

Project Manual Unit 1

Dutch Oven Cooking



University of Idaho
Extension

INTRODUCTION

Dutch oven cooking is a special activity that can be enjoyed by all. The fun not only comes in eating, but also on the way to the finished product. This project was written for those who love the outdoors, be it in the mountains, at a state campground, or right in your own backyard. This project, Level I, will give you the basics to get started. Level II explores the history and emphasizes temperature coordination and control of Dutch ovens. Level III focuses on meats and yeast breads.

Because of the nature of this project (lifting heavy Dutch ovens, lighting coals and handling hot coals and ovens) it is recommended the minimum age be 12 years old.

Note to project helpers: There is one project helper's guide for all three units of this project that includes additional information and helpful advice for you, the adult, to guide youth through this Dutch Oven project.

Acknowledgments:

The Dutch Oven curriculum was updated and adapted from previous work by 4-H leaders in Idaho Southern District III. This version was modified by Claudia Brush, Joey Peutz, and Nancy Shelstad. These materials were reviewed by Barbara Abo, Family and Consumer Science/4-H Extension Educator, University of Idaho; Carol Benesh, 4-H Curriculum and Outreach Specialist, Montana State University; Stephanie Shank, Assistant 4-H Agent 4-H Youth Development, University of Arizona.

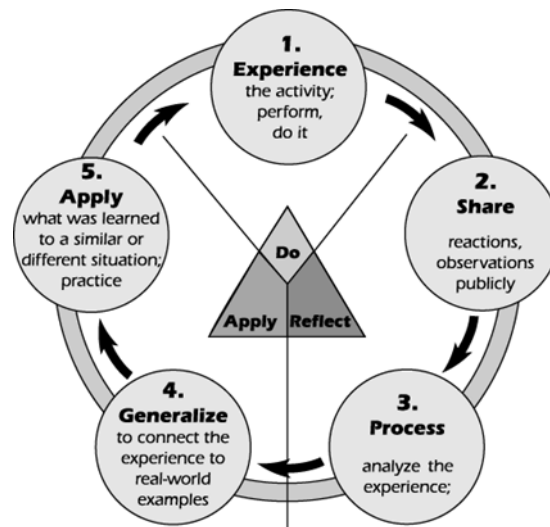
2012

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EXPERIENTIAL LEARNING MODEL

The Experiential Learning Model is used to help guide learning through this manual. The five steps encourage youth to try to do an activity before being told or shown how (experience). The project leader or helper will ask youth to describe what they have experienced and their reaction (share). The questions throughout the manual may be used to help youth analyze what you've accomplished (process). Youth will also want to think about how the activities and skills gained can help in future experiences (generalize). The last step asks youth to share how they can use this/these skill(s) in other parts of their life (apply). Do not hesitate to ask your leader or an Extension Educator for help.



Project Requirements: Put a check by each requirement as you complete it. This project may be repeated, each year complete the following;

- D **Complete** In member's current manual:
- D Complete all reflection questions
 - D Complete 3 Beyond Cooking activities
- D **Complete**
- D 4-H Involvement Report
 - D 4-H Project Record Book
- D **Cook** At least one from each of the following categories:
- D Soup or Stew
 - D One-Dish Meal
 - D Vegetable
 - D Quick Bread
 - D Dessert
 - D Breakfast
 - D Cooking On Lid
- D **Create** A recipe file or book that includes everything you cooked plus additional recipes to total a minimum of 11 recipes.
- D **Give** An oral presentation related to this project.
- D **Exhibit** Project
- Optional: Participation in a Dutch Oven cook-off is encouraged but not required.

Exhibit Requirements:

1. D Completed Project Manual, Record book, and Involvement Report.
2. D Your Dutch oven recipe file or book. All recipes should be neat and orderly. There should be a minimum of 11 recipes – there can be more although extras will not affect the judging outcome.
3. D A non-perishable dessert cooked in the Dutch oven. Include the recipe you used. Must be displayed on a plate, NOT in the Dutch oven. DO NOT BRING YOUR DUTCH OVEN.

OR

- D A poster (14"x22") or display illustrating what you learned in this project this year.

DUTCH OVEN COOKING PROJECT

Prepare at least 1 food from each category (with a minimum of 7). Recipes may be used from the recipe book that accompanies this project or from other sources.

List the foods you cooked the first year in this unit under the appropriate category

SOUP or STEW

1. _____
2. _____

VEGETABLE

1. _____
2. _____

DESSERT

1. _____
2. _____

COOKING ON LID

1. _____
2. _____

ONE-DISH MEAL

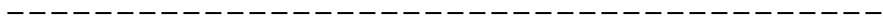
1. _____
2. _____

QUICK BREAD

1. _____
2. _____

BREAKFAST

1. _____
2. _____



List the foods you cooked the second year in this unit under the appropriate category

SOUP or STEW

1. _____
2. _____

VEGETABLE

1. _____
2. _____

DESSERT

1. _____
2. _____

COOKING ON LID

1. _____
2. _____

ONE-DISH MEAL

1. _____
2. _____

QUICK BREAD

1. _____
2. _____

BREAKFAST

1. _____
2. _____

NUTRITION AND HEALTHY LIVING



ChooseMyPlate

MyPlate illustrates the five food groups that are the building blocks for a healthy diet using a familiar image—a place setting for a meal. Before you eat, think about what goes on your plate or in your cup or bowl.

Information can be found at:
www.ChooseMyPlate.gov

Three Important Messages

Balancing Calories

- Enjoy your food, but eat less.
- Avoid oversized portions.

Foods to Increase

- Make half your plate fruits and vegetables.
- Make at least half your grains whole grains.
- Switch to fat-free or low-fat (1%) milk.

Foods to Reduce

- Compare sodium in foods like soup, bread, and frozen meals — and choose the foods with lower numbers.
- Drink water instead of sugary drinks.



Not only is eating well a great part of healthy living but being physically active is also important. Physical activity simply means movement of the body that uses energy. Walking, gardening, climbing the stairs, swimming or playing soccer are all good examples of being active. Record your physical activity for one week, discover how physically active you should be by visiting MyPlate.gov, and set a physical activity goal for yourself.

Physical Activity log

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
What did I do?							
Intensity level							
How long did I do it?							

My Physical Activity Goal:

Is my goal:

Specific-Specific is the What, Why, and How of a goal.

Measurable- Establish concrete criteria for measuring progress toward the attainment of each goal you set. How will you know when you've reached your goal?

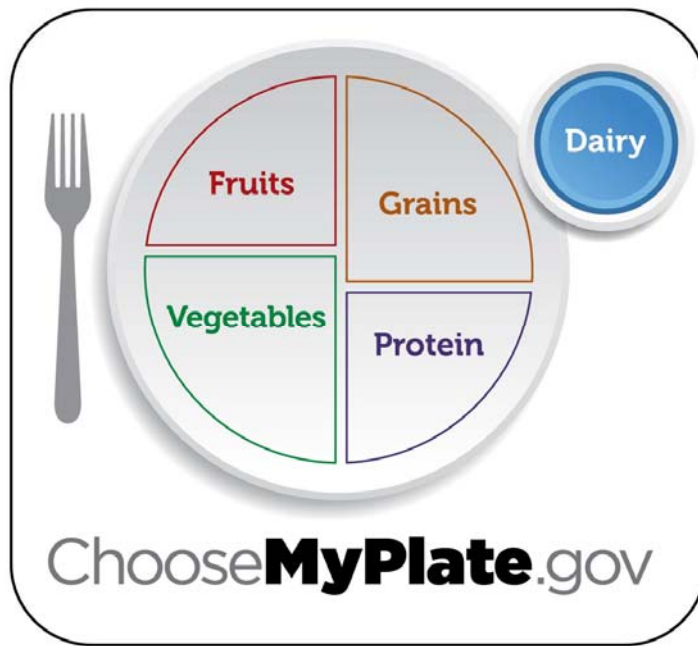
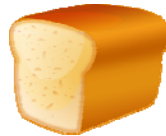
Attainable-A goal needs to stretch you slightly so you feel you can do it and it will need a real commitment from you.

Realistic-This is not a synonym for "easy." Realistic, in this case, means "do-able."

Timely-Set a timeframe for the goal: for next week, in three months, by eighth grade.

Food Grouping

Identify the food for each food group by drawing a line from the food to the correct food group on or by the plate. See your adult helper or leader for correct answers.



Reflection Question:

Answer the following before continuing on with the project. (Please write in complete sentences.)

Q. Each colored food group on MyPlate is a different size. Explain what this means as it relates to your nutrition requirements?

A. _____

Food Safety

Food safety is important for you and your family. That's why you should always remember to be food safe! It is easy and fun to do if you follow these four simple steps.

CLEAN: Wash hands and surfaces often
Foodborne bacterial can be hiding almost anyplace. In your kitchen, Dutch oven, your plate or even on your hands. The invisible enemy can multiply and make you sick. But you can follow these important rules: 1) wash your hands with warm water and soap for 20 seconds, 2) wash fruits and vegetables, 3) only put food on clean surfaces.



SEPARATE: Don't cross-contaminate!
Cross contamination is the scientific word for how bacteria can be spread from one food product to another. This is especially true when handling raw meat, poultry, eggs and seafood, so keep these foods and their juice away from ready-to-eat foods!

COOK: *Cook to proper temperature*

Did you know that food borne bacteria can't be seen, smelled or tasted and can make you sick? Be sure to use a food thermometer and to always cook food to a safe minimum internal temperature.

- Fish, steaks and roasts including beef, veal, pork and lamb need to reach 145 °F and be held for a 3 minute rest time.
- All poultry – whole, pieces or ground need to reach 165 °F.
- All ground meat (except poultry) including beef, veal, pork and lamb, and egg dishes need to reach 160 °F.



CHILL: *Refrigerate promptly*

Keeping cold foods cold is one of the most important rules you can follow to help fight bacteria growth. Chill leftovers and takeout foods within 2 hours and keep the fridge at 40 °F or below. To make sure you are keeping your food safe at all times keep cold foods cold. Some foods that need to stay cold include:

- Sandwiches or salads made with meat and poultry;
- Tuna and egg salad;
- Milk, cheese, and yogurt;
- Peeled or cut fruits and vegetables.



GETTING STARTED

Dutch oven cooking is more than just dumping food in a black pot and putting it on the hot coals, hoping that it will be good to eat. The biggest mistake people make, is not realizing the possibilities available to them with a Dutch oven. You can cook anything in your Dutch oven that you would normally cook in your home oven; just a few examples include bread, rolls, homemade pies, pizza, roast, and meatloaf. Remember, anything that can be fried, stewed, boiled, baked, steamed or poached can be cooked in a Dutch oven. Low-fat, low sodium and low-sugar recipes can also be cooked in the Dutch oven very successfully. Choosing the specific method of Dutch oven cooking to fit a certain type of food will result in more success.



Another important advantage to the Dutch oven is its versatility in times of emergency. Imagine, if the power or gas were off for a prolonged period of time, great meals could still be prepared using the Dutch oven.

Throughout this manual, the terms, "briquettes", and "coals" are used frequently. **THEY DO NOT MEAN THE SAME.** "Briquette" means the cold charcoal right out of the bag. "Coals" are the hot charcoal (with a grayish cast) that is ready to use.

Recommended for this project is to purchase good quality charcoal briquettes. Charcoal briquettes, vary in their quality. Either experiment or ask experienced Dutch oven chefs about which ones heat evenly, and do not disintegrate quickly.



SELECTING AND BUYING A DUTCH OVEN

A Dutch oven can be made of cast iron or aluminum. It is a pot with a flat bottom, 3 legs and a lid with a flange around the outside of it which helps hold the coals while cooking. If there is no flange, a wok ring can be used to keep coals on the top. The Dutch oven is designed to heat evenly. The most popular Dutch oven is the cast iron, however many "packers" will use the aluminum oven because it is light weight. For this project we will be referring to the cast iron Dutch oven.



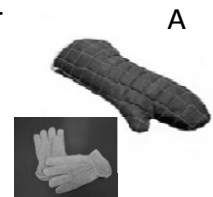
When shopping for a new Dutch oven, remember that all ovens are not the same. There are ovens ranging in size from eight inches in diameter to twenty two inches in diameter. There are also regular and deep depths available. Most families start out with a 12 or 14 inch diameter regular oven and then add ovens to meet their particular needs.

- + Make sure the lid fits well. The lid, during cooking, should make a seal so the fit is very important. Make sure to keep the correct lid with its oven base. Always use a lid that fits properly.
- + Check the walls of the oven. The walls of the oven should be the same thickness all the way around.
- + Check the oven surface. The surface of the Dutch oven should be an even gray color and should not show too many signs of grinding where the manufacturer has had to fix imperfections.
- + Pre-seasoned or unseasoned. Dutch ovens are available pre-seasoned or unseasoned. If an unseasoned oven is purchased, it needs to be seasoned before it is used the first time.

DUTCH OVEN ACCESSORIES AND COOKING TOOLS

There are a few accessories and tools that will help you cook with your Dutch ovens. Using these accessories and tools makes cooking easier, more comfortable, and safer.

A. LEATHER GLOVES OR OVEN MITTS - Heavy duty ranch style work gloves or welding gloves are great for handling hot lids and ovens. Oven mitts can also be used, but don't use the best oven mitts in the house. Oven mitts get black with use.



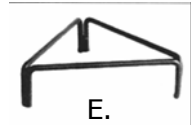
B. CHARCOAL CHIMNEY STARTER - Using a charcoal starter shortens the time to wait for the charcoal to get hot enough to use. Many Dutch oven cookbooks have pictures of different styles of charcoal starters.

C. CHARCOAL BUCKET - A charcoal bucket is 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 the coals.



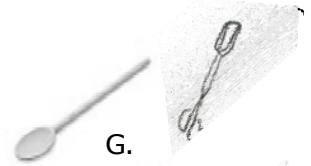
D. COOKING STAND - A cooking stand can be as simple as a cinder block with a barrel lid on top. Anything will do that is fireproof and up off the grass at least 10 inches.

E. LID HOLDER - A lid holder 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 - Lid lifters are available with either short or long handles. They can be purchased at any outdoor supply store. Even a pair of vise grips or channel lock pliers 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 - A list of long handled tools could include heat resistant spoons, tongs, turners, and forks. The long handles will keep you from burning yourself.



H. TONGS - At least two LONG HANDLED pair will be needed,

Heat resistant up to 450 °

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

2. Food Tongs - used for lifting food. DONOT use charcoal tongs for food.

I. APRON - An apron is used to protect your clothing against food spills. It should be close to the body to prevent it from catching fire.

J. WIND SCREEN— A windscreen is used to control air circulation. The windscreen should be about 8 inches high and surround your oven on three sides.

K. CHARCOAL— Good quality charcoal briquettes are convenient and simplify temperature control.



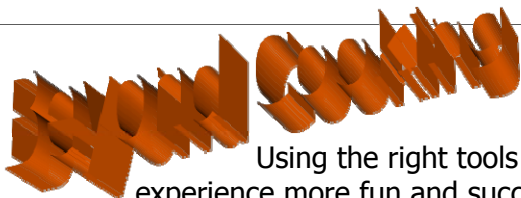
L. TOOL ROLL— A tool roll is a convenient way to store and take your tools with you when you go somewhere else to cook. It is usually made out of a heavy or quilted fabric. If you keep your Dutch oven tools all in one place, they're easier to locate.



L.



As you become 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.



Taking Inventory

Using the right tools and equipment will make your Dutch oven cooking experience more fun and successful. Make a list of what equipment you will need to get started, be specific with what size oven.

Equipment and Tools I will need:

Equipment/Tools and Features	Source/Cost	Rank

Research (go shopping, on-line, catalogs) the items you have listed and note where they can be purchased and how much it will cost. Include specific features of each item (pre-seasoned/unseasoned, size, come with carry case, etc.) that influenced you to choose each item on your purchase list.

If you had to purchase all of these items, how much would it cost?

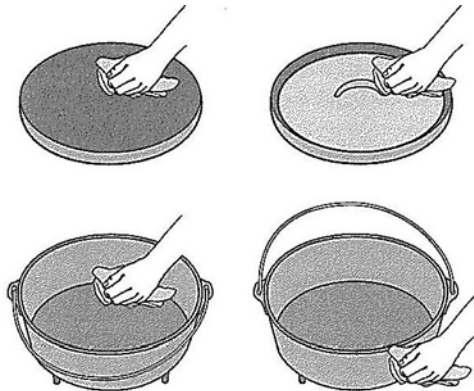
Determine which items you need and which ones are "nice to have". Rank each item, 1=most necessary down to the items that can be optional. Now you have a prioritized purchase list as finances permit.

CARING FOR A PRE-SEASONED DUTCH OVEN *

It is important to know how to care for a pre-seasoned Dutch oven so it will last a lifetime. Pre-seasoned Dutch ovens, ready to use cast iron cookware, can be used right from the start.

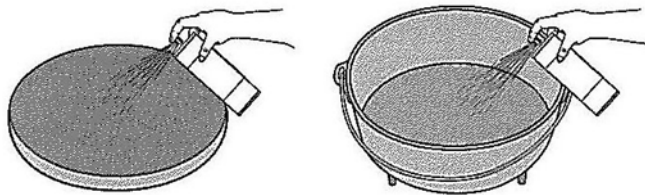
1

Rinse with hot water (do not use soap), and dry the interior and exterior surfaces thoroughly.



2

Before cooking, prepare the cooking surfaces by oiling or spraying with cooking spray. Be sure to spray all interior surfaces including the underside of the lid.



*From Camp Dutch Oven Cooking 101: From Backyard to Backwoods, 2004, Lodge press South Pittsburg, TN.

SEASONING A DUTCH OVEN

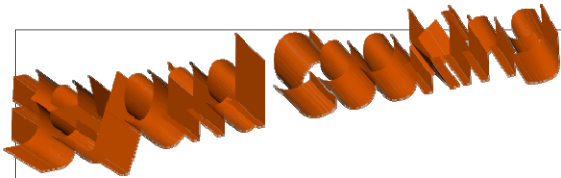
Seasoning a Dutch oven is very important. The seasoning on the oven protects it from rusting while not in use. Seasoning is also the feature that gives the Dutch oven a non-stick surface.

There are many ways to season a Dutch oven. Here is the procedure the leading Dutch oven manufacturer, Lodge, recommends to season a new Dutch oven. (Parents: Some 4-H'ers may need 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 stiff brush. Rinse and dry thoroughly with paper towels or a cloth.
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°F for 60 minutes. Allow the Dutch oven to remain in the oven until it cools to room temperatures. DO NOT OPEN THE OVEN DOOR TO SPEED COOLING.



The Dutch oven is now ready to use. If the Dutch oven hasn't been used for some time, and it smells rancid, it can be re-seasoned and brought back into service. (The definition of "rancid" is to have a rank smell or taste according to [Merriam-Webster Online Dictionary](#). 2009). When re-seasoning, begin as if it was a brand new oven and complete the seasoning process.



TheReasonToSeason

Rank the following items in the correct order to properly season a Dutch oven.

- _____ Warm the oven and spread a thin coat of vegetable oil
- _____ Wash with mild soapy water
- _____ Warm the oven and peel off label
- _____ Rinse and dry thoroughly
- _____ Allow oven to cool to room temperature
- _____ Place Dutch oven in conventional oven at 350° for 60 minutes

KEEPING A DUTCH OVEN CLEAN

Cleaning a Dutch oven right after it is used is very important. A dirty Dutch oven will deteriorate the seasoning. First, scrape out any leftover food and wash the oven. Then, thoroughly dry by placing the Dutch oven on a kitchen range burner set on medium heat. Watch carefully and remove from burner as soon as the oven is dry. Allow the Dutch oven to cool. Next, spread a THIN coat of vegetable oil on the inside bottom and sides of the Dutch oven. Return to burners set on medium heat and heat 3 to 4 minutes. Take off heat. Cool Dutch oven thoroughly.

Here are several tips to help with your cleaning:

- + Put only a THIN coat of vegetable oil on the Dutch oven at any one time. It will get sticky if too much oil is used.
- + 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 the Dutch oven.
- + If sugary build up 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. Like glass, the Dutch oven could crack.

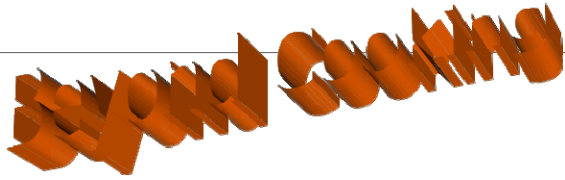
STORING A DUTCH OVEN

Store the Dutch oven in a cool dry place without drastic temperature changes. Also store it with the lid ajar. This will let the air circulate. A piece of clean paper towel or newspaper wadded up can be placed inside to help absorb any moisture that builds up. This helps prevent rust developing in the Dutch oven. If the Dutch oven does get rusty:

- + Clean off all the rust
- + Re-season it
 - Wash with mild detergent and completely dry
 - Rub with oil,
 - Heat (300°F for 60 minutes)
 - Completely cool overnight
- + Rub with a light coating of oil
- + Add a clean paper towel and store

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

TAKE CARE OF YOUR DUTCH OVEN AND IT WILL LAST A LIFETIME!



Dutch Oven Fun

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

APRON
CHARCOAL
CHIMNEY STARTER
COOKING STAND
DUTCH OVEN
LEATHER GLOVES
LID LIFTER
PRESEASONED
TONGS
UNSEASONED

BRIQUETTES
CHARCOAL BUCKET
COALS
COOKING TEMPERATURE
FLANGE
LID HOLDER
OVEN MITT
SAFETY
TOOL ROLL
WIND SCREEN

SAFETY FIRST

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

1. Charcoal is HOT! Do not drop charcoal on the ground. Stepping on a hot coal can ruin rubber-soled shoes. A small child may try to pick up a glowing coal. Check around your cooking area often for stray coals.
2. Use oven mitts or leather gloves when moving a hot Dutch oven. If you use a Dutch oven tool, make sure the oven is secure and does not tip.
3. While cooking keep loose clothing, tablecloths, and towels, away from hot coals.
4. Always open Dutch oven lids away from you. The escaping steam burns! Also, this helps avoid dropping ashes or coals into your food.
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. Be careful when adding frozen ingredients to avoid hot oil splatter.
7. **IMPORTANT!!** Do not burn charcoal briquette indoors. They give off toxic fumes when burning. Hot coals require good outdoor ventilation.

Reflection Question:

Answer the following before continuing on with the project. (Please write in complete sentences)

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

A. _____


FIRES FOR DUTCH OVEN COOKING

A Dutch oven can be heated for cooking with a gas grill, a barbeque, or even the kitchen range. However, a wood fire or charcoal briquettes are most commonly used.

A very hot fire is not necessary all the time. The design of the cast iron Dutch oven will help distribute heat around the oven. Begin with a low to moderate heat and then build it up as more heat is needed. Only open oven to check progress or doneness. To adjust the amount of heat up or down, remove some coals or add some, as described below.

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.

Always keep an eye on what you are cooking!



All Fired Up!

Although Dutch Oven cooking is typically thought to be done using charcoal briquettes, there are many heat sources that can be used. What are the pros and cons of each?

Pros	Heat Source	Cons
	Gas grill	
	Barbeque	
	Kitchen Range	
	Wood Fire	
	Charcoal Briquettes	
	Other:	

What are the most important considerations in selecting a heat source?

ESTIMATING TEMPERATURES

Many of the cooking principles used in the kitchen are used with Dutch oven cooking. When using recipes from conventional cookbooks it is important to note cooking temperatures and understand how to convert them. (Cooking time may vary based on weather conditions.)

Recipes in regular cookbooks sometimes refer to Slow, Moderate, Hot or Very Hot ovens. That usually means:

Slow	250° to 350°F
Moderate	350° to 400°F
Hot	400° to 450°F
Very Hot	450° to 500°F

Determining the Baking Temperature for Dutch Ovens

Basic 325° F Degree

To help determine baking temperatures for Dutch ovens, use the "3 up 3 down = 325°F" formula. 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. Replace coals when they are less than half their original size. 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°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.

<u>OVEN SIZES</u>	<u>8"</u>	<u>10"</u>	<u>12"</u>	<u>14"</u>	<u>16"</u>
Top Heat	11	13	15	17	19
Bottom Heat	5	7	9	11	13

EXCEPTIONS TO THE PREVIOUS CHART:

For baking (between 325°F and 350°F) bread, rolls, cakes, put only 6-8 coals on the bottom of a 12" oven and 14-16 coals on the top.

For frying or roasting in a 12" oven, begin with about 12-14 coals on the bottom and 16 coals on the top.

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

Modifying the Standard 325° F Temperature

The chart on the previous page gives the amount of coals required to heat different sizes of Dutch ovens to 325°F. Modify the 325°F temperature by adding or subtracting the number of coals. Follow the chart below:

TEMPERATURE	RAISE	LOWER
20 to 25°F	Add one (1) coal on the top and one (1) on the bottom	Remove one (1) coal on the top and one (1) on the bottom
45 to 50°F	Add two (2) coals on the top and two (2) on the bottom	Remove two (2) coals on the top and two (2) on the bottom

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

It is important to watch the food as you cook. As you become more skilled with Dutch oven cooking you will be able to estimate the number of coals needed for each recipe you 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 to use. If a wind screen is used, heat from the coals all around the oven will be more even. Therefore, the food will cook more evenly.

Reflection Question:

Answer the following before continuing on with the project. (Please write in complete sentences)

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

A. _____

COOKING ON THE DUTCH OVEN LID

The inside surface of the Dutch oven lid can be used as a cooking surface to cook bacon and eggs, hash browns, pancakes, hamburgers or anything cooked on a grill or a fry pan.

Keep the lid from directly contacting the coals by resting it on three rocks the same size or three large nails pounded into the ground arranged in a triangle. If cooking on the ground, put some foil down first with the shiny side up. Place the coals in the middle of the foil and watch the heat carefully. Be sure to use some kind of fat, oil or shortening, to prevent sticking. When finished cooking, clean the lid like the rest of the Dutch oven.

Reflection Question:

Answer the following before continuing on with the project. (Please write in complete sentences.)

Q. Describe how you steadied the Dutch oven lid and kept it level while you cooked.

A. _____

MEASURING EQUIVALENTS

The following is a simple list of measuring equivalents useful in all cooking adventures. Accurate measuring is an important factor in the success of cooking a recipe for the first time.



3 teaspoons = 1 tablespoon

4 tablespoons = $\frac{1}{4}$ cup

5 tablespoons + 1 teaspoon = $\frac{1}{3}$ cup

8 tablespoons = $\frac{1}{2}$ cup

16 tablespoons = 1 cup

2 tablespoons = 1 fluid ounce

1 cup = 8 ounces

2 cups = 16 ounces = 1 pint

4 cups = 32 ounces = 2 pints = 1 quart

16 cups = 8 pints = 4 quarts = 1 gallon

4 ounces = $\frac{1}{4}$ pound

8 ounces = $\frac{1}{2}$ pound

16 ounces = 1 pound

1 ounce butter = 2 tablespoons
1/2 cup butter = 1 stick or 1/4 pound
4 sticks of butter = 1 pound butter

2 cups granulated sugar = 1 pound
2 1/4 cups brown sugar, packed = 1 pound
3 1/2 cups powdered sugar = 1 pound
4 cups white flour = 1 pound
4 1/2 cups whole wheat flour = 1 pound



Reflection Question: Year 1

Answer the following before continuing on with the project. (Please write in complete sentences.)

Q. What are the elements that you control that will contribute to your success at Dutch oven cooking in year 1?

A. _____

Q. Reflecting on your cooking experiences this year, describe what elements you thought you were most successful accomplishing.

A. _____

Q. Reflecting on your cooking experiences this year, describe which elements need improvement and explain how you would improve next time.

A. _____

Reflection Question: Year 2

Answer the following before continuing on with the project. (Please write in complete sentences.)

Q. What are the elements that you control that will contribute to your success at Dutch oven cooking in year 2?

A. _____

Q. Reflecting on your cooking experiences this year, describe what elements you thought you were most successful accomplishing.

A. _____

Q. Reflecting on your cooking experiences this year, describe which elements need improvement and explain how you would improve next time.

A. _____

HAVE FUN COOKING!

