

Dutch Oven Cooking

Unit I



18 U.S.C. 707

Project Manual

Selecting and Buying a Dutch Oven

A Dutch oven is made of cast iron. It is a pot with a flat bottom with 3 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 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 eight inches in diameter to twenty-two inches in diameter. There are also various depths available. Most families start out with a 12 or 14 inch diameter 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, during cooking, needs to make a seal 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.

Size and Selection of Dutch Ovens

Adapted from: "Lovin' Dutch Oven" by Joan S. Larsen

The selection of 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, 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 1986. Check local hardware stores, grocery stores, or places that specialize in camping gear. The following chart applies to Lodge Dutch ovens. All sizes are 4 inches deep.

Size	Capacity	Suggested Uses and Servings*
8"	2 qts.	Main dishes, 2-6 servings Side dishes, 8-10 servings
10"	4 qts.	Main dishes, 2-12 servings Side dishes, 16-20 servings
12"	6 qts.	Main dishes, 6-18 servings Side dishes, to 30 servings
14"	8 qts.	Main dishes, 8-25 servings Side dishes, to 40 servings
16"	12 qts.	Main dishes, 12-38 servings Side dishes, to 60 servings

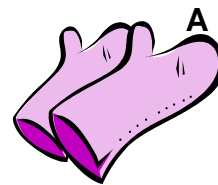
* Servings may vary. Main dishes are based on a 10 oz. serving. Side dishes are based on a 6 oz. serving.

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Dutch Oven Accessories and Cooking Tools

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 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. Charcoal Starter – Using a charcoal starter shortens the time you will need to wait for your charcoal to get hot enough to use. Many Dutch oven cookbooks have pictures of different styles of charcoal starters.



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 re-use 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 3 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.



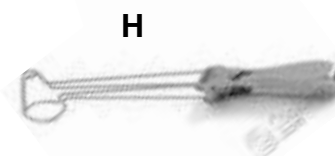
G & H

H. Tongs – At least two **long handled** pair will be needed:



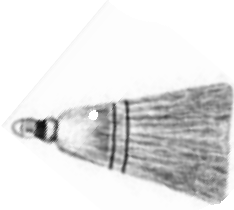
Charcoal Tongs – used for placing hot coals on top and underneath Dutch oven.

Food Tongs – used for lifting food. **Do Not** use charcoal tongs for food.



H

I. **Tool Roll** – 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.



As you get more familiar with Dutch oven cooking you may add different tools to your collection. Remember always keep your tools together, if at all possible store them close to your Dutch oven, then when you are ready to cook everything is easily available.

Answer the following before continuing on with the project.

List three accessories and/or tools used with Dutch oven cooking.

1. _____

2. _____

3. _____

List two items you should check when you buy a Dutch oven.

1. _____

2. _____

Seasoning the 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. It is also the feature that gives your oven a stick-free surface.

If you were to ask one hundred people how to season a Dutch oven you would probably get one hundred different answers. But, here is the procedure the leading Dutch oven manufacturer, "Lodge", recommends to **season** a new Dutch oven. (*Parents: some 4-Hers may need some help with the following steps.*)

1. Warm the Dutch oven and peel off the label. Wash, using mild, soapy water (**Never** use an abrasive cleanser) and a stiff brush. Make sure the protective coating provided by the manufacturer on **new** Dutch ovens is completely removed.
2. Warm the oven again and spread a thin coating of 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. Also, the salt in some fats attracts moisture which promotes rust.
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 re-season 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 following before continuing on with the project.

List the two reasons a Dutch oven should be seasoned.

1. _____

2. _____

List at least two times a Dutch oven should be seasoned.

1. _____

2. _____

Explain why a Dutch oven may smell rancid if not used for a period of time.

1. _____

Safety First

Always cook in a traffic-free and shrub-free area

1. 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.
2. 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.
3. 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.
4. Always open Dutch oven lids away from you. The escaping steam burns! Also, many a dish has been garnished by ashes and coals!
5. Put lids on a clean rock or stand. Remember, lids in the sand mean sand in the teeth.
6. Watch hot oil closely, it can burst into flames if it gets too hot.
7. Important!! Do not burn charcoal briquettes indoors. They give off toxic fumes when burning. Hot coals require good outdoor ventilation.
8. 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 following before continuing on with the project. (Write complete sentences)

1. What did you use to lift the lid on your hot Dutch oven? Did it protect you enough from the heat?

2. Where did you place your lid when you were stirring foods in your Dutch oven?

3. Describe the safe process of cleaning up the hot coals you used after you were finished cooking? Refer to Dutch oven accessories and cooking tools, page 3.

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

1.) _____

2.) _____

Fires For Dutch Oven Cooking

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 most likely you will settle on either a wood fire or charcoal briquettes.

Remember though, 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. Remember, 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.

Chimney Starter Method of Starting Charcoal 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 number ten (15 cup) tin can, follow these steps:

- ❖ Cut both ends off of the can.
- ❖ Punch holes every two 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 crumbled 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 30-40 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.



Always keep an eye on what you are cooking!

Estimating Temperatures

From: "Lovin' Dutch Oven" by Joan S. Larsen

Every year, state and national parks place more restrictions on gathering wood and building open fires. Charcoal is a good alternative. Besides being easy to obtain and transport, it is useful for regulating temperatures.

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.

Use the charcoal starter equipment to properly start the briquettes. Coals (heated charcoal briquettes) are ready to place under and on top of the Dutch oven when a gray ash forms around the coals.

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.

Determine the Basic 325 degree Baking Temperature for Dutch ovens

To help determine baking temperatures for Dutch ovens, use the “**3 up, 3 down = 325 degrees**” formula. (Plus three up, minus three down = 325 degrees). 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 degrees. For example, a 12” oven uses 15 top coals (“3 up” = 12+3”) and 9 bottom coals (“3 down” = 12 -3”) to reach a temperature of 325 degrees. The chart below gives the standard number of coals on top and on bottom to reach 325 degrees for the most common Dutch oven sizes.

Oven Sizes	8”	10”	12”	14”	16”
Top Heat	11	13	15	17	19
Bottom Heat	5	7	9	11	13

Exceptions to the previous chart:

If you are **baking** (between 325 and 350 degrees Fahrenheit) bread, rolls or cakes, put only 6-8 coals on the bottom of the 12 inch oven and 14-16 coals on the top.

For **frying or roasting** in a 12 inch oven, start out with about 12-14 coals on the bottom and 26 coals on the top.

For **steaming or broiling** add 3-6 coals on the bottom, eliminate top heat. Reduce the bottom heat for simmering.

Modify the standard 325 degree temperature

The chart on the top of this page gives the amount of coals required to heat different sizes of Dutch ovens to 325 degrees. Modify the 325 degree temperature by adding or subtracting the number of coals. Follow the chart below.

Temperature	Raise	Lower
20 to 25 Fahrenheit	Add 1 coal on the top and 1 on the bottom	Remove 1 coal on the top and 1 on the bottom
40 to 50 Fahrenheit	Add 2 coals on the top and 2 on the bottom	Remove 2 coals on the top and 2 on the bottom

Under ideal circumstances, **freshly lit briquettes yield up to one 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 the Dutch oven. Just add or subtract coals as the temperature of the recipe states.

Diagram of Top coals placement

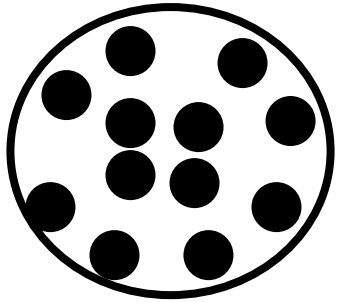
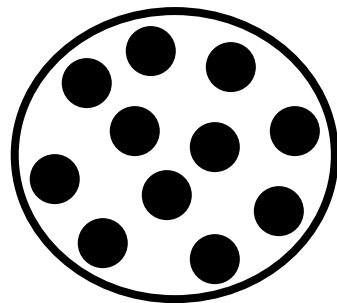


Diagram of Bottom coals placement



Answer the following before continuing on with the project.

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

Keeping Your Dutch Oven Clean

Cleaning your Dutch oven right after it is used is very important. A dirty oven will deteriorate the seasoning. 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 left over coals. Take off heat and cool. Next, spread a thin coat of vegetable oil on the inside bottom and sides of the Dutch oven. Return your Dutch oven to the coals and heat 3-4 minutes.

Here are several tips to help with your cleaning:

- Put only a Thin coat of vegetable oil on your oven at any one time. 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, you just need to wipe out your oven.
- If a sugary build up occurs after cooking, wash it out with a 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. Like glass, the Dutch oven could crack.

Answer the following before continuing on with the project

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.) Describe your experiences in complete sentences.

2. Explain the reason it is a good idea to line the Dutch oven with aluminum foil when cooking a Pineapple Upside Down Cake.

Storing Your Dutch Oven

Store your Dutch oven in a cool dry place without drastic temperature changes. Also store it with the lid ajar. This will let the air circulate and you should 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 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 re-season it as you 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.

Take care of your oven and it will last you a lifetime!



Answer the following:

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

Explain the reason's it is the best place to store your Dutch oven.

2. What causes a Dutch oven to rust?

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

Tips for the Master

1. Always start your coals 30-45 minutes before cooking.
2. When baking, use twice as many coals on top as on bottom. Also, pre-heating 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 $\frac{1}{4}$ 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. Lids in the sand mean 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 to cook the food with both top heat and bottom heat for about $\frac{2}{3}$'s of the total baking time. Then, remove the oven from bottom heat and finish baking with top heat only.

Websites:

The International Dutch Oven Society - www.idos.com

Lodge Manufacturers - www.lodgemfg.com

Byron's Dutch Oven Cooking – <http://papadutch.hom.comcast.net>

Camping and Dutch Oven Supplies – <http://store.wildernessessentials.com>