total Fat (g):	14g	21%	**Vitamin B6 (mg):**	trace	1%
Saturated Fat (g):	7g	34%	**Vitamin B12 (mcg):**	trace	0%
Monounsaturated Fat (g):	5g	23%	**Thiamin B1 (mg):**	.1mg	8%
Polyunsaturated Fat (g):	1g	4%	**Riboflavin B2 (mg):**	.1mg	4%
Cholesterol (mg):	25mg	8%	**Folacin (mcg):**	2mcg	1%
Total Carbohydrate (g):	19g	6%	**Niacin (mg):**	1mg	5%
Dietary Fiber (g):	1g	2%	**Caffeine (mg):**	0mg	N/A
Protein (g):	2g	4%	**Alcohol (kcal):**	0	N/A
Sodium (mg):	454mg	19%	**% Refuse:**		
Potassium (mg):	51mg	1%			
Calcium (mg):	12mg	1%			
Iron (mg):	1mg	5%			
Zinc (mg):	trace	1%			
Vitamin C (mg):	trace	0%			
Vitamin A (i.u.):	347IU	7%			
Vitamin A (r.e.):	86RE	9%			

Food Exchanges

Grain (Starch):	1
Lean Meat:	0
Vegetable:	0
Fruit:	0
Non-Fat Milk:	0
Fat:	3
Other Carbohydrates:	1/2

** Percent Daily Values are based on a 2000 calorie diet.*

Mountain Man Breakfast

Calories (kcal):	343
% Calories from Fat:	58.2%
% Calories from Carbohydrates:	20.1%
% Calories from Protein:	21.7%

Per Serving Nutritional Information

Total Fat (g):	22g	34%	**Vitamin B6 (mg):**	.3mg	17%
Saturated Fat (g):	9g	47%	**Vitamin B12 (mcg):**	1.0mcg	17%
Monounsaturated Fat (g):	9g	40%	**Thiamin B1 (mg):**	.3mg	18%
Polyunsaturated Fat (g):	2g	10%	**Riboflavin B2 (mg):**	.3mg	19%
Cholesterol (mg):	183mg	61%	**Folacin (mcg):**	36mcg	9%
Total Carbohydrate (g):	17g	6%	**Niacin (mg):**	3mg	17%
Dietary Fiber (g):	2g	7%	**Caffeine (mg):**	0mg	N/A
Protein (g):	19g	37%	**Alcohol (kcal):**	0	N/A
Sodium (mg):	572mg	24%	**% Refuse:**		
Potassium (mg):	682mg	19%			
Calcium (mg):	166mg	17%			
Iron (mg):	2mg	10%			
Zinc (mg):	2mg	14%			
Vitamin C (mg):	32mg	53%			
Vitamin A (i.u.):	404IU	8%			
Vitamin A (r.e.):	110 1/2RE	11%			

Food Exchanges

Grain (Starch):	1
Lean Meat:	2
Vegetable:	1/2
Fruit:	0
Non-Fat Milk:	0
Fat:	3
Other Carbohydrates:	0

** Percent Daily Values are based on a 2000 calorie diet.*

Peach and Apple Crunch

Calories (kcal):	104
% Calories from Fat:	4.3%
% Calories from Carbohydrates:	90.8%
% Calories from Protein:	4.8%

Per Serving Nutritional Information

Total Fat (g):	1g	1%	**Vitamin B6 (mg):**	trace	2%
Saturated Fat (g):	trace	0%	**Vitamin B12 (mcg):**	0mcg	0%
Monounsaturated Fat (g):	trace	1%	**Thiamin B1 (mg):**	.1mg	3%
Polyunsaturated Fat (g):	trace	1%	**Riboflavin B2 (mg):**	trace	2%
Cholesterol (mg):	0mg	0%	**Folacin (mcg):**	6mcg	1%
Total Carbohydrate (g):	25g	8%	**Niacin (mg):**	1mg	3%
Dietary Fiber (g):	3g	11%	**Caffeine (mg):**	0mg	N/A
Protein (g):	1g	3%	**Alcohol (kcal):**	0	N/A
Sodium (mg):	3mg	0%	**% Refuse:**		
Potassium (mg):	202mg	6%			
Calcium (mg):	18mg	2%			
Iron (mg):	1mg	3%			
Zinc (mg):	trace	2%			
Vitamin C (mg):	6mg	11%			
Vitamin A (i.u.):	327IU	7%			
Vitamin A (r.e.):	33RE	3%			

Food Exchanges

Grain (Starch):	1/2
Lean Meat:	0
Vegetable:	0
Fruit:	1
Non-Fat Milk:	0
Fat:	0
Other Carbohydrates:	1/2

** Percent Daily Values are based on a 2000 calorie diet.*

Fruit Pizza

Calories (kcal):	192
% Calories from Fat:	46.3%
% Calories from Carbohydrates:	46.3%
% Calories from Protein:	7.5%

Per Serving Nutritional Information

Total Fat (g):	10g	16%	**Vitamin B6 (mg):**	trace	2%
Saturated Fat (g):	3g	16%	**Vitamin B12 (mcg):**	.1mcg	2%
Monounsaturated Fat (g):	5g	20%	**Thiamin B1 (mg):**	.1mg	7%
Polyunsaturated Fat (g):	2g	7%	**Riboflavin B2 (mg):**	.1mg	6%
Cholesterol (mg):	13mg	4%	**Folacin (mcg):**	10mcg	2%
Total Carbohydrate (g):	23g	8%	**Niacin (mg):**	trace	2%
Dietary Fiber (g):	2g	9%	**Caffeine (mg):**	0mg	N/A
Protein (g):	4g	7%	**Alcohol (kcal):**	0	N/A
Sodium (mg):	80mg	3%	**% Refuse:**		
Potassium (mg):	204mg	6%			
Calcium (mg):	43mg	4%			
Iron (mg):	1mg	5%			
Zinc (mg):	trace	3%			
Vitamin C (mg):	27mg	45%			
Vitamin A (i.u.):	221IU	4%			
Vitamin A (r.e.):	54 1/2RE	5%			

Food Exchanges

Grain (Starch):	1/2
Lean Meat:	0
Vegetable:	0
Fruit:	1/2
Non-Fat Milk:	0
Fat:	2
Other Carbohydrates:	1/2

** Percent Daily Values are based on a 2000 calorie diet.*

Chocolate Lovers Delight

Calories (kcal):	377
% Calories from Fat:	19.6%
% Calories from Carbohydrates:	77.3%
% Calories from Protein:	3.1%

Per Serving Nutritional Information

Total Fat (g):	9g	13%	**Vitamin B6 (mg):**	trace	1%
Saturated Fat (g):	3g	16%	**Vitamin B12 (mcg):**	trace	1%
Monounsaturated Fat (g):	3g	14%	**Thiamin B1 (mg):**	.1mg	7%
Polyunsaturated Fat (g):	2g	8%	**Riboflavin B2 (mg):**	.1mg	5%
Cholesterol (mg):	0mg	0%	**Folacin (mcg):**	6mcg	1%
Total Carbohydrate (g):	76g	25%	**Niacin (mg):**	1mg	3%
Dietary Fiber (g):	2g	7%	**Caffeine (mg):**	13mg	N/A
Protein (g):	3g	6%	**Alcohol (kcal):**	0	N/A
Sodium (mg):	272mg	11%	**% Refuse:**		
Potassium (mg):	188mg	5%			
Calcium (mg):	100mg	10%			
Iron (mg):	2mg	9%			
Zinc (mg):	1mg	4%			
Vitamin C (mg):	trace	0%			
Vitamin A (i.u.):	4IU	0%			
Vitamin A (r.e.):	1/2RE	0%			

Food Exchanges

Grain (Starch):	0
Lean Meat:	0
Vegetable:	0
Fruit:	0
Non-Fat Milk:	0
Fat:	1 1/2
Other Carbohydrates:	5

** Percent Daily Values are based on a 2000 calorie diet.*

Measurement Conversion Table

U.S. customary	Conversion factor for U.S. customary to metric	Conversion factor for metric to U.S. customary	Metric
teaspoon (tsp)	4.93	0.20	milliliter (ml)
tablespoon (tbsp)	14.79	0.06	milliliter (ml)
ounce (oz)	28.35	0.035	gram (g)
fluid ounce (fl oz)	29.57	0.03	milliliter (ml)
cup (c)	236.59	0.004	milliliter (ml)
pound (lb)	0.454	2.20	kilogram (kg)
inch (in)	2.54	0.39	centimeter (cm)

Acknowledgments

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